

TECHNICAL REPORT

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INLAND
RAIL 

Biodiversity development assessment report

PART 2 OF 3

Appendix A to H

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT

ARTC

The Australian Government is delivering
Inland Rail through the Australian
Rail Track Corporation (ARTC), in
partnership with the private sector.

TECHNICAL REPORT

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Biodiversity development assessment report

Appendix A Minimum information requirements for the biodiversity development assessment report

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



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Table A1 BDAR requirements

Report section	Information and map requirements	BDAR location (section/figure)
Introduction	Introduction to the biodiversity assessment including:	Section 1
	<ul style="list-style-type: none"> identification of development site footprint, including: <ul style="list-style-type: none"> - operational footprint - construction footprint indicating clearing associated with temporary construction facilities and infrastructure 	Section 1.2 Appendix G
	<ul style="list-style-type: none"> general description of development site 	Section 1.2.1
	<ul style="list-style-type: none"> sources of information used in the assessment, including reports and spatial data 	Section 3.2 Section 14
	<ul style="list-style-type: none"> Site Map (as described in section 4.2) 	Figure 1.1 Figure 1.2
	<ul style="list-style-type: none"> Location Map (as described in section 4.2) 	Figure 4.1 Appendix G
	<ul style="list-style-type: none"> Digital shape files for all maps and spatial data 	Provided separately to BCD
Landscape Features	Identification of landscape features at the development site, including:	Section 4
	<ul style="list-style-type: none"> IBRA bioregions and subregions, NSW landscape region and area (hectares) 	Section 4.3.1 Section 4.4
	<ul style="list-style-type: none"> native vegetation extent in the buffer area 	Section 4.4 Table 4.5
	<ul style="list-style-type: none"> cleared areas 	Section 3.4.1 Appendix G
	<ul style="list-style-type: none"> evidence to support differences between mapped vegetation extent and aerial imagery 	Table 5.1 Appendix B Appendix G
	<ul style="list-style-type: none"> rivers and streams classified according to stream order 	Appendix G
	<ul style="list-style-type: none"> wetlands within, adjacent to and downstream of the site 	Section 4.3.5 Section 7.4

Report section	Information and map requirements	BDAR location (section/figure)
	<ul style="list-style-type: none"> connectivity features 	Section 4.3.6 Table 4.5 Section 9.2.1
	<ul style="list-style-type: none"> areas of geological significance and soil hazard features 	Section 4.3.3
	<ul style="list-style-type: none"> site context components, including: <ul style="list-style-type: none"> identification of method applied (ie linear or site-based) per cent native vegetation cover in the landscape (development site). 	Table 4.5 Section 4.4.1 Table 4.4
	<ul style="list-style-type: none"> IBRA bioregions and subregions (as described in Paragraphs 4.2.1–4.2.1) 	Section 4.3.1 Figure 4.1 Appendix G
	<ul style="list-style-type: none"> NSW landscape regions (as described in Paragraph 4.2.1) 	Section 4.3.2 Figure 4.1 Appendix G
	<ul style="list-style-type: none"> Rivers and streams (as described in Paragraph 4.2.1) 	Section 4.3.5 Figure 4.1 Appendix G
	<ul style="list-style-type: none"> Wetlands (as described in Paragraph 4.2.1) 	Section 4.3.5
	<ul style="list-style-type: none"> Connectivity of different areas of habitat (as described in Paragraphs 4.2.1–4.2.1) 	Section 4.3.6 Figure 4.1
	<ul style="list-style-type: none"> Areas of geological significance and soil hazard features (as described in Paragraphs 4.2.1–4.2.1) 	Section 4.3.3
	<ul style="list-style-type: none"> Native vegetation extent (as described in Subsection 4.3.2) 	Section 4.4.1 Table 4.4 Figure 4.1
Native Vegetation	Identify native vegetation extent within the development/biodiversity stewardship site, including cleared areas and evidence to support differences between mapped vegetation extent and aerial imagery.	Section 3.4.1 Section 5.1 Appendix B
	Describe PCTs within the development/biodiversity stewardship site, including:	Table 5.1 Appendix B Appendix G

Report section	Information and map requirements	BDAR location (section/figure)
	<ul style="list-style-type: none"> vegetation class 	Table 5.1 Appendix B Appendix G
	<ul style="list-style-type: none"> vegetation type 	Table 5.1 Appendix B Appendix G
	<ul style="list-style-type: none"> area (hectares) for each vegetation type 	Table 5.1 Appendix B Appendix G
	<ul style="list-style-type: none"> species relied upon for identification of vegetation type and relative abundance 	Appendix B Appendix E Appendix L
	<ul style="list-style-type: none"> justification of evidence used to identify a PCT (as outlined in Paragraph 5.2.1.12) 	Appendix B Appendix E Appendix L
	<ul style="list-style-type: none"> TEC status (as outlined in Paragraphs 5.2.1.14–5.2.1.15) 	Table 5.1 Appendix B Appendix G
	<ul style="list-style-type: none"> estimate of per cent cleared value of PCT(as outlined in Paragraph 5.2.1.16) 	Appendix B Appendix H
	Perform a vegetation integrity assessment of the development site, including:	
	<ul style="list-style-type: none"> mapping vegetation zones (Subsection 5.3.1) 	Section 5.2.1 Appendix G
	<ul style="list-style-type: none"> patch size (development site) 	Table 3.3 Section 4.4.2 Table 5.2
	<ul style="list-style-type: none"> assessing vegetation integrity using benchmark data (Subsection 5.3.3) 	Section 3.4.3 Table 3.3
	<ul style="list-style-type: none"> survey effort as described in Subsection 5.3.4 (number of plots) 	Section 3.4

Report section	Information and map requirements	BDAR location (section/figure)
	<ul style="list-style-type: none"> determining the vegetation integrity score (Appendix 6): <ul style="list-style-type: none"> - composition condition score - structure condition score - function condition score - vegetation integrity score. 	Table 12.2 Appendix L
	Where use of local data is proposed: <ul style="list-style-type: none"> identify relevant vegetation type identify source of information for local benchmark data justify use of local data in preference to database values. 	Section 3.4
	<ul style="list-style-type: none"> Map of native vegetation extent within the development site (as described in section 5.1) 	Appendix G
	<ul style="list-style-type: none"> Map of PCTs within the development site (as described in section 5.2) 	Appendix G
	<ul style="list-style-type: none"> Map of plot locations relative to PCTs 	Figure 3.2 Appendix G
	<ul style="list-style-type: none"> Map of TECs 	Figure 5.1
	<ul style="list-style-type: none"> Plot field data (MS Excel format) 	Appendix L
	<ul style="list-style-type: none"> Plot field data sheets 	Appendix L
	<ul style="list-style-type: none"> Patch size of intact native vegetation (as described in Subsection 5.3.2) 	Section 4.4.2
	<ul style="list-style-type: none"> Table of current vegetation integrity scores for each vegetation zone within the development site 	Table 12.1
Threatened species	Identify ecosystem credit species associated with PCTs on both the development site as outlined in section 6.2, including:	
	<ul style="list-style-type: none"> list of species derived 	Table 6.5 Appendix C
	<ul style="list-style-type: none"> justification for exclusion of any ecosystem credit species predicted above. 	Table 6.6

Report section	Information and map requirements	BDAR location (section/figure)
	Identify species credit species on the development site as outlined in sections 6.3 to 6.5, including:	
	<ul style="list-style-type: none"> list of candidate species 	Table 6.1 Table 6.7 Appendix I
	<ul style="list-style-type: none"> justification for inclusions and exclusions based on habitat features 	Table 6.1 Table 6.2 Table 6.7 Table 6.8 Appendix II
	<ul style="list-style-type: none"> indication of presence based on targeted survey or expert report 	Section 6.1 Section 6.2 Appendix I
	<ul style="list-style-type: none"> details of targeted survey technique, effort, timing and weather 	Section 3.4 Section 3.5 Section 3.6 Appendix D Appendix I
	<ul style="list-style-type: none"> species polygons 	Appendix I
	<ul style="list-style-type: none"> biodiversity risk weighting for the species 	Appendix K
	<ul style="list-style-type: none"> threatened species survey 	Section 3.4 Section 3.5 Appendix D Appendix I
	<ul style="list-style-type: none"> additional requirements for wind farm developments. 	Not applicable
	Where use of local data is proposed:	Not applicable
	<ul style="list-style-type: none"> identify relevant species 	Not applicable
	<ul style="list-style-type: none"> identify aspect of species data 	Not applicable
	<ul style="list-style-type: none"> identify source of information for local data 	Not applicable

Report section	Information and map requirements	BDAR location (section/figure)
	<ul style="list-style-type: none"> justify use of local data in preference to database values. 	Not applicable
	Where expert reports are used in place of targeted survey:	Not applicable
	<ul style="list-style-type: none"> identify the relevant species 	Not applicable
	<ul style="list-style-type: none"> justify the use of an expert report 	Not applicable
	<ul style="list-style-type: none"> indicate and justify the likelihood of presence of the species and information considered in making this assessment 	Not applicable
	<ul style="list-style-type: none"> estimate the number of individuals or area of habitat (whichever unit of measurement applies to the species/individual) for the development site or biodiversity stewardship site, including a description of how the estimate was made 	Not applicable
	<ul style="list-style-type: none"> identify the expert and provide evidence of their expert credentials. 	Not applicable
	Table of habitats or habitat components and their sensitivity classes	Table 6.4
	<ul style="list-style-type: none"> Table detailing the list of species credit species and presence status on site as determined by targeted survey, indicating also where presence was assumed and/or where presence was determined by expert report 	Section 6.1 Section 6.2 Appendix I
	<ul style="list-style-type: none"> Species credit species polygons (as described in Paragraph 6.4.1) 	Appendix I
	<ul style="list-style-type: none"> Table detailing species and habitat feature/component associated with species and its abundance on site (as described in Paragraph 6.4.1) 	Appendix I
	<ul style="list-style-type: none"> Table detailing biodiversity risk weighting for species on site (as described in section 6.6) 	Appendix K
	<ul style="list-style-type: none"> For wind farm developments: maps of habitual flight paths for nomadic and migratory species likely to fly over the site and maps of likely habitat for threatened aerial species resident on the site 	Not applicable
Avoid and minimise impacts	<p>Demonstration of efforts to avoid and minimise impact on biodiversity values in accordance with Chapter 8.</p> <p>Assessment of direct and indirect impacts unable to be avoided at the development site in accordance with sections 9.1 and 9.2. The assessment would include but not be limited to: type, frequency, intensity, duration and consequence of impact.</p> <p>For major projects: details of the adaptive management strategy proposed to monitor and respond to impacts on biodiversity values that are uncertain (section 9.4).</p>	Section 8.1 Section 8.2 Section 11.2

Report section	Information and map requirements	BDAR location (section/figure)
	<ul style="list-style-type: none"> Table of measures to be implemented before, during and after construction to avoid and minimise the impacts of the project, including action, outcome, timing and responsibility 	Table 11.1 Table 11.2 Table 11.3
	<ul style="list-style-type: none"> Map of final project footprint, including construction and operation 	Figure 1.3 Appendix G
	<ul style="list-style-type: none"> Maps demonstrating indirect impact zones where applicable 	Not applicable
Impact summary	Identification and an assessment of the impacts which are potential serious and irreversible impacts, in accordance with Subsections 10.2.2 for impacts on CEECs and 10.2.3 for threatened species	Section 9.1 Table 9.1 Table 9.2 Table 9.3
	identification of impacts requiring offset in accordance with Section 10.3.	Section 12.1 Appendix H Appendix K
	Identification of impacts not requiring offset in accordance with Paragraph 10.3.2. Identification of areas not requiring assessment in accordance with section 10.4	Section 3.4.1 Section 6.1 Appendix K Appendix I
	<ul style="list-style-type: none"> Map showing the location of serious and irreversible impacts 	Figure 5.1
	<ul style="list-style-type: none"> Map of impacts requiring offset 	Appendix G Appendix I
	<ul style="list-style-type: none"> Map of impacts not requiring offset 	Appendix G
	<ul style="list-style-type: none"> Map of areas not requiring assessment 	Appendix G
Impact summary	Ecosystem credits and species credits that measure the impact of the development on biodiversity values, including:	
	<ul style="list-style-type: none"> future vegetation integrity score for each vegetation zone at the development site (Equations 17 and 18 in Appendix 6) 	Table 12.2
	<ul style="list-style-type: none"> change in vegetation integrity score (Subsection 9.1.3) 	Table 12.2
	<ul style="list-style-type: none"> number of required ecosystem credits for the impact of development on each vegetation zone at a development site (Subsection 11.2.3) 	Table 12.2

Report section	Information and map requirements	BDAR location (section/figure)
	<ul style="list-style-type: none"> number of required species credits for each threatened species that is impacted on by development (Subsection 11.2.4). 	Table 12.1 Table 12.2
	<ul style="list-style-type: none"> Table of PCTs requiring offset and the number of ecosystem credits required 	Table 12.1 Table 12.2 Appendix K
	<ul style="list-style-type: none"> Table of threatened species requiring offset and the number of species credits required 	Table 12.3 Table 12.4 Appendix K
	<ul style="list-style-type: none"> Submitted proposal in the Credit Calculator 	Appendix K
	Credit classes for ecosystem credits and species credits at the development site.	Appendix K
Biodiversity credit report	<ul style="list-style-type: none"> Table of credit class and matching credit profile 	Appendix K

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Biodiversity development assessment report

Appendix B Detailed PCT profiles and fauna habitat descriptions

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



PCT descriptions

Table B1 PCT27

PCT 27 - Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South bioregion	
Vegetation formation	Semi-arid Woodlands (Grassy sub-formation)
Vegetation class	Riverine Plain Woodlands
PCT ID	27
PCT % cleared	86%
Plots sampled	T2-SP2, T2-MP21, T2-MP22
Area of impact	3.05 hectares
Floristic description	<p>This community consists of mid-high and low woodland to open woodland to about 10 metres high dominated by <i>Acacia pendula</i> (Weeping Myall) often with <i>Casuarina cristata</i> (Belah) and <i>Capparis mitchellii</i> (Wild Orange). <i>Eucalyptus populnea</i> subsp. <i>bimbil</i> (Poplar Box), <i>Alectryon oleifolius</i> (Western Rosewood), <i>Atalaya hemiglauca</i> (Whitewood) and <i>Eucalyptus largiflorens</i> (Black Box).</p> <p>Shrubs are sparse and include <i>Geijera parviflora</i> (Wilga), <i>Rhagodia spinescens</i>, <i>Capparis lasiantha</i>, <i>Acacia oswaldii</i>, <i>Acacia salicina</i>, <i>Myoporum montanum</i>, <i>Pimelea neo-anglica</i>, <i>Maireana aphylla</i>, <i>Atriplex stipitata</i>, <i>Leiocarpa panaetioides</i> and <i>Enchylaena tomentosa</i>. Many species of copperburrs may be present including <i>Sclerolaena brachyptera</i>, <i>Sclerolaena muricata</i> var. <i>muricata</i>, <i>Sclerolaena stelligera</i>.</p> <p>The ground cover is mid-dense to sparse. Common grass and forb species include <i>Einadia nutans</i> subsp. <i>nutans</i>, <i>Leiocarpa tomentosa</i>, <i>Marsilea hirsuta</i>, <i>Solanum esuriale</i>, <i>Daucus glochidiatus</i>, <i>Goodenia fascicularis</i>, <i>Oxalis perennans</i>, <i>Eryngium paludosum</i> and <i>Craspedia variabilis</i>.</p> <p>The most common grass species are <i>Monachather paradoxus</i>, <i>Chloris truncata</i>, <i>Enteropogon acicularis</i>, <i>Astrebla lappacea</i>, <i>Astrebla pectinata</i>, <i>Walwhalleya proluta</i>, <i>Dichanthium sericeum</i> subsp. <i>sericeum</i>, <i>Sporobolus caroli</i>, <i>Austrodanthonia setacea</i> and <i>Aristida leptopoda</i>.</p>
Justification for PCT selection	The PCT was dominated by Weeping Myall on rich loam soils on flat plains north west of Gilgandra. Multiple small shrub and ground cover species consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location) occurred in the plot.
Conservation significance	<p>The woodland occurrences of this community within the study area are consistent with the final determination for the EEC <i>Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion</i> (BC Act).</p> <p>The woodland occurrences are also consistent with the EEC <i>Weeping Myall Woodlands</i> (EPBC Act).</p>

PCT 27 - Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South bioregion

Photograph



Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion

Table B2 PCT 35

PCT 35 - Brigalow - Belah open forest/woodland on alluvial plains often gilgaied clay from Pilliga Scrub to Goondiwindi Brigalow Belt South bioregion

Vegetation formation	Semi-arid Woodlands (grassy sub-formation)
Vegetation class	Brigalow Clay Plain Woodlands
PCT ID	35
PCT % cleared	90%
Plots sampled	T1-P5, T1-P7, T2-P5
Area of impact	0.61 hectares
Floristic description	<p>This community is a low open woodland dominated by <i>Acacia harpophylla</i> (Brigalow) with a sparse understorey characterised by low abundances of saltbush species and native grasses.</p> <p>The canopy layer includes occasional occurrences of <i>Eucalyptus populnea</i> (Poplar Box) and <i>E. pilligaensis</i> (Pilliga Box).</p> <p>The low shrub layer is characterised by <i>Enchylaena tomentosa</i> (Ruby Saltbush), <i>Einadia hastata</i> (Berry Saltbush) and <i>Maireana enchylaenoides</i> (Wingless Bluebush).</p> <p>The dominant ground layer species included <i>Paspalidium caespitosum</i> (Brigalow Grass), <i>Enteropogon acicularis</i>, <i>Eragrostis brownii</i> (Brown's Lovegrass) and <i>Brunoniella australis</i> (Blue Trumpet).</p>
Justification for PCT selection	<p>The PCT within the study area is consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Although the ground layer was degraded and heavily impacted by drought and livestock grazing, the upper stratum was dominated by Brigalow and occurred on alluvial plains. In addition, cleared area of gilgaied lands were observed adjacent to the proposal site in agricultural land.</p>

PCT 35 - Brigalow - Belah open forest/woodland on alluvial plains often gilgaied clay from Pilliga Scrub to Goondiwindi Brigalow Belt South bioregion

Conservation significance Woodland occurrences of this community within the study area are consistent with the final determination for the EEC *Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains* (BC Act). The woodland occurrences are also consistent with the EEC *Brigalow (Acacia harpophylla dominant and co-dominant)* (EPBC Act).

Photograph



Brigalow-Belah open forest/woodland on alluvial plains often gilgaied clay from Pilliga Scrub to Goondiwindi Brigalow Belt South Bioregion

Table B3 PCT 36

PCT 36 - River Red Gum tall to very tall open forest/woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains bioregion.

Vegetation formation	Forested Wetlands
Vegetation class	Inland Riverine Forests
PCT ID	36
PCT % cleared	53%
Plots sampled	T2-P14, T2-P17, T2-P30, T2-P32, T1-P25
Area of impact	5.08 hectares
Floristic description	<p>This community consists of very tall or tall open forest or woodland up to 30 metres high lining major watercourses dominated by <i>Eucalyptus camaldulensis subsp. camaldulensis</i> (River Red Gum).</p> <p>A sparse shrub layer may be present and can include <i>Acacia salicina</i> (Cooba), <i>Acacia stenophylla</i> (River Cooba) and <i>Muehlenbeckia florulenta</i> (Lignum).</p> <p>The ground layer was very sparse at the time of survey but the dominant species included <i>Austrostipa ramosissima</i>, <i>Cynodon dactylon</i> (Couch) and <i>Paspalidium jubiflorum</i> (Warrego Summer Grass). Rush species included <i>Juncus spp</i>, whilst ferns included <i>Marsilea drummondii</i> (Nardoo) was present on poorly drained sites. Other ground covers include <i>Rumex brownii</i>, <i>Boerhavia dominii</i>, <i>Alternanthera denticulata</i> and <i>Lobelia concolor</i>.</p>

PCT 36 - River Red Gum tall to very tall open forest/woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains bioregion.

Justification for PCT selection The vegetation species found within this PCT are consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). The upper stratum on the banks of major creeks was dominated by River Red Gum in the southern end of the proposal site near Narromine and Burroway. This also fits the distribution information for this PCT.

Conservation significance Not listed as a threatened ecological community under BC Act and EPBC Act.

Photograph



River Red Gum tall to very tall open forest/ woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion.

Table B4 PCT 49

PCT 49 - Partly derived Windmill Grass - Copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South bioregion

Vegetation formation	Grasslands
Vegetation class	Semi-arid Floodplain Grasslands
PCT ID	49
PCT % cleared	50%
Plots sampled	T1-P23, T2-MP-36, T2-MP-38, T2-MP24, T2-P18, Plot 14, Plot 20, Plot 11
Area of impact	176.10 hectares

PCT 49 - Partly derived Windmill Grass - Copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South bioregion

Floristic description

This community is a tussock grassland dominated by *Chloris truncata* (Windmill Grass), *Enteropogon acicularis* (Curly Windmill Grass) and *Austrostipa scabra subsp. scabra* (Corkscrew grass) as well as *Convolvulus spp.*

Scattered small shrubs include *Sclerolaena muricata* (Black Roly Poly), *Sclerolaena birchii* (Galvanized Burr), *Atriplex leptocarpa*, *Atriplex muelleri*, *Vachellia (Acacia) farnesiana*, *Sida trichopoda*, *Acacia stenophylla* (River Cooba) and *Geijera parviflora* (Wilga) and *Solanum esuriale*.

Scattered trees include *Eucalyptus populnea subsp. bimbil* (Poplar Box) and *Eucalyptus coolabah* (Coolabah).

Justification for PCT selection

These sites have been located within grasslands dominated by *Chloris* species. Although the occurrence of this PCT within the study area is highly degraded and exhibits low native species diversity, it is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Additional plots completed in June 2020 exhibited a high species diversity of native herbs and forbs and dominance by Windmill Grass.

Conservation significance

Not listed as a threatened ecological community under BC Act and EPBC Act.

Photograph



Partly derived Windmill Grass - Copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion.

Table B5 PCT 55


PCT 55 - Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions	
Vegetation formation	Semi-arid Woodlands (grassy sub-formation)
Vegetation class	North-west Floodplain Woodlands
PCT ID	55
PCT % cleared	83%
Plots sampled	T2-MP23, Plot 5
Area of impact	0.21 hectares
Floristic description	<p>This community is a tall woodland dominated by <i>Casuarina cristata</i> (Belah) and <i>Eucalyptus pilligaensis</i> (Pilliga Box) with a sparse understorey characterised by low abundances of saltbush species and native grasses.</p> <p>Whilst shrub and ground layers were sparse during the survey, species generally include <i>Sclerolaena muricata</i> (Black Rolypoly), <i>Solanum esuriale</i> (Quena), <i>Sclerolaena birchii</i> (Galvanised Burr), <i>Sclerolaena divaricata</i> (Tangled Copperburr), <i>Salsola australis</i> and <i>Alectryon diversifolius</i> (Scrub Boonaree).</p> <p>The groundcover is characterised by low covers of native grasses and forbs, including <i>Chloris truncata</i> (Windmill Grass), <i>Panicum effusum</i> (Hairy Panic), <i>Maireana enchylaenoides</i> (Wingless Bluebush) and <i>Dichondra repens</i> (Kidney Weed).</p>
Justification for PCT selection	The occurrence of this PCT within the proposal site is restricted. In the proposal site it is highly degraded and exhibits low native species diversity, but it is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location).
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions</p>

Table B6 PCT 56

PCT 56 - Poplar Box - Belah woodland on clay - loam soils on alluvial plains of north-central NSW	
Vegetation formation	Grassy Woodland
Vegetation class	Floodplain Transition Woodlands
PCT ID	56
PCT % cleared	80%
Plots sampled	T1-P13, T2-P21, Singles 2, BM1*
Area of impact	19.5 hectares
Floristic description	<p>Tall to mid-high woodland dominated by <i>Eucalyptus populnea</i> subsp. <i>bimbil</i> (Poplar Box) and <i>Casuarina cristata</i> (Belah) commonly with the small tree <i>Alectryon oleifolius</i> (Western Rosewood).</p> <p>Tall shrubs are sparse and include <i>Geijera parviflora</i> (Wilga), <i>Apophyllum anomalum</i> (Warrior Bush), <i>Capparis</i> sp., <i>Citrus glauca</i> and <i>Rhagodia spinescens</i> (Thorny Rhagodia). Low shrubs include <i>Sclerolaena birchii</i> (Galvanized Burr), <i>Sclerolaena muricata</i> (Black Roly Poly), other copperburs, <i>Maireana coronata</i>, <i>Maireana decalvans</i> and <i>Enchylaena tomentosa</i>.</p> <p>The ground cover is sparse during dry times, such as the survey period, but mid-dense after rain. Species include grasses such as <i>Chloris truncata</i>, <i>Enteropogon acicularis</i> and <i>Austrostipa scabra</i> subsp. <i>scabra</i>. Forb species include <i>Einadia nutans</i> subsp. <i>nutans</i>, <i>Oxalis chnoodes</i>, <i>Bulbine alata</i>, <i>Erodium crinitum</i>, <i>Wahlenbergia fluminalis</i> and <i>Brachyscome heterodonta</i>.</p>
Justification for PCT selection	<p>The woodland occurrence of this PCT within the proposal site is consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT occurs as scattered patches throughout the central section of the proposal site always on flat alluvial plains. It has been heavily impacted by agriculture and is generally grazed and consists mostly of a scattered upper stratum of Belah and lesser amounts of Poplar Box.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

PCT 56 - Poplar Box - Belah woodland on clay - loam soils on alluvial plains of north-central NSW

Photograph



Poplar Box- Belah woodland on clay-loam soils on alluvial plains of north-central NSW.

* Benchmark data used

Table B7 PCT 78

PCT 78 - River Red Gum riparian tall woodland/open forest wetland in the Nandewar Bioregion and Brigalow Belt South bioregion.	
Vegetation formation	Forested Wetlands
Vegetation class	Inland Riverine Forests
PCT ID	78
PCT % cleared	60%
Plots sampled	T1-P2, T1-P8, T1-P9 T2-P1, T2-P15, T2-P14
Area of impact	26.23 hectares
Floristic description	<p>This community is comprised of tall open forest or woodland to 30 metres high composed of <i>Eucalyptus camaldulensis</i> (River Red Gum) often with <i>Angophora floribunda</i> (Rough-barked Apple), <i>Eucalyptus melliodora</i> (Yellow Box) or <i>Casuarina cunninghamiana</i> (River Oak). <i>Eucalyptus blakelyi</i> (Blakely's Red Gum) may intergrade with River Red Gum.</p> <p>The shrub layer was sparse but may contain thickets of wattles such as <i>Acacia deanei</i>, <i>Leptospermum polygalifolium</i>, <i>Leptospermum brachyandrum</i>, <i>Notelaea microcarpa</i> var. <i>microcarpa</i>, <i>Swainsona galegifolia</i>, <i>Nyssanthus erecta</i> and <i>Maireana microphylla</i>.</p> <p>Ground cover is often dense and is composed of a mixture of forbs, graminoids and sedges. Forbs include <i>Alternanthera denticulata</i>, <i>Commelina cyanea</i> and <i>Einadia hastata</i>. Graminoids include <i>Lomandra longifolia</i>, <i>Lomandra multiflora</i> and the grasses <i>Austrostipa verticillata</i>, <i>Cynodon dactylon</i>, <i>Aristida vagans</i> and <i>Themeda triandra</i>. Sedges include <i>Cyperus gracilis</i>, <i>Cyperus gymnocaulos</i>, <i>Carex inomitata</i> and <i>Carex appressa</i>. Weeds are often abundant and include <i>Lycium ferrosissimum</i> (African Boxthorn), <i>Salix babylonica</i> (Willow), and <i>Schinus areira</i> (Pepper Tree).</p>
Justification for PCT selection	<p>The occurrence of this PCT within the proposal site generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT is dominated by River Red Gum along the immediate riparian banks of the major rivers, including the Macquarie and Castlereagh Rivers. The occurrences of this PCT in the proposal site are generally weedy due to their location in publicly accessible areas and they have a number of high threat weeds recorded that are associated with this PCT. It grades quickly into other dryland communities including PCT88 and PCT248 which generally contain box species as per the classification for this PCT.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

PCT 78 - River Red Gum riparian tall woodland/open forest wetland in the Nandewar Bioregion and Brigalow Belt South bioregion.

Photograph



River Red Gum riparian tall woodland/ open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion.

Table B8 PCT 88

PCT 88 - Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	Pilliga Outwash Dry Sclerophyll Forests
PCT ID	88
PCT % cleared	38%
Plots sampled	T2-P31, T2-P34, T2-P26, T2-P25, T2-P16, T1-P10, T1-P11, T1-P12, T1-P16, T1-P17, T1-P18, T1-P19, T1-P20, T1-P22, T2-P25, T2-P31, T2-P34, T1-MP4, T1-MP5, T1-MP9, T1-MP24, T2-MP13
Area of impact	277.79 hectares
Floristic description	<p>This community is a tall woodland or open forest dominated by <i>Eucalyptus pilligaensis</i> (Pilliga Box) with <i>Callitris glaucophylla</i> (White Cypress Pine) and <i>Allocasuarina luehmannii</i> (Buloke).</p> <p>Shrub species include <i>Geijera parviflora</i> (Wilga), <i>Acacia deanei</i>, <i>Acacia hakeoides</i> and <i>Dodonaea viscosa</i>.</p> <p>The ground cover is sparse and includes the chenopods <i>Enchylaena tomentosa</i>, <i>Einadia nutans</i>, <i>Aristida ramosa</i>, <i>Austrostipa scabra</i> subsp. <i>scabra</i>, <i>Enteropogon acicularis</i>, <i>Digitaria brownii</i> and <i>Eragrostis lacunaria</i>. The sedges <i>Cyperus fulvus</i> or <i>Cyperus gracilis</i> may be present. Forbs species include <i>Calotis cuneifolia</i> and <i>Calotis lappulacea</i>.</p>
Justification for PCT selection	<p>The floristic composition found throughout the survey is highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT is common and widespread through the north, central and southern sections of the proposal site. It is dominated by Pilliga Box and other canopy species vary in their dominance depending on the patch. The PCT was dominated by native species but cover of species was not high mostly due to a cover of leaf litter and shrub species as well as regrowth upper stratum species (particularly in the Pilliga). It occurred on flat and plains across the proposal site in most soil types except sand, sandstone and alluvial clays.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

PCT 88 - Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South bioregion

Photograph



Pilliga Box- White Cypress Pine- Buloke shrubby woodland in the Brigalow Belt South Bioregion

Table B9 PCT 141


PCT 141 - Broombush - wattle very tall shrubland of the Pilliga to Goonoo regions, Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	Pilliga Outwash Dry Sclerophyll Forests
PCT ID	141
PCT % cleared	11%
Plots sampled	T1-MP10, T1-MP11, T1-MP13, T1-MP14, T1-MP19
Area of impact	29.47 hectares
Floristic description	<p>Tall to very tall shrubland to closed shrubland to over three metres high dominated by the tall shrub <i>Melaleuca uncinata</i> (Broombush). Other shrubs include <i>Calytrix tetragona</i>, <i>Westringia cheelii</i>, <i>Acacia triptera</i>, <i>Melaleuca erubescens</i>, <i>Acacia murrayana</i> and <i>Micromyrtus ciliata</i>.</p> <p>Ground cover was sparse due to dry conditions, however species included <i>Aristida jerichoensis</i> var. <i>jerichoensis</i>, <i>Lomandra leucocephala</i> and <i>Cheilanthes sieberi</i>.</p> <p>Canopy species which were also sparse included <i>Callitris glaucophylla</i> and <i>Eucalyptus crebra</i>.</p>
Justification for PCT selection	The floristic composition found throughout the survey is highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT occurred only in the Pilliga and was dominated by shrub species, including Broombush and <i>Acacia triptera</i> , consistent with the classification of this PCT. It occurred on flat plains sometimes in sandy areas grading into woodlands.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Broombush-wattle very tall shrubland of the Pilliga to Goonoo regions. Brigalow Belt South Bioregion.</p>

Table B10 PCT 145

PCT 145 - Western Rosewood - Wilga - Wild Orange - Belah low woodland of the Brigalow Belt South Bioregion and eastern Darling Riverine Plains bioregion	
Vegetation formation	Semi-arid Woodlands (Shrubby sub-formation)
Vegetation class	Western Peneplain Woodland
PCT ID	145
PCT % cleared	75%
Plots sampled	T1SP1, T2-SP4, T1SP2, T1BP5, Singles 1
Area of impact	53.99 hectares
Floristic description	<p>Low open woodland or open shrubland to about eight metres high, dominated by the small trees <i>Alectryon oleifolius</i> (Western Rosewood), <i>Geijera parviflora</i> Wilga (Wilga), <i>Casuarina cristata</i> Belah (Belah), <i>Atalaya hemiglauc</i> Whitewood (Whitewood) and <i>Capparis mitchellii</i> Orange Bush (Orange Bush). Eucalypts such as <i>Eucalyptus populnea</i> Poplar Box (Poplar Box) and <i>Eucalyptus pilligaensis</i> Pilliga Box (Pilliga Box) also occur.</p> <p>Shrubs include <i>Rhagodia spinescens</i>, <i>Senna</i> form taxon <i>filifolia</i> (Punty Bush), <i>Apophyllum anomalum</i> Warrior Bush (Warrior Bush) and <i>Eremophila mitchellii</i> Budda (Budda).</p> <p>Small shrubs and grasses dominate the ground cover. The main small shrubs are <i>Sclerolaena</i> spp. copperburrs (copperburrs) and <i>Maireana</i> sp bluebushes (bluebushes). Grasses include <i>Enteropogon acicularis</i>, <i>Chloris truncata</i>, <i>Dichanthium sericeum</i> subsp., <i>Enneapogon gracilis</i> and forbs of <i>Portulaca oleracea</i>, <i>Ptilotus semilanatus</i>, <i>Tetragonia tetragonioides</i> and <i>Sida corrugata</i>.</p>
Justification for PCT selection	The floristic composition found throughout the survey is highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT occurred on the edges of sloping hills and rocky outcrops grading onto the lower slopes where it occurred as an open woodland. Western Rosewood and Wilga were the most dominant canopy trees on the lower slopes of the proposal site. Grading to the higher slopes Wild Orange and other shrub species occurred but these are outside the proposal site but is still consistent with the PCT classification.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

PCT 145 - Western Rosewood - Wilga - Wild Orange - Belah low woodland of the Brigalow Belt South Bioregion and eastern Darling Riverine Plains bioregion

Photograph



Western Rosewood - Wilga - Wild Orange - Belah low woodland of the Brigalow Belt South Bioregion and eastern Darling Riverine Plains bioregion

Table B11 PCT 148

PCT 148 - Dirty Gum – Buloke - White Cypress Pine - Ironbark shrubby woodland of the deep sandy soils on the Liverpool Plains Region of the Brigalow Belt South bioregion

Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	Pilliga Outwash Dry Sclerophyll Forests
PCT ID	148
PCT % cleared	50%
Plots sampled	T2-P6, T2-P13, BM1*, BM2*
Area of impact	45.04 hectares
Floristic description	<p>This community is a tall to very tall woodland to open woodland dominated by <i>Eucalyptus chloroclada</i> (Dirty Gum) and <i>Allocasuarina luehmannii</i> (Buloke) often with <i>Callitris glaucophylla</i> (White Cypress Pine).</p> <p>Depending on grazing or fire history the understorey can be grassy or shrubby. Within this PCT the shrub layer was highly disturbed, therefore non-existent. Common shrubs described within the PCT include <i>Acacia deanei</i>, <i>Acacia spectabilis</i>, <i>Acacia sertiformis</i>, <i>Acacia ixiophylla</i>, <i>Dodonaea</i> spp., <i>Geijera parviflora</i> (Wilga), <i>Myoporum montanum</i> (Boobialla), <i>Brachyloma daphnoides</i>, <i>Xanthorrhoea glauca</i> subsp. <i>angustifolia</i>, <i>Daviesia ulicifolia</i> subsp. <i>pilligensis</i> and <i>Pimelea linifolia</i>.</p> <p>The ground cover may be very sparse or near to bare. Groundcover species included <i>Aristida ramosa</i>, <i>Digitaria brownii</i>, <i>Panicum effusum</i> and <i>Wahlenbergia gracilis</i>.</p>

PCT 148 - Dirty Gum – Buloke - White Cypress Pine - Ironbark shrubby woodland of the deep sandy soils on the Liverpool Plains Region of the Brigalow Belt South bioregion

Justification for
PCT selection

Although a very sparse shrub and ground layer was present, the community is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT occurred mostly as scattered patches in the north of the proposal site and is dominated Dirty Gum and White Cypress Pine. The groundcover layer was severely impacted by drought conditions and had a very low percent cover and low diversity of native species. However, the species observed in the ground layer were consistent with the PCT and high litter cover. It also occurred on sandy loam soils which is consistent with the occurrence of the PCT.

Conservation
significance

Not listed as a threatened ecological community under BC Act and EPBC Act.


Photograph



Dirty Gum- Buloke- White Cypress Pine- Ironbark shrubby woodland of the deep sandy soils on the Liverpool Plains Region of the Brigalow Belt South Bioregion.

* Benchmark data used

Table B12 PCT 168

PCT 168 - Derived Copperburr shrubland of the NSW northern inland alluvial floodplains	
Vegetation formation	Arid Shrublands (Chenopod sub-formation)
Vegetation class	Riverine Chenopod Shrublands
PCT ID	168
PCT % cleared	0
Plots sampled	T1-P1, BM1*, BM2*
Area of impact	8.56 hectares
Floristic description	<p>This community is a low open shrubland / sparse forbland with low shrubs 10-30 cm high dominated by copperburrs such as <i>Sclerolaena divaricata</i>, <i>Sclerolaena birchii</i> and <i>Sclerolaena muricata</i>, with other chenopods such as <i>Salsola australis</i> and low saltbushes such as <i>Atriplex semibaccata</i> and <i>Einadia nutans</i>.</p> <p>Scattered tall shrubs such as <i>Hakea leucoptera</i>, <i>Eremophila bignoniiflora</i> or <i>Apophyllum anomalum</i> may be present within the PCT but were not found during the survey.</p> <p>Ground covers were sparse but included <i>Portulaca oleracea</i> and <i>Boerhavia diffusa</i>.</p> <p>Grasses include <i>Aristida ramosa</i>, <i>Enteropogon acicularis</i>, <i>Cynodon dactylon</i> and <i>Urochloa panicoides</i>.</p>
Justification for PCT selection	The occurrence of this PCT within the proposal site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). It has been highly impacted by intensive agriculture and occurs mostly south of the Namoi River near Narrabri on private land on undulating grey soils rising out from River Red Gum communities on the river floodplain.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Derived Copperburr shrubland of the NSW northern inland alluvial floodplains.</p>

* Benchmark data used

Table B13 PCT 185



PCT 185 - Dwyer's Red Gum - White Cypress Pine - Currawang shrubby woodland	
Vegetation formation	Semi-arid Woodlands (Shrubby sub-formation)
Vegetation class	Inland Rocky Hill Woodlands
PCT ID	185
PCT % cleared	50%
Plots sampled	T2-BP3, T2-BP3-2
Area of impact	1.37 hectares
Floristic description	Tall mallee open woodland dominated by Dwyer's Red Gum (<i>Eucalyptus dwyeri</i>), White Cypress Pine (<i>Callitris glaucophylla</i>) and/or Currawang (<i>Acacia doratoxylon</i>) occasionally with stands of Drooping She-oak (<i>Allocasuarina verticillata</i>), Poplar Box (<i>Eucalyptus populnea</i>) or Western Grey Box (<i>Eucalyptus microcarpa</i>). Grades into communities with Western Grey Box (<i>Eucalyptus microcarpa</i>) or Mugga Ironbark (<i>Eucalyptus sideroxylon</i>). Kurrajong (<i>Brachychiton populneus</i> subsp. <i>populneus</i>) occurs in some locations. The understorey contains a sparse shrub layer that may include <i>Cassinia laevis</i> , <i>Grevillea floribunda</i> , <i>Acacia deanei</i> and in some areas <i>Leptospermum divaricatum</i> . Low shrubs species include <i>Melichrus urceolatus</i> , <i>Hibbertia obtusifolia</i> and thickets of <i>Platysace lanceolata</i> . The ground cover is sparse and is often covered in rocks. Species include forbs such as <i>Gonocarpus elatus</i> , <i>Calotis cuneifolia</i> , <i>Goodenia glabra</i> and <i>Hybanthus monopetalus</i> and grasses such as <i>Austrodanthonia setacea</i> , <i>Austrostipa scabra</i> , <i>Austrostipa densiflora</i> , <i>Austrodanthonia eriantha</i> , <i>Thyridolepis mitchelliana</i> and <i>Amphipogon caricinus</i> . The rock ferns (<i>Cheilanthes</i> spp.) are common.
Justification for PCT selection	Although a very sparse shrub and ground layer was present, the community is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). It occurred on a rocky outcrop proposed to be used for a borrow pit and was dominated by regrowth Dwyers Red Gum from previous quarry activity.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	
Dwyer's Red Gum - White Cypress Pine - Currawang shrubby woodland	

Table B14 PCT 202

PCT 202 - Fuzzy Box woodland on colluvium and alluvial flats in the Brigalow Belt South and Nandewar bioregion (including Pilliga)	
Vegetation formation	Grassy Woodlands
Vegetation class	Western Slopes Grassy Woodlands
PCT ID	202
PCT % cleared	75%
Plots sampled	T2-P37, BM1*
Area of impact	3.59 hectares
Floristic description	<p>This community is a tall woodland up to 20 metres high dominated by <i>Eucalyptus conica</i> (Fuzzy Box) and intergrades with <i>Callitris glaucophylla</i> (White Cypress Pine) and <i>Eucalyptus populnea</i> subsp. <i>bimbil</i> (Poplar Box),</p> <p>Understorey shrubs are very sparse and include <i>Geijera parviflora</i>, <i>Sclerolaena birchii</i> and <i>Eremophila debilis</i>.</p> <p>The ground cover may be dense after rain but is normally mid-dense to sparse. It usually contains a rich herb/grassy flora. Forb species include <i>Dichondra repens</i>, <i>Einadia nutans</i>, <i>Lepidium hyssopifolium</i>, <i>Vittadinia cuneata</i> and <i>Calotis lappulacea</i></p> <p>Grass and other species include <i>Austrostipa verticillata</i>, <i>Austrostipa scabra</i>, <i>Chloris truncata</i>, <i>Paspalidium constrictum</i> and <i>Carex inversa</i>.</p>
Justification for PCT selection	<p>The occurrence of this PCT is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). It occurred on flat plains near ephemeral drainage lines in the central section of the proposal site south of Gilgandra. Access to this PCT was limited to over the fence views due to private landholders not allowing access.</p>
Conservation significance	<p>Woodland occurrences of this community within the study area are consistent with the final determination for the EEC <i>Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South bioregions</i> (BC Act)</p>
Photograph	 <p>Fuzzy Box woodland on colluvium and alluvial flats in the Brigalow Belt South and Nandewar Bioregion (including Pilliga).</p>

* Benchmark data used

Table B15 PCT 206


PCT 206 – Dirty Gum – White Cypress Pine tall woodland of alluvial sand (sand monkeys) in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	
Vegetation formation	Semi-arid Woodlands (shrubby sub-formation)
Vegetation class	North-west Alluvial San Woodlands
PCT ID	206
PCT % cleared	50%
Plots sampled	Plot 7, Plot 8
Area of impact	12.66 hectares
Floristic description	The community is mid-high open woodland with Dirty Gum (<i>Eucalyptus chloroclada</i>) as the dominant canopy species. White Cypress Pine (<i>Callitris glaucophylla</i>) is present in the midstorey, with dense regrowth occurring in patches throughout. The shrub layer is generally absent with <i>Solanum ferocissimum</i> the only shrub species recorded. The ground cover is variable across the community, with the better quality parts of the community containing a relatively sparse cover and dominated by native grass and forb species including <i>Thyridolepis mitchelliana</i> , <i>Brunonia australis</i> and <i>Calotis cuneifolia</i> . The more degraded parts of the community are mid-dense and contain a higher proportion of weeds species such as <i>Arctotheca calendula</i> . Native species in this part of the community are dominated by <i>Calotis cuneifolia</i> , <i>Erodium crinitum</i> and <i>Chelianthese sieberi</i> .
Justification for PCT selection	The occurrence of this PCT is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community is restricted to one location east of Gilgandra. The site was dominated by Dirty Gum on very sandy red soils. Groundcover species diversity was high and consistent with those listed on the PCT description for this species including <i>Brunonia australis</i> .
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Dirty Gum – White Cypress Pine tall woodland of alluvial sand (sand monkeys) in the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion.</p>

Table B16 PCT 244




PCT 244 - Poplar Box grassy woodland on alluvial clay - loams soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt)	
Vegetation formation	Grassy Woodlands
Vegetation class	Floodplain Transition Woodlands
PCT ID	244
PCT % cleared	73%
Plots sampled	T2-P19, T2MP25, T2MP26, T2-P24, T2-P27
Area of impact	31.84 hectares
Floristic description	<p>The community is a mid-high to tall woodland or open woodland, averaging 13 metres high, dominated by <i>Eucalyptus populnea</i> subsp. <i>bimbil</i> (Poplar Box) with sparse occurrences of <i>Brachychiton populneus</i> (Kurrajong).</p> <p>The shrub layer is absent or sparse with some thickets in places. Tall shrub species include <i>Geijera parviflora</i> (Wilga) and <i>Eremophila glabra</i>. Low shrubs include <i>Maireana microphylla</i> and <i>Abutilon</i> spp.</p> <p>The ground cover is mid-dense to sparse and may contains low shrubs. A range of grass species is also present including <i>Austrostipa scabra</i> subsp. <i>scabra</i>, <i>Chloris truncata</i>, <i>Chloris divaricata</i> <i>Austrodanthonia racemosum</i> and <i>Digitaria brownii</i>.</p> <p>Forb species include <i>Calotis lappulacea</i>, <i>Arthropodium minus</i> and <i>Rostellularia adscendens</i> subsp. <i>adscendens</i>.</p> <p>Weed species were apparent however sparse, including <i>Medicago</i> spp. and <i>Lycium ferocissimum</i>.</p>
Justification for PCT selection	<p>The community is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT occurs mostly just north of Narromine on flat alluvial plains that retain some wet/water areas after heavy rainfall and there are dense patches of Poplar Box regrowth in low lying areas. It occurs rising out from ephemeral drainage lines on alluvial clays and was heavily impacted by drought conditions due to livestock grazing.</p>
Conservation significance	<p>The woodland occurrences are also consistent with the EEC <i>Poplar Box grassy woodland</i> (EPBC Act).</p>
Photograph	 <p>Poplar Box grassy woodland on alluvial clay-loams soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).</p>

Table B17 PCT 247

PCT 247 - Lignum shrubland wetland on regularly flooded alluvial depressions in the Brigalow Belt South bioregion and Darling Riverine Plains bioregion	
Vegetation formation	Freshwater Wetlands
Vegetation class	Inland Floodplain Shrublands
PCT ID	247
PCT % cleared	63%
Plots sampled	T1-P21, BM1*, BM2*
Area of impact	6.91 hectares
Floristic description	<p>This community is a tall shrubland or open shrubland usually to two metres high. There is a lack of canopy species within the community, with no scattered trees present. The dominant shrub species is <i>Sclerolaena muricata</i>.</p> <p>Whilst groundcover species increase in diversity the ground cover may be dense after rains or inundation but is very sparse during drought. Grass species include <i>Paspalidium jubiflorum</i> (Warrego Summer Grass) and <i>Enteropogon acicularis</i> (Curly Windmill Grass).</p> <p>Forbs include <i>Alternanthera denticulata</i>, <i>Lobelia concolor</i>, <i>Einadia polygonoides</i> and <i>Solanum esuriale</i>. <i>Carex inversa</i>, <i>Juncus spp.</i> and <i>Marsilea drummondii</i> (Nardoo fern) were also present within the survey.</p>
Justification for PCT selection	Although there is a lack of dominant shrubs, the absence of a canopy layer and the composition of the native species indicates that this PCT is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Lignum occurred as scattered plants in poor health due to lack of water but grasses including <i>Paspalidium</i> dominated the groundcover.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Lignum shrubland wetland on regularly flooded alluvial depressions in the Brigalow Belt South Bioregion and Darling Riverine Plains Bioregion</p>

* Benchmark data used

Table B18 PCT 248

PCT 248 - Mixed box eucalypt woodland on low sandy-loam rises on alluvial plains in central western NSW	
Vegetation formation	Grassy Woodlands
Vegetation class	Floodplain Transition Woodlands
PCT ID	248
PCT % cleared	80%
Plots sampled	T1-P24, T2P37, BM1*
Area of impact	14.71 hectares
Floristic description	<p>This community is a tall woodland averaging about 14 metres high dominated by <i>Eucalyptus pilligaensis</i> (Pilliga Box) and <i>Eucalyptus populnea subsp. bimbil</i> (Poplar Box).</p> <p>Shrubs are very sparse but include <i>Sclerolaena birchii</i>, <i>Sclerolaena muricata</i> and <i>Maireana enchylaenoides</i>.</p> <p>The ground cover is usually mid-dense and is dominated by grasses such as <i>Austrostipa verticillata</i>, <i>Cynodon dactylon</i>, <i>Enteropogon acicularis</i> and <i>Rytidosperma fulvum</i>.</p> <p>Forbs such as <i>Sida corrugata</i>, <i>Dysphania multifida</i>, <i>Zaleya galericulata</i> and <i>Lepidium pseudohyssopifolium</i>, <i>Einadia nutans</i>, <i>Einadia trigonos</i> and <i>Neptunia gracilis</i> are also present.</p>
Justification for PCT selection	This PCT is consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). The upper canopy included a general mix of Inland Grey Box, White Box, Poplar Box and Fuzzy Box as per the PCT classification.
Conservation significance	The one occurrence of this community near the Macquarie River is commensurate with Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (BC Act and Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (EPBC Act).
Photograph	 <p>Mixed box eucalypt woodland on low sandy-loam rises on alluvial plains in central western NSW.</p>

* Benchmark data used

Table B19 PCT 250

PCT 250 - Derived tussock grassland of the central western plains and lower slopes of NSW	
Vegetation formation	Grasslands
Vegetation class	Western Slopes Grasslands
PCT ID	250
PCT % cleared	0 - derived
Plots sampled	None - BM1*, BM2*, BM3*, BM4*, BM5*
Area of impact	82.84 hectares
Floristic description	<p>Mid-high to tall grasslands that have been derived from clearing of woodland vegetation in central west NSW. Scattered trees such as Western Rosewood (<i>Alectryon oleifolius</i> subsp. <i>canescens</i>), Kurrajong (<i>Brachychiton populneus</i> subsp. <i>trilobus</i>) and White Cypress Pine (<i>Callitris glaucophylla</i>) may occur.</p> <p>Shrubs are absent or very sparse and may include <i>Acacia deanei</i> subsp. <i>deanei</i>, <i>Geijera parviflora</i>, <i>Eremophila mitchellii</i>, <i>Acacia decora</i>, <i>Rhagodia spinescens</i> and the low shrub <i>Sclerolaena birchii</i>.</p> <p>The ground cover usually dense especially after rain but may be sparse during dry times. It contains a large array of grasses that form different associations across this broad community. Common grass species include <i>Aristida calycina</i> var. <i>calycina</i>, <i>Aristida jerichoensis</i> var. <i>subspinulifera</i>, <i>Aristida ramosa</i>, <i>Austrodanthonia setacea</i>, <i>Austrostipa scabra</i> subsp. <i>scabra</i>, <i>Bothriochloa macra</i>, <i>Chloris truncata</i>, <i>Enteropogon acicularis</i>, <i>Eragrostis lacunaria</i>, <i>Dichanthium sericeum</i> subsp. <i>sericeum</i> and <i>Digitaria brownii</i>.</p> <p>Forbs include <i>Chamaesyce drummondii</i> and <i>Dichondra repens</i>. The rock fern <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i> is often present.</p>
Justification for PCT selection	Occurrence of this community viewed over the fence were consistent with the dominant groundcover grass species for this community and scattered paddock trees indicate it is likely to be derived. Even in drought conditions, this PCT appeared to have a good cover of native grasses and was topographically consistent with the location of this PCT.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

* Benchmark data used

Table B20 PCT 255


PCT 255 - Mugga Ironbark - Buloke- Pilliga Box - White Cypress Pine - shrubby woodland on sandstone in Dubbo region south western Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	255
PCT % cleared	50%
Plots sampled	T1-P15, T2-BP2, T2-BP5, T2-BP5-2
Area of impact	11.77 hectares
Floristic description	<p>This community is comprised of tall woodland with trees to 20 metres high, dominated by <i>Eucalyptus sideroxylon</i> (Mugga Ironbark), <i>Eucalyptus pilligaensis</i> (Pilliga Box) and <i>Callitris glaucophylla</i> (White Cypress Pine). A mid-dense shrub understorey is usually present unless heavily grazed. The shrub layer within this survey was sparse with the only species observed as <i>Solanum ferocissimum</i>.</p> <p>The ground cover includes grass species such as <i>Austrostipa scabra</i> subsp. <i>scabra</i>, <i>Austrostipa verticillata</i>, <i>Eragrostis lacunaria</i> and <i>Panicum effusum</i>.</p> <p>Forb species including <i>Brunoniella australis</i>, <i>Lomandra filiformis</i> as well as <i>Cheilanthes sieberi</i> were also present.</p>
Justification for PCT selection	Despite the lack of shrub species within this PCT, floristic composition is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Mugga Ironbark was dominant and occurs as a small roadside remnant north of Narromine. Although the sandstone component of this community was not evident in the plot, it did occur in the wider study area and the community is likely to have been connected to former cleared patches of the community on farming land.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Mugga Ironbark- Buloke- Pilliga Box- White Cypress Pine- shrubby woodland on sandstone in Dubbo region south western Brigalow Belt South Bioregion.</p>

Table B21 PCT 256


PCT 256 - Green Mallee tall mallee woodland on rises in the Pilliga - Goonoo regions, southern Brigalow Belt South bioregion	
Vegetation formation	Semi-arid Woodlands (Shrubby sub-formation)
Vegetation class	Inland Rocky Hill Woodlands
PCT ID	256
PCT % cleared	23%
Plots sampled	T1-MP25
Area of impact	0.27 hectares
Floristic description	<p>This community consists of tall mallee woodland to about 8m high dominated by <i>Eucalyptus viridis</i> (Green Mallee).</p> <p>The shrub layer is sparse to mid-dense and contains species such as <i>Dodonaea viscosa</i>, <i>Solanum ferocissimum</i> and <i>Acacia deanei</i>.</p> <p>The ground cover is sparse and includes the grass species <i>Austrostipa scabra</i>, <i>Enteropogon acicularis</i> and <i>Austrodanthonia fulva</i>. <i>Dianella revoluta</i> and <i>Amyema spp.</i> were also observed in the survey.</p>
Justification for PCT selection	The lack of shrub and grass species within this PCT are generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Green Mallee was dominant in this very small patch within a very low rise in the Pilliga and although shrubs occurred in the adjacent PCTs they were less dominant in the Green Mallee PCT.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Green Mallee tall mallee woodland on rises in the Pilliga- Goonoo regions, southern Brigalow Belt South Bioregion.</p>

Table B22 PCT 394

PCT 394 - Narrow-leaved Ironbark - White Cypress Pine woodland on slopes and flats in the Coonabarabran, Pilliga scrub regions	
Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	North-west Slopes Dry Sclerophyll Woodlands
PCT ID	394
PCT % cleared	36%
Plots sampled	T1-MP31, T1-MP34, T2-P23, T1-P14, T1-P15 T1-MP18, T1-MP20, T1-MP30, T1-MP42 (woodland form) T1-MP22, T1-MP23, T2-MP9, T2-MP8 (post fire derived native shrubland form)
Area of impact	69.66 hectares
Floristic description	<p>This community is a tall open forest or woodland usually dominated by <i>Eucalyptus crebra</i> (Narrow-leaved Ironbark), Blakely's Red Gum <i>Eucalyptus blakelyi</i> (Blakely's Red Gum), and <i>Callitris glaucophylla</i> (White Cypress Pine) with <i>Allocasuarina luehmannii</i> and <i>Brachychiton populneus</i>.</p> <p>The shrub layer is sparse to mid-dense and includes <i>Melichrus urceolatus</i>, <i>Melaleuca uncinata</i>, <i>Acacia mariae</i>, <i>Acacia murrayana</i>, <i>Acacia deanei</i> and <i>Geijera parviflora</i>.</p> <p>The ground cover is quite sparse with bare ground common. Grass species include <i>Aristida jerichoensis</i> and <i>Austrostipa scabra</i>.</p> <p>Forb species include <i>Dianella revoluta</i>, <i>Einadia hastata</i> and <i>Calotis cuneifolia</i>.</p>
Justification for PCT selection	<p>Although the occurrence of this PCT is degraded and exhibits low native species diversity, it is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This low species diversity is likely attributed to the drought conditions during the survey and history of disturbance where it predominately occurs in the Pilliga on flats.</p> <p>Narrow-leaved Ironbark is the dominant eucalypt with White Cypress Pine varying from moderate to high density.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

PCT 394 - Narrow-leaved Ironbark - White Cypress Pine woodland on slopes and flats in the Coonabarabran, Pilliga scrub regions

Photograph



Narrow-leaved Ironbark, White Cypress Pine woodland on slopes and flats in the Coonabarabran, Pilliga scrub regions (woodland zone).



Narrow-leaved Ironbark, White Cypress Pine woodland on slopes and flats in the Coonabarabran, Pilliga scrub regions (post fire derived native shrubland zone).

Table B23 PCT 397


PCT 397 - Poplar Box - White Cypress Pine shrub grass tall woodland of the Pilliga - Warialda region, Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	Pilliga Outwash Dry Sclerophyll Forests
PCT ID	397
PCT % cleared	45%
Plots sampled	T1-MP33, T2-MP11, T2-MP12, T2-MP17, T2-MP18, T2-MP39
Area of impact	15.78 hectares
Floristic description	<p>This community is a tall woodland dominated by <i>Eucalyptus populnea</i> subsp. <i>bimbil</i> (Poplar Box) and <i>Callitris glaucophylla</i> (White Cypress Pine) with other trees including <i>Allocasuarina luehmannii</i> (Buloke).</p> <p>The shrub layer is sparse with low native species diversity but includes <i>Acacia deanii</i>, <i>Melichrus urceolatus</i> and <i>Solanum ferocissimum</i>.</p> <p>The ground cover is sparse and dominated by grasses and forbs such as <i>Austrostipa scabra</i> subsp. <i>scabra</i>, <i>Aristida ramosa</i>, <i>Enteropogon acicularis</i> and <i>Rytidosperma</i> spp. Forb species include <i>Lomandra leucocephala</i>, <i>Einadia trigonos</i>, <i>Cheilanthes sieberi</i> and <i>Dianella revoluta</i>.</p>
Justification for PCT selection	The occurrence of this PCT within the proposal site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This PCT was dominated by White Cypress Pine with only scattered Poplar Box. The shrub layer varied across the patch and the groundcover was sparse due to drought conditions. The species that were recorded are consistent with the classification of this PCT.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Poplar Box - White Cypress Pine shrub grass tall woodland of the Pilliga - Warialda region, Brigalow Belt South bioregion</p>

Table B24 PCT 398

PCT 398 - Narrow - leaved Ironbark - White Cypress Pine - Buloke tall open forest on lower slopes and flats in the Pilliga Scrub and surrounding forests in the central north Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	398
PCT % cleared	27%
Area of impact	369.78 hectares
Plots sampled	T1-MP9, T1-MP10, T2-MP2, T2-MP1, T2-MP5, T1-MP20, T2-MP20, T1-MP35, T1-MP36, T2-MP19 T1-MP1, T1-MP2, T1-MP3, T1-MP6, T1-MP7, T2-MP4, T2-MP14, T2-MP15 (woodland condition) T1-MP40, T1-MP41 (shrub and Callitris cleared derived condition)
Floristic description	<p>This community is a tall open forest dominated by <i>Eucalyptus crebra</i> (Narrow-leaved Ironbark), <i>Callitris glaucophylla</i> (White Cypress Pine) and <i>Allocasuarina luehmannii</i> (Buloke).</p> <p>The shrub layer is sparse and includes <i>Acacia deanei</i>.</p> <p>The ground cover is also sparse and mostly covered with leaf litter. Grass species include <i>Aristida ramosa</i>, <i>Aristida jerichoensis</i> and <i>Austrostipa scabra</i>.</p> <p>The mat-rushes <i>Lomandra filiformis</i>, <i>Lomandra leucocephala</i> and <i>Cheilanthes sieberi</i> are also abundant. Forb species include <i>Calotis cuneifolia</i>, <i>Einadia hastata</i> and <i>Dianella revoluta</i>.</p>
Justification for PCT selection	The dominant tree species of Narrow-leaved Ironbark, Buloke and White Cypress Pine found within this community are consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). The dominance of Buloke and White Cypress Pine varied throughout patches of the Pilliga where it occurred most frequently.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.

PCT 398 - Narrow - leaved Ironbark - White Cypress Pine - Buloke tall open forest on lower slopes and flats in the Pilliga Scrub and surrounding forests in the central north Brigalow Belt South bioregion

Photograph



Narrow-leaved Ironbark - White Cypress Pine - Buloke tall open forest on lower slopes and flats in the Pilliga Scrub and surrounding forests in the central north Brigalow Belt South bioregion (woodland condition).



Narrow-leaved Ironbark - White Cypress Pine- Buloke tall open forest on lower slopes and flats in the Pilliga Scrub and surrounding forests in the central north Brigalow Belt South bioregion (shrub and Callitris cleared condition).

Table B25 PCT 399


PCT 399 - Red Gum - Rough-barked Apple +/- tea tree sandy creek woodland (wetland) in the Pilliga - Goonoo sandstone forests, Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	399
PCT % cleared	10%
Plots sampled	T2-P12, T2-P11, T1-MP17, T1-MP21, T1-MP29, T2-MP3, T2-MP16, T1-MP32
Area of impact	53.71 hectares
Floristic description	<p>This community is a tall riparian woodland or open woodland dominated by <i>Eucalyptus blakelyi</i> (Blakely's Red Gum) along a watercourse. <i>Angophora floribunda</i> (Rough-barked Apple), <i>Callitris glaucophylla</i> (White Cypress Pine), and <i>Allocasuarina luehmannii</i> (Buloke) grow on adjoining sandy valley flats.</p> <p>The shrub layer is sparse overall and includes <i>Leptospermum polygalifolium</i>, <i>Acacia deanei</i>, <i>Callistemon linearis</i> and <i>Cassinia arcuata</i>.</p> <p>Much of the ground cover in the watercourses are bare of vegetation covered with sand with patches of shrubs, sedges, water plants and rushes. Grass species include <i>Aristida ramosa</i>, whilst the forb species observed were <i>Wahlenbergia gracilis</i> and <i>Ajuga australis</i>.</p> <p>The sedge species <i>Cyperus lucidus</i>, and <i>Gahnia aspera</i> were identified within the community as well as <i>Juncus continuus</i>.</p>
Justification for PCT selection	The floristic layers are highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). The PCT in the proposal site is dominated by Rough-barked Apple and Blakely's Red Gum occurring along sandy creeks throughout the Pilliga.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Red Gum - Rough-barked Apple +/- tea tree sandy creek woodland (wetland) in the Pilliga - Goonoo sandstone forests, Brigalow Belt South bioregion.</p>

Table B26 PCT 404


PCT 404 - Red Ironbark - White Bloodwood +/- Burrows Wattle heathy woodland on sandy soil in the Pilliga forest	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	404
PCT % cleared	9%
Plots sampled	T2-MP5, T2-MP6, T2-MP7, T2-MP10
Area of impact	23.05 hectares
Floristic description	<p>Mid-high to tall woodland containing <i>Eucalyptus crebra</i> (Narrow-leaved Ironbark) and <i>Callitris glaucophylla</i> (White Cypress Pine).</p> <p>Shrub species include <i>Acacia deanei</i> and <i>Dodonaea viscosa</i>.</p> <p>The ground cover is very sparse due to disturbance. Grass species include <i>Enteropogon acicularis</i>, <i>Eragrostis</i> spp., <i>Aristida ramosa</i> and <i>Aristida jerichoensis</i>.</p> <p>Forb species include <i>Lomandra longifolia</i> and <i>Lomandra leucocephala</i></p>
Justification for PCT selection	<p>The canopy species and additional floristic layers are generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the central section of the Pilliga on sandy flats grading out of a sandstone PCT. The community was dominated by Red Ironbark with scattered occurrences of White Bloodwood. Burrow Wattle occurred on the upper gentle slope of the patch. Forbs were not diverse due to drought conditions but included <i>Lomandra</i> species.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Red Ironbark - White Bloodwood +/- Burrows Wattle heathy woodland on sandy soil in the Pilliga forest.</p>

Table B27 PCT 406


PCT 406 - White Bloodwood – Motherumbah - Red Ironbark shrubby sandstone hill woodland/open forest mainly in east Pilliga forests	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	406
PCT % cleared	6%
Plots sampled	T1-MP15, T1-MP16
Area of impact	2.30 hectares
Floristic description	<p>Mid-high to tall shrubby woodland or open forest dominated by White Bloodwood (<i>Corymbia trachyphloia</i> subsp. <i>amphistomatica</i>) with Motherumbah (<i>Acacia cheelii</i>) with Red Ironbark (<i>Eucalyptus fibrosa</i>) and some Black Cypress Pine (<i>Callitris endlicheri</i>).</p> <p>The shrub layer contains the tall shrub <i>Acacia cheelii</i> and <i>Allocasuarina diminuta</i> and other shrubs such as <i>Persoonia sericea</i>, <i>Leptospermum parvifolium</i>, <i>Hibbertia incana</i>, <i>Cassinia arcuata</i>, <i>Calytrix tetragona</i> and <i>Grevillea floribunda</i>.</p> <p>The ground cover is sparse and includes the grass species <i>Austrodanthonia induta</i> and <i>Aristida ramosa</i>. Sedges include <i>Lepidosperma laterale</i> and <i>Schoenus kennyi</i>.</p> <p>Forb species include, <i>Stypandra glauca</i>, <i>Gonocarpus elatus</i>, <i>Calotis lappulacea</i>, <i>Dianella revoluta</i> var. <i>revoluta</i> and <i>Lomandra filiformis</i>.</p>
Justification for PCT selection	<p>The occurrence of this PCT is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the central section of the Pilliga within the proposal site on a rise with sandstone rocks at the surface. The community was very dense and shrubby with Motherumbah dominant, although it had been impacted by fire within the last 3-5 years. Due to the density of shrub regrowth after the fire and drought conditions, the groundcover diversity and percent cover was very low.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>White Bloodwood – Motherumbah - Red Ironbark shrubby sandstone hill woodland/open forest mainly in east Pilliga forests</p>

Table B28 PCT 409


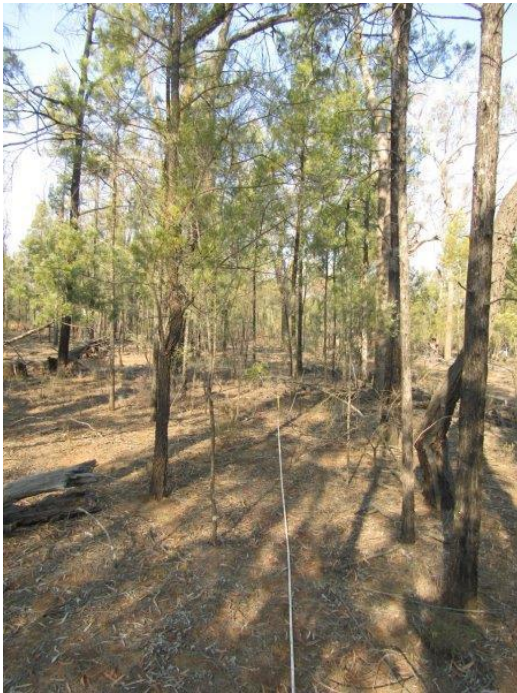
PCT 409 - Dirty (Baradine) Gum - White Bloodwood - White Cypress Pine - Motherumbah shrubby woodland on sandy soils in the Pilliga Scrub and surrounding region, Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	409
PCT % cleared	17%
Plots sampled	T1-MP28
Area of impact	0.82 hectares
Floristic description	<p>This community is a mid-high to tall woodland dominated by <i>Eucalyptus chloroclada</i> (Dirty Gum), <i>Corymbia trachyphloia</i> and <i>Callitris glaucophylla</i> (White Cypress Pine).</p> <p>The shrub layer is sparse and consists of <i>Acacia mariae</i>, <i>Acacia deanei</i>, <i>Melichrus urceolatus</i>, <i>Brachyloma daphnoides</i> and <i>Grevillea floribunda</i>.</p> <p>The ground cover is very sparse to sparse and includes grass species such as <i>Austrostipa scabra</i> and <i>Aristida spp.</i> The mat-rushes <i>Lomandra leucocephala</i> and <i>Lomandra multiflora</i> are also present.</p> <p>Forb species observed includes <i>Einadia nutans</i>.</p>
Justification for PCT selection	<p>The occurrence of this PCT within the proposal site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the central section of the Pilliga within the proposal site on gently slopes grading to flats. The community was shrubby with Motherumbah dominant, although it had been impacted by fire within the last 3-5 years. Due to the density of shrub regrowth after the fire and drought conditions, the groundcover diversity and percent cover was very low.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Dirty (Baradine) Gum - White Bloodwood - White Cypress Pine - Motherumbah shrubby woodland on sandy soils in the Pilliga Scrub and surrounding region, Brigalow Belt South bioregion.</p>

Table B29 PCT 411

PCT 411 - Buloke - White Cypress Pine woodland on outwash plains in the Pilliga Scrub and Narrabri regions, Brigalow Belt South Bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	Pilliga Outwash Dry Sclerophyll Forests
PCT ID	411
PCT % cleared	25
Plots sampled	BM1*, BM2*, BM3*
Area of impact	8.76 hectares
Floristic description	This plant community features a mid to tall woodland dominated by Buloke (<i>Allocasuarina leuhmannii</i>) that often constitutes over 70% of the tree cover. Other tree species include <i>Eucalyptus crebra</i> and <i>Callitris glaucophylla</i> . The community often occurs on orange sandy clay – loam soil on outwash flats over sandstone in plain or rise landscape patterns, mainly in the Pilliga outwash sub-region. The shrub layer is often sparse, and the ground layer is sparse or very bare.
Justification for PCT selection	The occurrence of this PCT within the site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the northern section of the Pilliga within the proposal site on flats. The canopy was dominated by dense Buloke and to a lesser extent White Cypress Pine. Large trees were mostly absent from the community. Due to the density of Buloke, drought conditions and some evidence of recent commercial timber harvesting, groundcover diversity was low.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Buloke – White Cypress Pine woodland on outwash plains of the Pilliga Scrub and Narrabri regions, Brigalow Belt South Bioregion</p>

* Benchmark data used

Table B30 PCT 414


PCT 414 - White Mallee - Dwyer's Red Gum mallee heath on sands in the Goonoo - Pilliga region, Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	414
PCT % cleared	40%
Plots sampled	T1-MP27, T1-MP26
Area of impact	7.32 hectares
Floristic description	<p>This community is a tall mallee woodland dominated by the mallee form of <i>Eucalyptus dwyeri</i> (Dwyers Gum) with a diverse heath understorey. Another species observed within this community is <i>Corymbia trachyphloia</i> (White Bloodwood).</p> <p>A dense to mid-dense shrub layer is present including species such as <i>Grevillea floribunda</i>, <i>Melichrus urceolatus</i>, <i>Senna artemisioides</i>, <i>Cassinia arcuata</i>, <i>Melaleuca erubescens</i>, <i>Darwinia</i> spp., <i>Allocasuarina diminuta</i>, <i>Micromyrtus ciliata</i>, <i>Acacia burrowii</i> and <i>Acacia mariae</i>.</p> <p>The ground cover is often very sparse with bare patches of soil prevalent. Ground cover species include <i>Dianella revoluta</i>, <i>Lomandra leucocephala</i> and the vine <i>Cassytha pubescens</i>.</p>
Justification for PCT selection	<p>The occurrence of this PCT within the site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the central and southern sections of the Pilliga north of Etto Creek within the proposal site on sandy flats. The canopy was dominated by scattered White Mallee and Red Ironbark and many of the Mallee were experiencing severe dieback. There was a dense layer of shrubs, including <i>Allocasuarina diminuta</i> and <i>Acacia mariae</i>. The shrub and canopy layer were all experiencing severe dieback and were regrowth from a previous fire. Due to the density of shrubs and drought conditions groundcover diversity was low.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>White Mallee - Dwyer's Red Gum mallee heath on sands in the Goonoo - Pilliga region, Brigalow Belt South bioregion.</p>

Table B31 PCT 436


PCT 436 - Derived Kurrajong grassy open woodland / isolated trees in the BBS and Nandewar Bioregion	
Vegetation formation	Grassy Woodlands
Vegetation class	Western Slopes Grassy Woodlands
PCT ID	436
PCT % cleared	0
Plots sampled	T2-P29, T2-P28, T2-SP1
Area of impact	5.98 hectares
Floristic description	<p>This community is a grassy woodland due to the absence of trees and shrubs observed within the survey.</p> <p>The ground cover is usually dense due to absence of tree cover and loam to clay soils. Grasses include <i>Austrodanthonia setacea</i>, <i>Bothriochloa macra</i>, <i>Digitaria brownii</i> and <i>Austrostipa ramosissima</i>.</p> <p>Forbs within the community included <i>Triptilodiscus pygmaeus</i>, <i>Xerochrysum bracteatum</i>, <i>Dichondra repens</i> and <i>Oxalis</i> spp.</p> <p>Scramblers also included <i>Convolvulus erubescens</i>.</p> <p>Weeds are often abundant and include <i>Medicago polymorpha</i>, <i>Bromus molliformis</i>, <i>Hordeum leporinum</i>, <i>Hypochaeris radicata</i>, <i>Polygonum aviculare</i>, <i>Trifolium arvense</i>, <i>Vulpia bromoides</i>, <i>Arctotheca calendula</i>, <i>Avena fatua</i>, <i>Lolium rigidum</i>, <i>Carthamus lanatus</i> and <i>Trifolium glomeratum</i>.</p>
Justification for PCT selection	<p>The lack of tree and shrub layers indicate that the occurrence of this PCT within the site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the southern section of the proposal site but also occurred in the central sections in the wider locality. It was characterised by a groundcover layer dominated by <i>Aristida</i> species and scattered trees of Kurrajong on gently undulating slopes.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Derived Kurrajong grassy open woodland / isolated trees in the Brigalow Belt South and Nandewar Bioregion.</p>

Table B32 PCT 444


PCT 444 - Silver-leaved Ironbark grassy tall woodland on clay - loam soils on plains in the Brigalow Belt South bioregion	
Vegetation formation	Grassy Woodlands
Vegetation class	Western Slopes Grassy Woodlands
PCT ID	444
PCT % cleared	83%
Plots sampled	T2-P20
Area of impact	1.11 hectares
Floristic description	<p>This community is a tall to mid-high woodland dominated by <i>Eucalyptus melanophloia</i> (Silver-leaved Ironbark) with <i>Brachychiton populneus</i> (Kurrajong), <i>Callitris glaucophylla</i> (White Cypress Pine) and <i>Eucalyptus populnea</i> (Poplar Box).</p> <p>A shrub layer is absent within the community.</p> <p>The ground cover is sparse due to dry conditions however, can become dense in wetter seasons. Grass species include <i>Rytidosperma caespitosum</i>, <i>Austrostipa scabra</i>, <i>Austrostipa verticillata</i>, <i>Enteropogon acicularis</i> and <i>Chloris ventricosa</i></p> <p>Forb species include <i>Einadia nutans</i>, <i>Phyllanthus virgatus</i>, <i>Lepidium hyssopifolium</i>, <i>Dichopogon fimbriatus</i>, <i>Maireana enchylaenoides</i> and <i>Dichondra repens</i>.</p>
Justification for PCT selection	<p>The tree species observed and the absence of a shrub layer indicate that the occurrence of this PCT within the site is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the central section of the proposal site as an isolated roadside patch. It occurred on dark clay loam soils near Mount Tenandra on a flat plain. The groundcover was grassy and included <i>Rytidosperma</i> and <i>Austrostipa</i> species.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Silver-leaved Ironbark grassy tall woodland on clay-loam soils on plains in the Brigalow Belt South Bioregion.</p>

Table B33 PCT473


PCT 473 - Red gum - Rough-barked Apple - Narrow-leaved Ironbark - cypress pine grassy open forest on flats and drainage lines in the Goonoo and surrounding forests, southern Brigalow Belt South Bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Western Slopes Dry Sclerophyll Forests
PCT ID	473
PCT % cleared	50%
Plots sampled	T2-P8, T2-P7, T2-P9
Area of impact	15.26 hectares
Floristic description	Tall open forest or woodland with trees including red gums (<i>Eucalyptus chloroclada</i> or <i>Eucalyptus blakelyi</i>), <i>Angophora floribunda</i> , <i>Callitris glaucophylla</i> , <i>Eucalyptus crebra</i> , <i>Allocasuarina luehmannii</i> or <i>Callitris endlicheri</i> . The shrub layer is sparse and includes <i>Pittosporum angustifolium</i> , <i>Lissanthe strigosa</i> subsp. <i>strigosa</i> , <i>Enchylaena tomentosa</i> , <i>Dodonaea viscosa</i> subsp. <i>cuneata</i> , <i>Geijera parviflora</i> and <i>Acacia decora</i> . The ground cover is sparse to mid-dense depending on rain. It includes grasses such as <i>Microlaena stipoides</i> var. <i>stipoides</i> and <i>Austrostipa scabra</i> subsp. <i>scabra</i> and forbs such as <i>Ranunculus sessiliflorus</i> var. <i>sessiliflorus</i> , <i>Daucus glochidiatus</i> , <i>Rumex brownii</i> , <i>Crassula sieberiana</i> subsp. <i>sieberiana</i> ; climbers include <i>Desmodium varians</i> and <i>Glycine tabacina</i> ; the rock fern <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i> is common along the sedges <i>Carex inversa</i> and <i>Carex appressa</i> .
Justification for PCT selection	This described community is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred on flats in the Pilliga but was not associated with drainage lines. It occurred on flats in the north of the proposal site on private properties in the Bohena Creek area. The groundcover was sparse and not diverse during surveys due to drought conditions.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Red gum - Rough-barked Apple - Narrow-leaved Ironbark - cypress pine grassy open forest on flats and drainage lines in the Goonoo and surrounding forests, southern Brigalow Belt South Bioregion</p>

Table B34 PCT 589


PCT 589 - White Box - White Cypress Pine - Silver-leaved Ironbark grassy woodland on mainly clay loam soils on hills mainly in the Nandewar Bioregion	
Vegetation formation	Grassy Woodlands
Vegetation class	Western Slopes Grassy Woodlands
PCT ID	589
PCT % cleared	83%
Plots sampled	T1-MP37
Area of impact	1.23 hectares
Floristic description	<p>Tall woodland to open forest (with <i>Callitris</i> regrowth) dominated by White Box (<i>Eucalyptus albens</i>) and White Cypress Pine (<i>Callitris glaucophylla</i>) and sometimes with Silver-leaved Ironbark (<i>Eucalyptus melanophloia</i>) or Yellow Box (<i>Eucalyptus melliodora</i>).</p> <p>The shrub layer is sparse and includes <i>Geijera parviflora</i>, <i>Cassinia laevis</i>, <i>Notelaea microcarpa</i> var. <i>microcarpa</i>, <i>Dodonaea viscosa</i> subsp. <i>angustifolia</i>, <i>Beyeria viscosa</i>, <i>Senna</i> form taxon <i>coriacea</i>, <i>Cassinia quinquefaria</i> and <i>Bursaria spinosa</i> subsp. <i>spinosa</i>.</p> <p>The ground layer is dense to mid-dense with a well developed mix of grasses and forbs. Grass species include <i>Austrostipa scabra</i>, <i>Cymbopogon refractus</i>, <i>Dichanthium sericeum</i> subsp. <i>sericeum</i>, <i>Themeda australis</i>, <i>Aristida personata</i>, <i>Austrostipa aristiglumis</i>, <i>Austroanthonia bipartita</i>, <i>Eragrostis leptostachya</i> and <i>Aristida leptopoda</i>.</p> <p>Forb species include <i>Dichondra</i> species, <i>Asperula conferta</i>, <i>Brunoniella australis</i>, <i>Calotis lappacea</i>, <i>Cullen tenax</i>, <i>Mentha satureioides</i> along with the sedge <i>Cyperus gracilis</i> and the climber <i>Glycine tabacina</i>.</p>
Justification for PCT selection	<p>This described community is generally consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Some of these attributes were missing in this zone as it had been recently logged on private land making PCT selection difficult, however, logged trees on the ground were mostly White Box and White Cypress Pine.</p>
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>White Box - White Cypress Pine - Silver-leaved Ironbark grassy woodland on mainly clay loam soils on hills mainly in the Nandewar Bioregion</p>

Table B35 PCT 599



PCT 599 - Blakely's Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South and Nandewar bioregions	
Vegetation formation	Grassy Woodlands
Vegetation class	Western Slopes Grassy Woodlands
PCT ID	599
PCT % cleared	80%
Plots sampled	T2-P35, T2-P36
Area of impact	2.21 hectares
Floristic description	<p>This community is a tall woodland dominated by <i>Eucalyptus blakelyi</i> (Blakely's Red Gum) and <i>Eucalyptus melliodora</i> (Yellow Box) often with <i>Eucalyptus microcarpa</i> (Grey Box).</p> <p>The shrub layer is sparse and includes species such as <i>Geijera parviflora</i>, <i>Eremophila debilis</i>, <i>Sclerolaena muricata</i> and <i>Maireana microphylla</i>.</p> <p>The ground cover is usually mid-dense to dense dominated by grasses and forbs. Grass species include <i>Austrostipa aristiglumis</i>, <i>Cynodon dactylon</i>, <i>Chloris truncata</i>, <i>Chloris ventricosa</i>, <i>Paspalidium constrictum</i> and <i>Austrostipa verticillata</i>.</p> <p>Forb species include <i>Dichondra repens</i>, <i>Arthropodium spp.</i>, <i>Einadia nutans</i>, <i>Sida cunninghamii</i>, <i>Vittadinia cuneata</i>, <i>Sida corrugata</i> and <i>Dianella longifolia</i>. The climbers <i>Glycine tabacina</i> and <i>Glycine clandestina</i> are also present.</p>
Justification for PCT selection	<p>The occurrence of this PCT within the site is consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). Yellow Box was the dominant canopy species and the groundcover diversity was high even in drought conditions, likely owing to its occurrence on a narrow roadside patch with no grazing. It occurred on a flat area south of the Macquarie River at the southern end of the proposal site.</p>
Conservation significance	<p>Some parts of this community occur south of the Macquarie River within the study area and are consistent with the final determination for the EEC as White Box Yellow Box Blakely's Red Gum Woodland (BC Act) and White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland (EPBC Act)</p>
Photograph	 <p>Photograph 34. Blakely's Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South Bioregion and Nandewar Bioregions.</p>

Table B36 PCT 619

PCT 619 - Derived Wire Grass grassland of the NSW Brigalow Belt South bioregion and Nandewar bioregion	
Vegetation formation	Grasslands
Vegetation class	Western Slopes Grasslands
PCT ID	619
PCT % cleared	0
Plots sampled	T2-P10, T2-P3, T2-P22, T2-P21, T1-P10, T1-P4, T1-P6, T2-P2, BM1*
Area of impact	326.26 hectares
Floristic description	<p>This community is a mid-high derived tussock grassland dominated by species of <i>Aristida</i> (wire grass) including <i>Aristida muricata</i>, <i>Aristida behriana</i> and <i>Aristida ramosa</i>. Other grass species include <i>Austrodanthonia fulva</i>, <i>Enteropogon acicularis</i>, <i>Cynodon dactylon</i>, <i>Bothriochloa macra</i> and <i>Dactyloctenium radulans</i>.</p> <p>The forbs observed within the community include <i>Boerhavia dominii</i>, <i>Solanum esuriale</i>, <i>Hyalosperma</i> spp., <i>Alternanthera denticulata</i>, <i>Dichondra repens</i>, <i>Sida corrugata</i>, <i>Oxalis perennans</i>, <i>Solanum esuriale</i>, <i>Wahlenbergia gracilis</i>, <i>Portulaca</i> spp. and <i>Einadia nutans</i>.</p> <p>Isolated occurrences of trees and shrubs were observed with species such as <i>Sclerolaena muricata</i>, <i>Sclerolaena birchii</i>, <i>Alectryon oleifolius</i> and <i>Maireana microphylla</i> being present.</p>
Justification for PCT selection	<p>The lack of a canopy layer and isolated minimal occurrences of shrubs indicates that the occurrence of this PCT within the site is highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred extensively throughout the central and northern sections of the proposal site. In some cases it contained scattered paddock trees usually of Belah or Wilga. <i>Aristida</i> species dominated the groundcover layer and there was a good diversity of native species although percent cover of these species was low due to drought conditions. This derived community was generally less impacted by overgrazing and drought than the derived PCT49 (Windmill Grass) which occurred more commonly in the central sections.</p>
Conservation significance	<p>Not listed as a threatened ecological community under BC Act and EPBC Act. Occurrences of this PCT are not located near occurrences of Box Gum Woodland, and are thus not likely to be a derived form of this TEC.</p>
Photograph	 <p>Derived Wiregrass grassland of the NSW Brigalow Belt South bioregion and Nandewar bioregion</p>

* Benchmark data used

Table B37 PCT 746



PCT 746 - Brown Bloodwood - cypress - ironbark heathy woodland in the Pilliga region of the Brigalow Belt South Bioregion	
Vegetation formation	Wet Sclerophyll Forests (Shrubby sub-formation)
Vegetation class	Northern Escarpment Wet Sclerophyll Forests
PCT ID	746
PCT % cleared	n/a
Plots sampled	T1-BP1, T2-BP2
Area of impact	2.12 hectares
Floristic description	<p>Tall to very tall open forest. The most common species in this community are <i>Corymbia trachyphloia</i> subsp. <i>amphistomatica</i> (White Bloodwood), <i>Eucalyptus fibrosa</i> (Red Ironbark) and <i>Callitris endlicheri</i> (Black Cypress Pine).</p> <p>In the shrub layer is <i>Acacia cheelii</i> (Motherumbah) <i>Acacia doratoxylon</i> (Currawang) <i>Acacia pilligaensis</i> (Pilliga Wattle), <i>Cassinia arcuata</i>, <i>Cassinia laevis</i> (Cough Bush), <i>Grevillea floribunda</i> subsp. <i>floribunda</i> (Seven Dwarfs Grevillea), <i>Homoranthus flavescens</i>, <i>Melichrus urceolatus</i> (Urn Heath), <i>Persoonia cuspidifera</i>, <i>Pultenaea foliolosa</i> (A Bush Pea) and <i>Xanthorrhoea acaulis</i>.</p> <p>In the ground layer there is <i>Dianella revoluta</i> (Blueberry Lily), <i>Digitaria breviglumis</i>, <i>Goodenia rotundifolia</i>, <i>Hibbertia obtusifolia</i> (Horary Guinea Flower), <i>Lomandra multiflora</i> subsp. <i>multiflora</i> (Many Flowered Mat—rush), <i>Pomax umbellata</i> (Pomax), <i>Schoenus ericetorum</i>.</p>
Justification for PCT selection	The very tall canopy layer, scattered shrubs and sparse groundcovers indicates that the occurrence of this PCT within the site is highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). This community occurred in the mid section of the Pilliga on flats and was dominated by Brown Bloodwood and White Cypress Pine.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>Brown Bloodwood - cypress - ironbark heathy woodland in the Pilliga region of the Brigalow Belt South Bioregion</p>

Table B38 PCT 1384

PCT 1384 - White Cypress Pine – Bulloak - Ironbark woodland of the Pilliga area of the Brigalow Belt South bioregion	
Vegetation formation	Dry Sclerophyll Forests (Shrub/grass sub-formation)
Vegetation class	Pilliga Outwash Dry Sclerophyll Forests
PCT ID	1384
PCT % cleared	75%
Plots sampled	T1-MP12, BM1*, BM2*
Area of impact	8.77 hectares
Floristic description	<p>This community is dominated by <i>Callitris glaucophylla</i> (White Cypress Pine), <i>Angophora floribunda</i> (Rough-barked Apple) and <i>Allocasuarina luehmannii</i> (Bulloak) with occurrences of <i>Eucalyptus crebra</i> (Narrow-leaved Ironbark).</p> <p>This community also has a mid-dense shrub layer with species such as <i>Dodonaea viscosa subsp. angustissima</i>, <i>Melichrus urceolatus</i>, <i>Acacia deanei</i> and <i>Calytrix tetragona</i>.</p> <p>The ground layer is sparse with low native species diversity but includes forbs such as <i>Xerochrysum bracteatum</i> and <i>Dianella revoluta</i> as well as <i>Lomandra leucocephala</i>.</p>
Justification for PCT selection	The occurrence of the dominant tree species of Buloke and White Cypress Pine within this community is highly consistent with the attributes described for this PCT in the BioNet Vegetation Classification database (landform position, dominant canopy, soil types, location). It occurred on flats in the northern section of the Pilliga and the canopy stratum was dense resulting in only scattered shrub cover and minimal groundcover.
Conservation significance	Not listed as a threatened ecological community under BC Act and EPBC Act.
Photograph	 <p>White Cypress Pine – Bulloak - Ironbark woodland of the Pilliga area of the Brigalow Belt South bioregion.</p>

* Benchmark data used

Fauna habitat descriptions

Table B39 Fauna habitats: grassland with scattered trees



Grassland with scattered paddock trees	
Description	<p>Dominated by exotic crop species (eg Oats) or derived native grassland. Occasional isolated paddock trees or small groups of paddock trees are present. Paddock tree species comprise Narrow-leaved Grey Box (<i>Eucalyptus pilligaensis</i>) and occasional White Cypress Pine (<i>Callitris glaucophylla</i>). Many paddock trees are hollow-bearing.</p>
Fauna recorded	<p>A number of bird species typically associated with open grazing country were recorded. Galahs (<i>Eolophus roseicapillus</i>), Red-rumped Parrot (<i>Psephotus haematonotus</i>) and Eastern Rosella (<i>Platycercus eximius</i>) were recorded, often near hollows. The introduced Common Myna (<i>Sturnus tristis</i>) and Common Starling (<i>Sturnus vulgaris</i>) are likely to compete with native bird species for hollows. Small flocks of the Noisy Miner (<i>Manorina melanocephala</i>) were observed. Flocks of Welcome Swallows (<i>Hirundo neoxena</i>) were seen foraging above and in the pasture and grassland. Whistling Kites (<i>Haliastur sphenurus</i>) were observed at a nest in a paddock tree and Black Kites (<i>Milvus migrans</i>) were seen soaring above grassland.</p> <p>The introduced Brown Hare (<i>Lepus capensis</i>) and Fox (<i>Vulpes vulpes</i>), and Eastern Grey Kangaroo (<i>Macropus giganteus</i>) were observed in open paddocks. A range of microbats were recorded and would forage over the proposal site. Potential roosting habitat is present in hollow trees.</p> <p>South-eastern Morethia Skinks (<i>Morethia boulengeri</i>) and Ragged Snake-eyed Skinks (<i>Cryptoblepharus pannosus</i>) were seen basking on fallen timber, and Tree Dtellas (<i>Gehyra variegata</i>) were observed on paddock trees while spotlighting.</p>
Threatened species recorded or likely to occur	<ul style="list-style-type: none"> • Spotted Harrier – observed hunting over cleared agricultural land near Narromine, and in roadside vegetation in Gilgandra • Little Eagle – not observed during surveys, but could forage over agricultural land • Square-tailed Kite – not observed during surveys, but could forage over agricultural land • Yellow-bellied Sheath-tail-bat – recorded at various locations via Anabat surveys. Could roost and breed in paddock trees • Little Pied Bat – recorded north of Narrabri • Eastern Freetail Bat – recorded north of Narrabri • Five-clawed Worm-skink – not recorded, but may occur in the Narrabri area
Photograph	<div>  <p>Paddock trees over cropping</p> </div> <div>  <p>Derived native grassland</p> </div>

Table B40 Fauna habitats: woodland patches in agricultural land



Woodland patches in agricultural land	
Description	<p>Woodland vegetation is present as various-sized patches within agricultural land. This can comprise small patches within a larger paddock, riparian vegetation retained along creek lines, linear strips along roadsides and paper roads or 'laneways', and larger patches associated with travelling stock reserves.</p> <p>This vegetation comprises a canopy of eucalypts and Cypress Pine, often with a sparse understory and grassy ground layer. A high density of leaf litter and fallen timber is present, particularly along paper roads and in travelling stock reserves. Hollow-bearing trees and stags are present.</p> <p>Connectivity between patches varies. Some patches in agricultural land are isolated from other areas. Vegetation along creek lines and roads provides narrow strips of connectivity through the highly cleared agricultural landscape.</p> <p>This vegetation tends to be impacted by grazing, and clearing for firewood and fencing. In publicly accessible areas such as travelling stock reserves, vegetation and habitats are impacted by creation of tracks for dirt-bike riding, and rubbish dumping.</p>
Fauna recorded	<p>Large patches of woodland vegetation provided habitat for a wide range of bird species. Many small woodland birds occupy these habitats. A nest of a Wedge-tailed Eagle was observed in a woodland patch on a property near Narromine.</p> <p>Reptiles including a Yellow-faced Whip Snake, various geckos and skinks were observed. A Shingleback was observed on a road near Narromine.</p> <p>Ornate Burrowing Frogs were captured in pitfall traps on a property near Gilgandra after rain.</p>
Threatened species recorded or likely to occur	<ul style="list-style-type: none"> • Grey-crowned Babbler - the most common threatened species recorded during surveys, and often occurred in woodland patches in agricultural land. • Black Falcon – recorded in a small woodland patch with two Whistling Kite nests north of Narrabri, to the west of the study area • Varied Sittella – occasional records in larger woodland patches • Speckled Warbler – recorded in dense, shrubby roadside vegetation at Bohena Creek • Black-chinned Honeyeater – recorded at Leeches Creek Road near Gilgandra • Koala – there is an EES (2019a) record associated with roadside vegetation south of Narromine. No Koalas were recorded during surveys for the proposal other than in the Pilliga
Photograph	<div>  <p>Woodland on property south of Narromine</p> </div> <div>  <p>Woodland on property near Burroway</p> </div>

Table B41 Fauna habitats: the forests of the Pilliga

The forests of the Pilliga	
Description	<p>Much of the Pilliga is dominated by Narrow-leaved Ironbark (<i>Eucalyptus crebra</i>) and White Cypress Pine (<i>Callitris glaucophylla</i>) with a sparse understory. Other trees present include Pilliga Box (<i>E. pilligaensis</i>), Poplar Box (<i>E. populnea</i>) and White Bloodwood (<i>Corymbia trachyphloia</i>) among others. It is believed that prior to 1830 the Pilliga was an open, grassy woodland with low incidences of large old eucalypts and cypress pines. With the increase in grazing, and exclusion of fire, and later the introduction of logging, perennial grasses declined and the incidence of old trees decreased. The forest is now dominated by a mostly young overstorey of eucalypts, cypress pines and Buloke, and a dense understory of small eucalypts, cypress pines, Buloke and shrubs, but little grass (Date et al 2002).</p> <p>Forests of the Pilliga are impacted by logging, fire and grazing. Logging in the Pilliga is associated with habitats which have high frequencies of Narrow-leaved Ironbark and/or White Cypress Pine. Fire is also excluded from commercially valuable stands, but is used for fuel reduction in non-commercial stands. Grazing is also used to thin cypress pine regeneration (Date et al 2002). Date et al. (2002) found that many bird species are declining in the Pilliga as a result of these disturbance regimes, and will continue to do so without adaptive management for maintaining and rehabilitating their habitats. Box-ironbark forests have a large number of logs, stumps and dead trees, due to experienced intense logging but little fire (Date et al 2002).</p>
Fauna recorded	<p>Date et al (2002) found the box-ironbark forests of the Pilliga are characterized by high frequencies of 12 bird species, with low frequencies of many other species. Similar results were found during the surveys, with bird diversity being lower at forest sites than at creek sites.</p> <p>A variety of bats were recorded by the Anabat located in a forest site. The Yellow-footed Antechinus was recorded in traps in Ironbark/Broombush. Eastern Grey Kangaroos and Red-necked Wallabies were also observed. Foxes were recorded on cameras.</p> <p>A variety of reptiles were recorded, including the Bearded Dragon, Nobbi Dragon, Tommy Roundhead, Tree Skink and Brown-blazed Wedgesnout Ctenotus.</p>
Threatened species recorded or likely to occur	<ul style="list-style-type: none"> • Grey-crowned Babbler – the most commonly recorded threatened species in the Pilliga during surveys • Glossy Black-cockatoo – a few pairs were observed flying overhead during surveys in the Pilliga and Bohena area. A small family group was recorded at a dam in the Pilliga by a camera trap. • Varied Sittella – recorded on few occasions • Brown Treecreeper – recorded on few occasions • Speckled Warbler – recorded in shrubby forest at Bohena Creek rest area • Squirrel Glider – a family group were observed at a hollow in a Narrow-leaved Ironbark adjacent to Pilliga Forest Way • Inland Forest Bat – probable record at Trap site 5 • Large-eared Pied Bat – probable record at Trap site 5 • Yellow-bellied Sheath-tail Bat – definite record at trap site 5 • Pilliga Mouse – not recorded during surveys, but known to occur • Eastern Pygmy-possum – not recorded during surveys, but known to occur • Black-striped Wallaby – not recorded during surveys, but known to occur

The forests of the Pilliga

Photograph



Ironbark Forest over Broombush
(Trap site 4)



Corymbia forest with Cypress Pine
(Trap site 5)



Mallee near Site 4



Ironbark – Buloke forest



View across recently burnt forest from the
Salt Caves tower, showing the limited
understorey

Table B42 Fauna habitats: heath and shrublands of the Pilliga



Heathlands of the Pilliga	
Description	<p>The proposal crosses comparatively small areas of heathy vegetation in the Pilliga, including dense heath, and a more open heath under woodland canopy. Shrub species include Broombush (<i>Melaleuca uncinata</i>), various wattles (<i>Acacia</i> spp.), <i>Darwinia</i> spp., Seven Dwarfs Grevillea (<i>Grevillea floribunda</i>), Urn-heath (<i>Melichrus urceolatus</i>), Silver Cassia (<i>Senna artemisioides</i>), Drooping Cassinia (<i>Cassinia arcuata</i>), Rosy Paperbark (<i>Melaleuca erubescens</i>), Fringed Heath Myrtle (<i>Micromyrtus ciliata</i>) and Sticky Hop-bush (<i>Dodonaea viscosa</i>). Overstory species include Narrow-leaved Ironbark (<i>Eucalyptus crebra</i>), White Cypress Pine (<i>Callitris glaucophylla</i>), mallee form of Dwyers Gum (<i>Eucalyptus dwyeri</i>) and White Bloodwood (<i>Corymbia trachyphloia</i>).</p> <p>Occasional hollow-bearing trees occur in woodland areas. The ground cover is often very sparse with bare patches of soil prevalent.</p>
Fauna recorded	<p>Heath provides forage and shelter habitat for small mammals. The yellow-footed Antechinus (<i>Antechinus flavipes</i>) was trapped in heathy vegetation. Flowering species also provide foraging habitat for a range of small birds. Reptiles such as the Nobbi Dragon were also observed.</p>
Threatened species recorded or likely to occur	<ul style="list-style-type: none"> • Eastern Pygmy-possum – not recorded but known to occur • Pilliga Mouse – not recorded but known to occur • Various microbats likely to occur
Photograph	<div>  <p>Broombush with occasional Ironbark (Trap site 4)</p> </div> <div>  <p>Heath in the central Pilliga</p> </div>

Table B43 Fauna habitats: creeks of the Pilliga

Creeks of the Pilliga	
Description	<p>Creek lines of the Pilliga have a canopy of Blakely's Red Gum and the Rough-barked Apple. Cypress and ironbarks often occur in close proximity to the creeks but these areas are described above. Blakely's Red Gums often have hollows present, and hollows also occur in the Rough-barked Apple.</p> <p>The shrub layer is sparse overall and includes Tootoon (<i>Leptospermum polygalifolium</i>), Dean's Wattle (<i>Acacia deanei</i>), Narrow-leaved Bottlebrush (<i>Callistemon linearis</i>) and Drooping Cassinia (<i>Cassinia arcuata</i>). Watercourses are generally bare of vegetation with occasional patches of shrubs, sedges, water plants and rushes.</p> <p>Woodlands on creeks had fewer stumps, logs or dead trees than box-ironbark forests, due to the lack of logging in these areas (Date et al 2002).</p> <p>Creeks beds are usually sandy, and no water was observed during surveys. Some ponds were present in Baradine Creek outside the Pilliga as a result of rains immediately prior to the March survey. No emergent vegetation is present in the creeks, other than Baradine Creek outside the study area. Burrows of various sizes were observed in the sandy banks and soils of the creek beds. Cumbil Creek has low outcrops of sandstone present, with small crevices that would provide habitat for reptiles such as skinks and geckos.</p> <p>Blakely's Red Gum woodlands associated with creek lines in the Pilliga have been found to be characterized by 36 bird species that were virtually absent from the nearby box-ironbark forests away from the creeks, including 10 threatened and declining species (Date et al 2002). Many of these species are habitat specialists, and are dependent on mature trees for abundant nectar, insect prey or nesting, or are dependent on the grassy or grass/shrub mosaic understory to forage or nest. Creek line vegetation has been subject to less logging and grazing, but moderate fire impacts (Date et al 2002).</p>
Fauna recorded	<p>Little evidence of arboreal mammals was recorded along creek lines. According to Stanton (2011), the Brush-tailed Possum is rare in the Pilliga area. A small number of Koala scats were recorded from Etoo Creek and Coolangala Creek.</p> <p>Six microbat species were trapped in the harp nets at Coolangala Creek (including forest bats, broad-nosed bats, wattled bats, and long-eared bats). This is a wide creekline surrounded by large, hollow-bearing eucalypts. It is also near the interface with cleared agricultural land, increasing the microhabitats available for foraging. Only two bat species were trapped at the smaller Rocky Creek (both forest bat species), although the anabat recorded additional species at these creeks, including broad-nosed bats and wattled bats among others.</p> <p>Macropods recorded included the Eastern Grey Kangaroo, Swamp Wallaby, Wallaroo and Red-necked Wallaby. The Yellow-footed Antechinus was recorded at Etoo Creek and Coolangala Creek. Diggings and tracks of Foxes were also observed.</p> <p>Small skinks such as the Timid Slider and Southern Rainbow Skink were trapped in funnel traps in the sandy creek beds. Geckos such as the Eastern Spiny-tailed Gecko, Wood Geckos and the Tree Dtella were also trapped or observed on shrubs and timber during spotlighting. Gould's Goannas were observed and many burrows or diggings from this species were recorded. A Lace Monitor was also recorded in the Aloes picnic area adjacent to Etoo Creek.</p> <p>The Ornate Burrowing Frog was trapped in pitfall traps at Rocky Creek. Additional frog species were recorded at Baradine Creek south of the study area where water remained from recent rains, including the Spotted Grass Frog, Striped Marsh Frog (Brown-striped Frog), Emerald-spotted Tree Frog, Desert Tree Frog and Eastern Sign-bearing Froglet.</p>

Creeks of the Pilliga

Threatened species recorded or likely to occur

- Barking Owl – Known nest trees occur near the alignment at Baradine Creek, Etoo Creek and Rocky Creek (records courtesy of Forestry Corporation), although a Barn Owl was observed at the likely nest tree at Rocky Creek, and this tree may not currently be in use by Barking Owls. The Pilliga forests support the largest Barking Owl population in NSW (EES 2019b). Stanton (2011) found that the species appeared to be associated with forests on the Pilliga Outwash rather than the less productive forests associated with the Pilliga sandstone.
- Brown Treecreeper – recorded on few occasions
- Koala – scats were recorded at Coolangala Creek and Etoo Creek. No individuals were observed, despite the targeted transect survey along Etoo Creek (a previous stronghold for the species). Koalas are known to have declined substantially in numbers in the Pilliga in recent years (Lunney et al 2017).
- Squirrel Glider – observed in ironbark forest in the Pilliga. Would utilise riparian vegetation for denning, foraging and dispersal.
- Corben's Long-eared Bat – trapped at Coolangala Creek in Baradine State Forest.
- Little Pied Bat – recorded on anabats at Rocky Creek
- Large-eared Pied Bat – probable Anabat record at Coolangala Creek
- Eastern Bentwing Bat – definite Anabat record at Rocky Creek
- Yellow-bellied Sheath-tail Bat – definite Anabat record at Rocky Creek
- Pale-headed Snake – one individual recorded on Cumbil Forest Road on a warm evening after rain.

Photograph



Etoo Creek (Trap site 3)



Baradine Creek at John's Crossing (upstream of study area)





Cumbil Creek showing outcropping sandstone



Cumbil Creek showing defined channel

Table B44 Fauna habitats: rivers and associated riparian vegetation

Rivers and associated riparian vegetation	
Description	<p>The alignment crosses the Macquarie River, Castlereagh River, Namoi River and Narrabri Creek. Only the Macquarie River, Namoi River and Narrabri Creek had water present during surveys. Both the Namoi River and Narrabri Creek appeared to comprise a large pools, while the Macquarie River was flowing at all times. The Castlereagh River flowed following a rain event immediately after surveys in March 2019, however was dry during all survey periods.</p> <p>Riparian vegetation comprises a canopy of large old River Red Gums (<i>Eucalyptus camaldulensis</i>), most with hollows of various sizes. A range of shrubs occur under the canopy. Emergent vegetation is present in some locations, providing habitat for small birds and frogs. Exotic trees including Willows are present in some areas.</p> <p>Riparian vegetation provides an important corridor through the generally cleared agricultural landscape surrounding these rivers.</p> <p>Riparian vegetation is disturbed by access by stock, feral pigs and people. Rubbish dumping was evident at the travelling stock reserve on the Macquarie River at Narromine.</p>
Fauna recorded	<p>The Little Red Flying Fox was observed at the Namoi River and Narrabri Creek.</p> <p>The Common Brush-tailed Possum was observed in high numbers in River Red Gums at the Castlereagh River, as well as at the Macquarie River. The Southern Boobook and Tawny Frogmouth were also recorded at these rivers.</p> <p>Riparian vegetation supported a high diversity of bird species, including various honeyeaters, kingfishers, parrots and cockatoos. The Nankeen Night Heron was observed at Narrabri Creek.</p> <p>The Southern Spiny-tailed Gecko was observed at the Castlereagh River. A skin of a brown snake (<i>Psuedonaja</i> sp.) was also collected at this location.</p> <p>The Emerald-spotted Tree Frog was heard calling or was observed at the Macquarie River, Namoi River and Narrabri Creek. The Long-thumbed Frog (<i>Limnodynastes fletcheri</i>) and the Ornate Burrowing Frog were observed at Narrabri Creek, and the Broad-palmed Frog was observed at a small pool at the Castlereagh River.</p>
Threatened species recorded or likely to occur	<p>Grey-crowned Babbler – recorded at the Castlereagh River</p> <p>Eastern Bentwing Bat – probable record at the Macquarie River and Castlereagh River</p> <p>Eastern Freetail Bat – probable record at Narrabri Creek</p> <p>Little Pied Bat – probable record at the Castlereagh River</p> <p>Yellow-bellied Sheath-tail Bat – definite record at Narrabri Creek</p> <p>Squirrel Glider – may occur in riparian vegetation, particular where this connects to the Pilliga forests</p>
Photograph	<div>  <p>Macquarie River, Narromine</p> </div> <div>  <p>Castlereagh River, Curban</p> </div>

Rivers and associated riparian vegetation




Namoi River, Narrabri



Narrabri Creek, Narrabri

Table B45 Fauna habitats: creeks and associated riparian vegetation in agricultural land

Creeks and associated riparian vegetation in agricultural land	
Description	<p>Many small creeks cross the proposal site within predominantly cleared agricultural land. Riparian vegetation is generally retained in these areas, and provides important linkages across the landscape for fauna movement.</p> <p>Riparian vegetation provides habitat for a range of bird species, including many small woodland birds such as White-plumed Honeyeaters, Western Gerygones and Superb Fairy-wrens. Galahs, Australian Ringnecks and Sulphur-crested Cockatoos were commonly observed.</p> <p>Dominant tree species comprise River Red Gums in the south, and Blakely's Red Gums in the north. Many hollow-bearing trees are present.</p> <p>These creeks remain dry for much of the year, with flows occurring on occasion after heavy rain. Occasional small pools remain for longer periods of time, and provide breeding habitat for frogs.</p>
Fauna recorded	<p>A roadkill Carpet Python was observed on Gilmours Road near Kickabil Creek.</p> <p>Frogs heard calling or observed at creek lines included the Broad-palmed Frog, Eastern Sign-bearing Froglet and Emerald-spotted Tree Frog.</p>
Threatened species recorded or likely to occur	<p>Yellow-bellied Sheathtail Bat – definite record at Bohena Creek and Ewenmar Creek</p> <p>Little Pied Bat – probable record at Ewenmar Creek</p>
Photograph	<div>   </div>
	<div> <p>Ewenmar Creek, Burroway</p> <p>Kickabil Creek, Kickabil</p> </div>

Creeks and associated riparian vegetation in agricultural land



Creek near Gilgandra after November rains



Leeches Creek, Balladoran, after November rains

Table B46 Fauna habitats: dams, roadside ditches and soaks

Dams and roadside ditches	
Description	<p>Farm dams are present in agricultural land. These provide water for stock as well as native fauna including frogs, turtles, birds, macropods and bats. Few contain emergent, floating or submerged aquatic vegetation.</p> <p>Dams are present at various locations within the Pilliga forest. During surveys there was limited water present, with only some dams containing low levels of water. These dams provide important water sources for native fauna in the forest, as generally there is no water in the ephemeral creeklines.</p> <p>Roadside ditches contain pools of water after heavy rain. These are often vegetated with grasses and sometimes sedges. Frogs were often heard calling from these areas.</p>
Fauna recorded	<p>Farm dams provide habitat for a range of fauna species. Australian Wood Ducks were commonly recorded, as were Pacific Black Ducks and White-faced Herons. Eastern Snake-necked Turtles and Red-bellied Black Snakes were observed at farm dams. Frogs recorded at dams and roadside soaks included the Emerald-spotted Tree Frog, Spotted Grass Frog. Farm dams attract insects, which in turn attract microchiropteran bats.</p> <p>One small puddle at a property near Narrabri had numerous Ornate Burrowing Frog tadpoles and metamorphs present.</p> <p>On one evening in November 2018 heavy rain fell near Narromine and eight frog species were recorded during spotlighting, including the Desert Tree Frog, Sudell's Frog, Green Tree Frog and</p> <p>Cameras at the dams at Coxes Road in the Pilliga recorded pigs, sheep, a feral cat, Eastern Grey Kangaroos, Red-necked Wallabies, Common Bronzewing, and Australian Ringnecks.</p>
Threatened species recorded or likely to occur	<p>Dams in the Pilliga are known to be an important water source for Glossy Black Cockatoos. A family group were recorded at Clay Foot Dam in the Pilliga on a remote camera</p> <p>Eastern Bentwing Bat – probable record at a fam dam near Gilgandra</p> <p>Little Pied Bat – definite record at a farm dam near Narrabri</p> <p>Yellow-bellied Sheath-tail Bat – recorded at farm dams near Narrabri</p>

Dams and roadside ditches

Photograph



Farm dam with no emergent vegetation,
Dappo



Farm dam with some emergent vegetation,
Narrabri



Coxes Road dam, Pilliga forest



Emus at Coxes Road dam





Glossy Black-cockatoos at Clay Foot
Dam



Eastern Grey Kangaroos at Clay Foot Dam

Table B47 Fauna habitats: rocky hillsides

Dams and roadside ditches	
Description	<p>Rocky hillsides occur in the Black Hollow area north-east of Gilgandra near the Warrumbungle Range. In these areas, the proposal is located in cleared agricultural land, with rocky areas occurring upslope of the proposal site. Rocks occur as loose and embedded surface rock on steep slopes. Rock does not occur on gentle slopes at the base of these hills, and may have been 'tidied up' historically by landowners.</p> <p>No caves or crevices were recorded in these areas.</p>
Fauna recorded	<p>A range of birds and other fauna were recorded in the areas, mainly due to the retention of woodland habitat in these areas. Species recorded included the Singing Honeyeater (<i>Gavicalis virescens</i>), White-winged Triller (<i>Lalage sueurii</i>), Red-capped Robin (<i>Petroica goodenovii</i>), Yellow-footed Antechinus (<i>Antechinus flavipes</i>) and skinks (<i>Carlia</i> spp.) among others.</p>
Threatened species recorded or likely to occur	<p>The proposal site is not within the distribution of species such as the Pink-tailed Worm-lizard (<i>Aprasia parapulchella</i>) or Striped Legless Lizard (<i>Delma impar</i>) that rely on surface rock.</p>
Photograph	<div>  <p>Surface rock and view to adjacent agricultural land, Tabletop Mountain, Black Hollow</p> </div> <div>  <p>Surface rock on top of Tabletop Mountain, Black Hollow</p> </div>

TECHNICAL REPORT

1

Biodiversity development assessment report

Appendix C Likelihood of occurrence of threatened and migratory biota

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



Threatened flora

Status

CE – critically endangered, E – endangered, V – vulnerable

Table C1 – Likelihood of occurrence of threatened flora species in the proposal site

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Communities									
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) (EPBC Act)		-	E	Recorded	Ecosystem	The listed ecological community is characterised by the presence of Brigalow (<i>Acacia harpophylla</i>) as one of the three most abundant tree species (Butler 2007). Brigalow is usually either dominant in the tree layer or co-dominant with other species such as <i>Casuarina cristata</i> (Belah), other species of <i>Acacia</i> , or species of <i>Eucalyptus</i> . Occasionally Belah, or species of <i>Acacia</i> or <i>Eucalyptus</i> may be more common than Brigalow within the broad matrix of Brigalow vegetation. The structure of the vegetation ranges from open forest to open woodland. The height of the tree layer varies from about 9 metres in low rainfall areas (averaging around 500 mm per annum) to around 25 metres in higher rainfall areas (averaging around 750 mm per annum) (Butler 2007). A prominent shrub layer is usually present (DAWE, 2020) The edge of a linear patch of this TEC along the Newell Highway and extending onto private properties. Small area on the edge of this patch	Not recorded: This PCT was not recorded during alignment surveys	Not recorded: This PCT was not recorded during alignment surveys	Known: This PCT was recorded in Segment 11. In total 0.60 hectares of this community will be removed.
Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions		E	-	Recorded	Ecosystem	Community occurs on brown loam or clay, alluvial or colluvial soils on prior streams and abandoned channels or slight depressions on undulating plains or flats of the western slopes. Community often occurs upslope from River Red Gum communities above frequently inundated areas of the floodplain. It also occurs on colluvium soils on lower slopes and valley flats. Occurs on alluvial soils of the South West Slopes, Brigalow Belt South and Darling Riverine Plains Bioregions. Mainly in the Dubbo-Narrromine-Parkes-Forbes area.	Not recorded: This PCT was not recorded during alignment surveys	Not recorded: This PCT was not recorded during alignment surveys	Known: This PCT was recorded in Segment 8. In total 3.59 hectares of this community will be removed

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
<p>Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (BC Act)</p> <p>Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and derived native grasslands of South-eastern Australia (EPBC Act)</p>		E	E	Recorded	Ecosystem	<p>Grey box woodlands includes those woodlands in which the most characteristic tree species, <i>Eucalyptus microcarpa</i> (Inland Grey Box), is often found in association with <i>E. populnea subsp. bimbil</i> (Bimble or Poplar Box), <i>Callitris glaucophylla</i> (White Cypress Pine), <i>Brachychiton populneus</i> (Kurrajong), <i>Allocasuarina luehmannii</i> (Bullock) or <i>E. melliodora</i> (Yellow Box), and sometimes with <i>E. albens</i> (White Box). The community occurs on fertile soils of the western slopes and plains of NSW. The community generally occurs where average rainfall is 375- 800 mm pa and the mean maximum annual temperature is 22- 26°C.</p> <p>One large patch south of the Macquarie River (very southern end of alignment) mostly within Crown Reserve/TSR</p>	Not recorded: This PCT was not recorded during alignment surveys	Not recorded: This PCT was not recorded during alignment surveys	Known: This PCT was recorded in Segment 8. In total 14.71 hectares of this community will be removed.
Poplar Box grassy woodland on alluvial plains (EPBC Act)		-	E	Recorded	Ecosystem	<p>This ecological community is comprised of native grassy eucalypt woodland where poplar/ Bimble Box is the main tree canopy species present. Other tree species may occasionally occur depending on the characteristics of the site, these include <i>Callitris glaucophylla</i> (White Cypress Pine), <i>Casuarina cristata</i> (Belah), <i>Eucalyptus coolabah</i> (Coolibah), <i>Eucalyptus largiflorens</i> (Black Box), <i>Eucalyptus melanophloia</i> (Silver-Leaved Ironbark), <i>Eucalyptus microcarpa</i> (Inland Grey Box) and <i>Eucalyptus pilligaensis</i> (Narrow-Leaved Grey Box). This community mostly occurs as scattered patches inland of the Great Dividing Range in NSW and Queensland, within the Brigalow Belt North, Brigalow Belt South, Cobar Peneplain, Darling Riverine Plains, NSW South Western Slopes and Riverina IBRA bioregions.</p> <p>One large patch south of the Macquarie River (very southern end of alignment) mostly within Crown Reserve/TSR.</p>	Not recorded: This PCT was not recorded during alignment surveys	Not recorded: This PCT was not recorded during alignment surveys	Known: This PCT was recorded in Segment 8 and 9. In total 25.7 hectares of this community will be removed.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Myall Woodland in the Darling Riverine Plains, Brigalow Bet South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions (BC Act)		E	E	Recorded	Ecosystem	This ecological community is characterised by the dominance of Weeping Myall (<i>Acacia pendula</i>). The community is typically scattered across the eastern parts of the alluvial plains of the Murray-Darling river system. Typically, it occurs on red-brown earths and heavy textured grey and brown alluvial soils within a climatic belt receiving between 375 and 500 mm mean annual rainfall. The structure of the community varies from low woodland and low open woodland to low sparse woodland or open shrubland, depending on site quality and disturbance history.	Not recorded: This PCT was not recorded during alignment surveys	Not recorded: This PCT was not recorded during alignment surveys	Known: This PCT was recorded in Segment 9. In total 3.05 hectares of this community will be removed.
Weeping Myall Woodlands (EPBC Act)						Occurs as one patch on private property. Not connected to any other Weeping Myall TEC			
White Box Yellow Box Blakely's Red Gum Woodland (BC Act)		CE	CE	Recorded		Box-Gum Woodland is found from the Queensland border in the north, to the Victorian border in the south. It occurs in the tablelands and western slopes of NSW. Characterised by the presence or prior occurrence of White Box, Yellow Box and/or Blakely's Red Gum.	Not recorded: This PCT was not recorded during alignment surveys	Not recorded: This PCT was not recorded during alignment surveys	Known: This PCT was recorded in Segment 8, 9. In total 2.20 hectares of this community will be removed.
White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland (EPBC Act)						The trees may occur as pure stands, mixtures of the three species or in mixtures with other trees, including wattles. Commonly co-occurring eucalypts include Apple Box (<i>E. bridgesiana</i>), Red Box (<i>E. polyanthemos</i>), Candlebark (<i>E. rubida</i>), Snow Gum (<i>E. pauciflora</i>), Argyle Apple (<i>E. cinerea</i>), Brittle Gum (<i>E. mannifera</i>), Red Stringybark (<i>E. macrorhyncha</i>), Grey Box (<i>E. microcarpa</i>), Cabbage Gum (<i>E. amplifolia</i>) and others. One linear roadside patch extending to a small patch on private property at the southernmost end of the alignment south of the Macquarie River			
Flora									
Austral Toadflax	<i>Thesium australe</i>	V	V	None	Species	Found in small, scattered populations along the east coast, northern and southern tablelands. Occurs in grassland or grassy woodland. Found in association with Kangaroo Grass <i>Themeda australis</i> . Flowers in spring and summer. Known association with Kangaroo Grass (<i>Themeda australis</i>). No suitable potential habitat is present.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Bluegrass	<i>Dicanthium setosum</i>	V	V	Near Narrabri-Bionet	Species	<p>Species exists inland Queensland and NSW. Occurs in moderately disturbed areas like cleared woodland, grassy roadside remnants and pasture. Often found with White Box <i>Eucalyptus albens</i>, Silver-leaved Ironbark <i>Eucalyptus melanophloia</i>, Yellow-Box <i>Eucalyptus melliodora</i>, Ribbon Gum <i>Eucalyptus viminalis</i>, Winter Apple <i>Eremophila dibilus</i> and Kangaroo Grass <i>Themeda triandra</i>. Associated with heavy basaltic black soils and red-brown loams with clay subsoil.</p> <p>Associated with heavy basaltic black soils and red-brown loams with clay subsoil. These soil types occur mostly to the north. Consultation with BCD accountable officer, confirmed species unlikely to occur due to lack of suitable soil types and associated habitat types in proposal site.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.
Coolabah Bertya	<i>Bertya opposens</i>	V	V	Yes, one only near Bohena Creek - Bionet	Species	<p>Coolabah Bertya occurs in a range of habitats including stony mallee ridges and cypress pine forest on red soils. The wide variation in habitat type between the populations makes the identification of critical habitat very difficult.</p> <p>This species is known from adjacent to Bohena Creek Rest area on the Newell Highway within the proposal site. Four individuals are known from the site. No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in March, September, October and November. With the exception of Bohena Creek, the PCTs in the study area are not associated with stony or gravelly mallee ridges or sandy gully habitats; these latter habitats are typically associated with sandy outwash areas such as those found in the Pilliga Outwash sub-region to the south of Narrabri (where Jacks SF is located)</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species is known to occur at the Bohena Creek Rest area within the proposal site

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Cobar Greenhood	<i>Pterostylis cobarensis</i>	V	-	Recorded at multiple locations in the Pilliga-Bionet	Species	<p>A terrestrial orchid with transparent flowers with brown and green markings. It has been recorded in Bourke, Nyngan, Cobar, Nymagee, Warren, Gilgandra, Narrabri, and Coonabarabran districts. Recorded from a number of reserves and state forests including Mutawintji, Gundabooka, Culgoa, Warrumbungles National Parks, Quanda, Yathong Nature Reserves, Mt Grenfell Historic Site and Bimilwindi and Pilliga East State Forests. It prefers eucalypt woodlands, open mallee or Callitris shrublands on low stony ridges and slopes in skeletal sandy-loam soils.</p> <p>Associated species include <i>Eucalyptus morrisii</i>, <i>E. viridis</i>, <i>E. intertexta</i>, <i>E. vicina</i>, <i>Callitris glaucophylla</i>, <i>Geijera parviflora</i>, <i>Casuarina cristata</i>, <i>Acacia doratoxylon</i>, <i>Senna</i> spp. and <i>Eremophila</i> spp.</p> <p>This species was recorded at one location in Pilliga East State Forest. No evidence of the species was recorded in other suitable habitat areas surveyed in the proposal site in October, September and November. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species is assumed to occur within Segment 7 based on the availability of suitable habitat and associated PCTs likely to support the species.	Assumed presence: This species has previously been recorded throughout the Pilliga Forrest (Segment 10) and is assumed to occur. This species is assumed to occur within Segment 11 based on the availability of suitable habitat and associated PCTs likely to support the species.
-	<i>Commersonia procumbens</i>	V	V	Recorded at multiple locations in the Pilliga - Bionet	Species	<p>This species is endemic to NSW, and is mainly confined to the Duboo-Mendooran-Gilgandra region, but also in th Pilliga and Nymagee areas. It typically grows in sandy sites, often alongside roads. It has been recorded in <i>Eucalyptus dealbata</i>, and <i>Eucalyptus sideroxylon</i> communities, <i>Melaleuca uncinata</i> scrub, under mallee eucalypts with a <i>Calytrix tetragona</i> understorey, and in a recently burnt Ironbark and Callitris area. Also in <i>Eucalyptus fibrosa subsp. nubila</i>, <i>Eucalyptus dealbata</i>, <i>Eucalyptus albens</i> and <i>Callitris glaucophylla</i> woodlands north of Dubbo.</p> <p>Other associated species include <i>Acacia triptera</i>, <i>Callitris endlicheri</i>, <i>Eucalyptus melliodora</i>, <i>Allocasuarina diminuta</i>, <i>Philotheca salsolifolia</i>, <i>Xanthorrhoea</i> species, <i>Exocarpos cupressiformis</i>, <i>Leptospermum parvifolium</i> and <i>Kunzea parvifolia</i>.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in March, September, October and November. However, the</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species has previously been recorded throughout the Pilliga Forrest (Segment 10) and is assumed to occur.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
						species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.			
Finger Panic Grass	<i>Digitaria porrecta</i>	E	-	None	Species	Distribution is from northern NSW and Southern Queensland. Occurs in native grassland, woodlands and open forests. Associated with White Box <i>Eucalyptus albens</i> , Weeping Myall <i>Acacia pendula</i> , Plains Grass <i>Austrostipa aristiglumis</i> , Downs Nutgrass <i>Cyperus bifax</i> and Flower-of-an-Hour <i>Hibiscus trionum</i> . Limited suitable habitat in native grassland, woodlands or open forest with a grassy understorey, on richer soils.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.
-	<i>Homoranthus darwinoides</i>	V	V	None	Species	Rare in the central tablelands and western slopes of NSW, occurring from Putty to the Dubbo district. It is found west of Muswellbrook between Merriwa and Bylong, and north of Muswellbrook to Goonoo SCA. The species has been collected from Lee's Pinch, but not relocated at its original locality north of Mt Coricudgy above the headwaters of Widden Brook. Grows in in various woodland habitats with shrubby understoreys, usually in gravely sandy soils. Landforms the species has been recorded growing on include flat sunny ridge tops with scrubby woodland, sloping ridges, gentle south-facing slopes, and a slight depression on a roadside with loamy sand. Known from the Goonoo forest region usually in gravelly and sandy soils. Limited soil types in Pilliga forests with associated species in soil types uncommon.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.
Keiths Zieria	<i>Zieria ingramii</i>	E	E	None	Species	This species grows in dry sclerophyll forests on light sandy soil. All known populations have been recorded within <i>Eucalyptus</i> – <i>Callitris</i> woodland or open forest with a shrubby to heathy understory. Occurs mostly on gentle slopes in red-brown and yellow-brown sandy loams, often with a rocky surface. Lack of records in locality.	Low: No records for this species, or significant suitable habitat occurred. This species is unlikely to occur.	Low: No records for this species, or significant suitable habitat occurred. This species is unlikely to occur.	Low: No records for this species, or significant suitable habitat occurred. This species is unlikely to occur.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Large-leafed Monotaxis	<i>Monotaxis macrophylla</i>	E	-	None	Species	<p>An erect herb known to have an association and subsequent distribution related to fire. This species displays properties of a fire ephemeral species, as its germination is stimulated by the passage of fire, individual plants are short-lived, a large biomass is produced in a short period of time, flowering occurs shortly after germination and populations do not persist in the absence of fire.</p> <p>Grows on rocky ridges and hillsides and requires fires for germination. No suitable habitat is known from the proposal site for this species.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.
Leafless Indigo	<i>Indigofera efoliata</i>	E	E	None	Species	<p>Very rare and possibly now extinct, known only from a few collections in the Dubbo area. Mr E.F. Biddiscombe is the only person alive to have seen <i>Indigofera efoliata</i> in the wild, in August 1955. Sites were located along the Dubbo to Minore railway line and road, on Wallaringa and Geurie properties and in Goonoo State Forest.</p> <p>Recorded in Goonoo State Forest in <i>Eucalyptus crebra</i> and <i>Callitris glaucophylla</i> dry sclerophyll forest, and in <i>Eucalyptus microcarpa</i> and <i>Callitris glaucophylla</i> tall woodland. Herbarium records note the species as growing on slight rises amongst ironstone formation in stony red-brown sandy loam.</p> <p>Known from near Dubbo and Goonoo forest region and thought to be extinct. Known from slight rises amongst ironstone formation in stony red-brown sandy loam.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Pine Donkey Orchid	<i>Diuris tricolor</i>	V	-	Recorded at multiple locations in the Pilliga - Bionet	Species	<p>Sporadically distributed on the western slopes of NSW, extending from south of Narrandera all the way to the north of NSW.</p> <p>Disturbance regimes are not known, although the species is usually recorded from disturbed habitats.</p> <p>Associated species include <i>Callitris glaucophylla</i>, <i>Eucalyptus populnea</i>, <i>Eucalyptus intertexta</i>, Ironbark and Acacia shrubland. The understorey is often grassy with herbaceous plants such as Bulbine species.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in September and October. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species is assumed to occur within Segment 7 based on the availability of suitable habitat and associated PCTs likely to support the species.	Assumed presence: This species has previously been recorded throughout the Pilliga Forrest (Segment 10) and is assumed to occur. This species is also assumed to occur within Segment 8, 9 and 11 based on the availability of suitable habitat and associated PCTs likely to support the species.
Scant Pomaderris	<i>Pomaderris queenslandica</i>	E	-	None	Species	<p>Widely scattered but not common in north-east NSW and in Queensland. It is known from several locations on the NSW north coast and a few locations on the New England Tablelands and North West Slopes, including near Torrington and Coolata.</p> <p>Found in moist eucalypt forest or sheltered woodlands with a shrubby understorey, and occasionally along creeks.</p> <p>No suitable habitat is present. Habitats in the study area lack sheltered, shrubby understories.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Silky Swainson-pea	<i>Swainsona sericea</i>	V	-	None	Species	<p>Silky Swainson-pea has been recorded from the Northern Tablelands to the Southern Tablelands and further inland on the slopes and plains. There is one isolated record from the far north-west of NSW. Its stronghold is on the Monaro. Also found in South Australia, Victoria and Queensland.</p> <p>Found in Natural Temperate Grassland and Snow Gum Eucalyptus pauciflora Woodland on the Monaro. Found in Box-Gum Woodland in the Southern Tablelands and South West Slopes.</p> <p>In the region, known from Box-Gum woodland and occasionally <i>Callitris</i> grassy habitats. Marginal suitable habitat present.</p>	Low: No records for this species, or significant suitable habitat occurred. This species is unlikely to occur.	Low: No records for this species, or significant suitable habitat occurred. This species is unlikely to occur.	Low: No records for this species, or significant suitable habitat occurred. This species is unlikely to occur.
Slender Darling Pea	<i>Swainsona murrayana</i>	V	V	Recorded from roadside reserves in the mid and southern segments - Bionet	Species	<p>Found throughout NSW, it has been recorded in the Jerilderie and Deniliquin areas of the southern riverine plain, the Hay plain as far north as Willandra National Park, near Broken Hill and in various localities between Dubbo and Moree. Occurs in grassland, herbland and open Black-box woodland. Associated with low chenopod shrubs <i>Maireana</i> species, wallaby-grass <i>Austrodanthonia</i> species and spear grass <i>Austrostipa</i> species. Flowers from spring to early summer. Grows on heavy grey or brown clay, loam, or red cracking clays.</p> <p>Grows in a variety of vegetation types including bladder saltbush, black box and grassland communities on level plains, floodplains and depressions and is often found with <i>Maireana</i> species. Plants have been found in remnant native grasslands or grassy woodlands that have been intermittently grazed or cultivated.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in September and October. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species has previously been recorded within road reserves throughout the mid, and southern segments. The species is assumed to occur within Segment 9 and 10 based on the availability of suitable habitat and associated PCTs likely to support the species.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
Spiny Peppercress	<i>Lepidium aschersonii</i>	V	V	Multiple records from near Narrabri - Bionet	Species	<p>Found on ridges of gilgai clays dominated by Brigalow (<i>Acacia harpophylla</i>), Belah (<i>Casuarina cristata</i>), Buloke (<i>Allocasuarina lehmanii</i>) and Grey Box (<i>Eucalyptus microcarpa</i>). In the south has been recorded growing in Bull Mallee (<i>Eucalyptus behriana</i>). Often the understorey is dominated by introduced plants. The species grows as a component of the ground flora, in grey loamy clays. Vegetation structure varies from open to dense, with sparse grassy understorey and occasional heavy litter.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in March, October, September and November. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species has previously been recorded near Narrabri, and is assumed to occur within Segment 11 based on the availability of suitable habitat and associated PCTs likely to support the species.
Native Milkwort	<i>Polygala linariifolia</i>	V	V	Recorded at multiple locations in the Pilliga - Bionet	Species	<p>Native Milkwort is an annual or perennial herb that occurs in sandy soils in dry eucalypt forests, with a sparse understory. It has been recorded in the Pilliga area in Fuzzy Box woodland, White Cypress Pine-Bullaoak – Ironbark woodland, Rough-barked Apple riparian forb-grass open forest, and Ironbark - Brown Bloodwood shrubby woodland.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in March, October and November. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed presence based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species has previously been recorded throughout the Pilliga Forrest (Segment 10) and is assumed to occur based on the availability of suitable habitat and associated PCTs likely to support the species.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Multi-function compound sites Segment 1 Segment 2 Segment 3	Borrow pits Segment 4 Segment 5 Segment 6 Segment 7	Alignment Segment 8 Segment 9 Segment 10 Segment 11
-	<i>Tylophora linearis</i>	V	E	Recorded at multiple locations in the Pilliga-Bionet	Species	<p>Grows in dry scrub and open forest. Recorded from low-altitude sedimentary flats in dry woodlands of <i>Eucalyptus fibrosa</i>, <i>Eucalyptus sideroxylon</i>, <i>Eucalyptus albens</i>, <i>Callitris endlicheri</i>, <i>Callitris glaucophylla</i> and <i>Allocasuarina luehmannii</i>.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in March and October. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species has previously been recorded throughout the Pilliga Forrest (Segment 10 and 11) and is assumed to occur based on the availability of suitable habitat and associated PCTs likely to support the species.
Winged Peppercress	<i>Lepidium monoplocoides</i>	E	E	Known from near Narrabri-Bionet	Species	<p>Widespread in the semi-arid western plains regions of NSW. Collected from widely scattered localities, with large numbers of historical records but few recent collections. Occurs on seasonally moist to waterlogged sites, on heavy fertile soils, with a mean annual rainfall of around 300-500 mm. Predominant vegetation is usually an open woodland dominated by <i>Allocasuarina luehmannii</i> (Bulloak) and/or eucalypts, particularly <i>Eucalyptus largiflorens</i> (Black Box) or <i>Eucalyptus populnea</i> (Poplar Box). The field layer of the surrounding woodland is dominated by tussock grasses.</p> <p>Recorded in a wetland-grassland community comprising <i>Eragrostis australasicus</i>, <i>Agrostis avenacea</i>, <i>Austroanthonia duttoniana</i>, <i>Homopholis proluta</i>, <i>Myriophyllum crispatum</i>, <i>Utricularia dichotoma</i> and <i>Pycnosorus globosus</i>, on waterlogged grey-brown clay. Also recorded from a <i>Maireana pyramidata</i> shrubland.</p> <p>No evidence of the species was recorded in suitable habitat areas surveyed in the proposal site in March, October, September and November. However, the species is likely to occur and drought conditions are likely to have been a large contributing factor to species absence. The species is assumed present based on previous records, suitable potential and discussions with BCD accountable officers.</p>	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Low: No habitat or PCTs associated with, or likely to support this species occurs within these Segments.	Assumed presence: This species has previously been recorded throughout the Pilliga Forrest (Segment 10 and 11) and is assumed to occur based on the availability of suitable habitat and associated PCTs likely to support the species.

Threatened and migratory fauna species

This appendix provides the likelihood of occurrence assessment for threatened and migratory fauna species listed under the BC Act and EPBC Act for the proposal.

Table C2: Likelihood of occurrence of threatened and migratory fauna for the main alignment segments of the proposal

Table C3: Potential Candidate Threatened Species by IBRA subregion

Table C4: Likelihood of occurrence of potential candidate threatened fauna species at compound sites

Table C5: Likelihood of occurrence of potential candidate threatened fauna species at borrow pit sites

Status

CE – critically endangered, E – endangered, V – vulnerable, C - CAMBA, J – JAMBA, K – ROKAMBA, B - Bonn

Table C2 Likelihood of occurrence of threatened and migratory fauna for the main alignment segments of the proposal

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Likelihood of occurrence in the Narromine to Curban area (Segment 8)	Likelihood of occurrence in Curban to Pilliga area (Segment 9)	Likelihood of occurrence in Pilliga area (Segment 10)	Likelihood of occurrence in Pilliga to Narrabri area (Segment 11)
BIRDS										
Australasian Bittern	<i>Botaurus poiciloptilus</i>	E	E	1 record within 20 kilometres (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Widespread but uncommon over most NSW except the northwest. Favours permanent freshwater wetlands with tall dense reedbeds particularly <i>Typha</i> spp. and <i>Eleocharis</i> spp., with adjacent shallow, open water for foraging. Roosts during the day amongst dense reeds or rushes and feeds mainly at night on frogs, fish, yabbies, spiders, insects and snails.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
Australian Bustard	<i>Ardeotis australis</i>	E		Recorded as a potential candidate species within the BAM-C	Species	Occurs in inland Australia. In NSW mainly found in the north-west corner, less often in the lower western and central west plains regions, with occasional vagrants east to the western slopes and riverine plain. Breeding confined to the north-west region. Mainly inhabits tussock and hummock grasslands, also occurs in low shrublands and low open grassy woodlands. Breeds on bare ground on low sandy ridges or stony rises in ecotones between grassland and shrubland cover. Travels long distances, presumably in response to habitat and climatic conditions.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Likelihood of occurrence in the Narromine to Curban area (Segment 8)	Likelihood of occurrence in Curban to Pilliga area (Segment 9)	Likelihood of occurrence in Pilliga area (Segment 10)	Likelihood of occurrence in Pilliga to Narrabri area (Segment 11)
Australian Painted Snipe	<i>Rostratula australis</i>	E	E	3 records within 20km, last recorded 2008 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Normally found in permanent or ephemeral shallow inland wetlands, either freshwater or brackish. Nests on the ground amongst tall reed-like vegetation near water. Feeds on mudflats and the water's edge taking insects, worm and seeds. Prefers fringes of swamps, dams and nearby marshy areas with cover of grasses, lignum, low scrub or open timber.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
Barking Owl	<i>Ninox connivens</i>	V		333 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Occurs from coast to inland slopes and plains, though is rare in dense, wet forests east of the Great Dividing Range and sparse in higher parts of the tablelands and in the arid zone. Inhabits eucalypt woodlands, open forest, swamp woodlands, and, especially in inland areas, timber along watercourses. Roosts along creek lines in dense, tall understorey foliage (eg in Acacia and Casuarina), or dense eucalypt canopy. Nests in hollows of large, old eucalypts including <i>Eucalyptus camaldulensis</i> , <i>Eucalyptus albens</i> , <i>Eucalyptus polyanthemos</i> and <i>Eucalyptus blakelyi</i> . Birds and mammals important prey during breeding. Territories range from 30 to 200 hectares.	Likely - could breed and roost along larger watercourses, and forage in surrounding areas	Likely - could breed and roost along larger watercourses, and forage in surrounding areas	Known - large population of the species in NSW occurs in the Pilliga forests	Likely - could breed and roost along larger watercourses, and forage in surrounding areas

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Likelihood of occurrence in the Narromine to Curban area (Segment 8)	Likelihood of occurrence in Curban to Pilliga area (Segment 9)	Likelihood of occurrence in Pilliga area (Segment 10)	Likelihood of occurrence in Pilliga to Narrabri area (Segment 11)
Black-breasted Buzzard	<i>Hamirostra melanosternon</i>	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Sparsely distributed in areas of less than 500mm rainfall, north from north-western NSW. Inhabits a range of inland habitats, especially along timbered watercourses which is the preferred breeding habitat. Also hunts over grasslands and sparsely timbered woodlands. Breeds from August to October near water in a tall tree.	Possible. Scattered records in locality. Considered a vagrant to the area. Potential foraging habitat present.	Possible. Scattered records in locality. Considered a vagrant to the area. Potential foraging habitat present.	Possible. Scattered records in locality. Considered a vagrant to the area. Potential foraging habitat present.	Possible. Scattered records in locality. Considered a vagrant to the area. Potential foraging habitat present.
Black Falcon	<i>Falco subniger</i>	V		6 records within 20km (OEH 2020a)	Ecosystem	The Black Falcon is widely, but sparsely, distributed in NSW, mostly occurring in inland regions. Some reports of 'Black Falcons' on the tablelands and coast of NSW are likely to be referable to the Brown Falcon. Occurs in plains, grasslands, foothills, timbered watercourses, wetland environs, crops, and occasionally over towns and cities. Breeding occurs along timbered waterways in inland areas.	Moderate - scattered records around Narromine. Could occur throughout the alignment including agricultural areas.	Moderate - Could occur throughout the alignment including agricultural areas.	Moderate - Could occur throughout the alignment including agricultural areas.	Known - recorded in woodland patch in agricultural land near Narrabri
Black-chinned Honeyeater (eastern subspecies)	<i>Melithreptus gularis gularis</i>	V		3 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Widespread in NSW, but rarely recorded east of Great Dividing Range except in Richmond and Clarence River areas and scattered sites in the Hunter, Central Coast and Illawarra regions. Mostly in upper levels of drier open forests /woodlands dominated by box and ironbark eucalypts, or less commonly smooth-barked gums, stringybarks and tea-trees. Forage over home range of >5 hectares. Tend to occur within largest woodland patches in the landscape. They forage for insects, nectar and honeydew. The nest is hidden by foliage high in the crown of a tree.	Present. Recorded in small woodland patch in agricultural land south of Gilgandra.	Likely. Would occur in larger remnants.	Present. Recorded in the Pilliga.	Likely. Would occur in larger remnants.

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Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	E		Recorded as a predicted species within the BAM-C	Ecosystem	In NSW, becomes increasingly uncommon south of the Northern Rivers region, and rarely occurs south of Sydney. Breeding recorded as far south as Buladelah, though most breeding in NSW occurs in the north-east. Primarily inhabits permanent freshwater wetlands and surrounding vegetation including swamps, floodplains, watercourses and billabongs, freshwater meadows, wet heathland, farm dams and shallow floodwaters. Will also forage in inter-tidal shorelines, mangrove margins and estuaries. Feeds in shallow, still water. Breeds during summer, nesting in or near a freshwater swamp.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
Blue-billed Duck	<i>Oxyura australis</i>	V		Recorded as a predicted species within the BAM-C	Ecosystem	Partly migratory, travels short distances between breeding swamps and over-wintering lakes. Young birds disperse in April-May from breeding swamps in inland NSW to Murray River system and coastal lakes. Prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation. Nests in Cumbungi over deep water or in trampled Lignum, sedges or spike-rushes. Completely aquatic, swimming along the edge of dense cover.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.

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Brolga	<i>Grus rubicunda</i>	V		10 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	In NSW occurs west of the Great Dividing Range and on the north coast. Dependent on wetlands, especially shallow swamps. Often feed in dry grassland, ploughed paddocks or desert claypans.	Low - May occur on occasions in dry grasslands and wetland habitat present in agricultural areas of the study area.	Low - May occur on occasions in dry grasslands and wetland habitat present in agricultural areas of the study area.	Unlikely - no suitable habitat present	Low - May occur on occasions in dry grasslands and wetland habitat present in agricultural areas of the study area.
Brown Treecreeper (eastern subspecies)	<i>Climacteris picumnus victoriae</i>	V		120 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs from Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell to the east coast, in areas such as the Snowy River Valley, Cumberland Plain, Hunter Valley and parts of the Richmond and Clarence Valleys. Most common on the inland slopes and plains. Inhabits eucalypt woodlands and dry open forest, usually dominated by stringybarks or rough-barked species with open grassy understorey. Fallen timber is important foraging habitat. Nests in hollows in standing trees or stumps.	Likely. Would occur in larger remnants where fallen timber is present.	Possible. Could occur in larger remnants where fallen timber is present.	Present. Recorded on a number of occasions during surveys in the Pilliga. Foraging and breeding habitat present.	Likely. Would occur in larger remnants where fallen timber is present.
Bush Stone-curlew	<i>Burhinus grallarius</i>	E		11 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Scattered distribution across NSW. Inhabits lowland grassy woodland and open forest and, in coastal areas, Casuarina and Melaleuca woodlands, saltmarsh and mangroves. Requires a low, sparse groundcover, some fallen timber and leaf litter, and a general lack of a shrubby understory (DEC 2006).	Low. May occur on occasion. Few local records.	Low. May occur on occasion. Few local records.	Likely. Scattered records from the Pilliga area.	Likely. Occasional records from the Narrabri area.

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Curlew Sandpiper	<i>Calidris ferruginea</i>	E	CE	May occur within 20km (DEE 2020a)	Species/ Ecosystem	Breeds in northern hemisphere. In Australia generally occupies littoral and estuarine habitats. In NSW mainly found in intertidal mudflats on sheltered coasts. Roosts on beaches, spits or islands on the coast/in wetlands, or in saltmarsh on rocky shores.	Nil- no intertidal habitat present in the study area.	Nil- no intertidal habitat present in the study area.	Nil- no intertidal habitat present in the study area.	Nil- no intertidal habitat present in the study area.
Diamond Firetail	<i>Stagonopleura guttata</i>	V		30 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Typically found west of the Great Dividing Range, but populations also occur in drier coastal areas including W Sydney, Hunter, Clarence and Snowy River valleys. Occurs in grassy eucalypt woodlands including Box Gum and Snow Gum communities, as well as open forest, mallee and natural and derived grasslands. Often found in riparian areas and occasionally in lightly wooded farmland. Nests in shrubby understorey or higher up under nests of other species.	Likely. Would occur in larger remnants and along watercourses.	Likely. Would occur in larger remnants and along watercourses.	Likely. Would occur in larger remnants and along watercourses.	Likely. Would occur in larger remnants and along watercourses.

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Dusky Woodswallow	<i>Artamus cyanopterus cyanopterus</i>	V		58 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	The Dusky Woodswallow is widespread from the coast to inland, including the western slopes of the Great Dividing Range and farther west. It is often recorded in woodlands and dry open sclerophyll forests, and has also been recorded in shrublands, heathlands regenerating forests and very occasionally in moist forests or rainforests. The understorey is typically open with sparse eucalypt saplings, acacias and other shrubs, often with coarse woody debris. It is also recorded in farmland, usually at the edges of forest or woodland or in roadside remnants or wind breaks with dead timber. The nest is an open shallow untidy cup frequently built in an open hollow, crevice or stump. Although Dusky Woodswallows have large home ranges, individuals may spend most of their time in about a 2 hectares range and defend an area about 50 metres around the nest. Dusky Woodswallows prefer larger remnants over smaller remnants. Competitive exclusion by Noisy Miners (<i>Manorina melanocephala</i>) is a significant threat to this species.	Likely. Would occur in larger remnants.	Possible. Could occur in larger remnants where fallen timber is present.	Likely. Large areas of habitat present in the Pilliga forests.	Likely. Would occur in larger remnants.

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Eastern Curlew	<i>Numenius madagascariensis</i>		CE, C,J,K	May occur within 20km (DEE 2020a)	Species/ Ecosystem	Within Australia, the species has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. It is most commonly associated with sheltered coasts, and all internationally important sites for this species in Australia are on the coast. The birds are also found in saltworks and sewage farms. Breeds in Russia and north-eastern China.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. No mapped important areas likely to occur in proposal site.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, occur along the alignment. No mapped important areas likely to occur in proposal site.	Nil. No wetland areas present in the Pilliga.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, occur along the alignment. No mapped important areas likely to occur in proposal site.
Flame Robin	<i>Petroica phoenicea</i>	V		Recorded as a predicted species within the BAM-C	Ecosystem	Breeds in upland moist eucalypt forests and woodlands, often on ridges and slopes, in areas of open understorey. Migrates in winter to more open lowland habitats such as grassland with scattered trees and open woodland on the inland slopes and plains. Forages from low perches, feeding on invertebrates taken from the ground, tree trunks, logs and other coarse woody debris. Fallen logs and coarse woody debris are important habitat components. Open cup nest of plant fibres and cobweb is often built near the ground in a sheltered niche, ledge or shallow cavity in a tree, stump or bank.	Possible - may occur on occasion in larger remnants.	Possible - may occur on occasion in larger remnants.	Possible - may occur on occasion.	Possible - may occur on occasion in larger remnants.

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Freckled Duck	<i>Stictonetta naevosa</i>	V		1 record within 20km, last recorded 2001 (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Breeds in large, ephemeral swamps in the Murray-Darling, particularly along the Paroo and Lachlan Rivers and other Riverina rivers. In drier times moves to more permanent waters. Disperses during extensive inland droughts and may be found in coastal areas during such times. Prefers freshwater swamps/creeks with dense Cumbungi, Lignum or tea-tree. Nests in dense vegetation at or near water level.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. May occur at farm dams and along rivers on occasion.	Possible. May occur at farm dams and along rivers on occasion.	Low. Limited water bodies present. May occur on rare occasions at dams.	Possible. May occur at farm dams and along rivers on occasion.
Gilbert's Whistler	<i>Pachycephala inornata</i>	V		Recorded as a predicted species within the BAM-C	Ecosystem	Occurs in arid and semi-arid timbered habitats in mallee shrubland, and occasionally in box-ironbark woodlands, Cypress Pine, Belah woodlands and River Red Gum forests. Within mallee, the species often occurs in association with an understorey of spinifex and low shrubs of acacias, hakeas, sennas and grevilleas. In woodland habitats, the understorey contains areas of dense shrubbery, particularly dense regrowth thickets of Callitris. Occurs across most of NSW's semi-arid and arid regions. Diet consists primarily of insects and spiders, but may also include seeds and fruits. Breeding occurs from August - November, with nesting occurring 2 metres above the ground in the fork of densely foliated prickly plants such as acacias.	Possible. Within the northern edge of its current distribution. Could forage in Box-ironbark woodlands and Cypress Woodlands.	Possible. Within the northern edge of its current distribution. Could forage in Box-ironbark woodlands and Cypress Woodlands.	Likely. Within the northern edge of its current distribution. Could forage in Box-ironbark woodlands and Cypress Woodlands. Previously recorded in adjacent Merriwindi SF and Timallallie NP.	Possible. Within the northern edge of its current distribution. Could forage in Box-ironbark woodlands and Cypress Woodlands.

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Glossy Black-Cockatoo	<i>Calyptorhynchus lathami</i>	V		107 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Widespread but uncommon from coast to southern tablelands and central western plains. Feeds almost exclusively on the seeds of Allocasuarina species. Prefers woodland and open forests, rarely away from Allocasuarina. Roost in leafy canopy trees, preferably eucalypts, usually <1km from feeding site. Nests in large (approx. 20cm) hollows in trees, stumps or limbs, usually in Eucalypts (Higgins 1999).	Possible. May occur in areas of Allocasuarina and Casuarina in larger woodland patches in agricultural land.	Possible. May occur in areas of Allocasuarina and Casuarina in larger woodland patches in agricultural land.	Present. Large areas of foraging and breeding habitat present.	Present. Areas of foraging and breeding habitat present in larger remnants.
Grey-crowned Babbler (eastern subspecies)	<i>Pomatostomus temporalis temporalis</i>	V		474 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs on western slopes and plains, as well as in the Hunter Valley and several locations on the north coast. Inhabits open Box-Gum Woodlands on the slopes, and Box-Cypress-pine and open Box Woodlands on alluvial plains. Family groups have territories between 1-50 (generally around 10) hectares. Nests typically built in shrubs or sapling eucalypts.	Present. Individuals recorded throughout the study area in roadside remnants and other small patches of vegetation. Would forage and breed in these areas.	Present. Individuals recorded throughout the study area in roadside remnants and other small patches of vegetation. Would forage and breed in these areas.	Present. Individuals recorded in a number of locations throughout the Pilliga. Would forage and breed in these areas.	Present. Individuals recorded throughout the study area in roadside remnants and other small patches of vegetation. Would forage and breed in these areas.

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Grey Falcon	<i>Falco hypoleucos</i>	E		Recorded as a predicted species within the BAM-C	Ecosystem	Inhabits shrubland, grassland and wooded watercourses of arid and semi-arid regions, and occasionally open woodlands throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. Breeding only occurs within arid areas of the Great Dividing Range. Its diet consists of other birds, especially parrots and pigeons, reptiles and small mammals. Nesting occurs in disused nests of other birds of prey and ravens, high in a living eucalypt near water or a watercourse. Breeding occurs in late winter and early spring.	Likely. Potential foraging and breeding habitat present in larger remnants.	Likely. Potential foraging and breeding habitat present in larger remnants.	Likely. Potential foraging and breeding habitat present throughout the Pilliga forests.	Likely. Potential foraging and breeding habitat present in larger remnants.
Hooded Robin (south-eastern form)	<i>Melanodryas cucullata cucullata</i>	V		21 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Considered a sedentary species, but local seasonal movements are possible. Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Occurrence is positively associated with patch size, and with components of habitat complexity including canopy cover, shrub cover, ground cover, logs, fallen branches and litter. Nests on low, live or dead forks or branches of trees or stumps, or occasionally on fallen trees or limbs.	Likely. Would occur in larger remnants.	Possible. Could occur in larger remnants where fallen timber is present.	Likely. Large areas of habitat present in the Pilliga forests.	Likely. Would occur in larger remnants.

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Little Eagle	<i>Hieraetus morphnoides</i>	V		18 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs throughout NSW except most densely forested parts of the Dividing Range escarpment. Occupies habitats rich in prey within open eucalypt forest, woodland or open woodland. Sheoak or acacia woodlands and riparian woodlands of interior NSW are also used. For nest sites it requires a tall living tree within a remnant patch, where pairs build a large stick nest in winter and lay in early spring.	Likely. Potential foraging and breeding habitat present in larger remnants.	Likely. Potential foraging and breeding habitat present in larger remnants.	Likely. Potential foraging and breeding habitat present throughout the Pilliga forests.	Likely. Potential foraging and breeding habitat present in larger remnants.
Little Lorikeet	<i>Glossopsitta pusilla</i>	V		22 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs from coast to western slopes of the Great Dividing Range. Inhabits dry, open eucalypt forests and woodlands. Occurrence is positively associated with patch size, and with components of habitat complexity including canopy cover, shrub cover, ground cover, logs, fallen branches and litter. Feed primarily on profusely-flowering eucalypts and a variety of other species including melaleucas and mistletoes. On the western slopes and tablelands <i>Eucalyptus albens</i> and <i>E. melliodora</i> are particularly important food sources for pollen and nectar respectively. Mostly nests in small (opening approx. 3cm) hollows in living, smooth-barked eucalypts, especially <i>Eucalyptus viminalis</i> , <i>E. blakelyi</i> and <i>E. dealbata</i> . Most breeding records are from the western slopes.	Possible - may occur on occasion in larger remnants.	Possible - may occur on occasion in larger remnants.	Likely - all records in the locality occur from the Pilliga to just north of Narrabri. Important breeding and feeding resources are likely to be present within the Pilliga.	Likely - all records in the locality occur from the Pilliga to just north of Narrabri. Breeding and foraging resources are present in larger patches.

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Magpie Goose	<i>Anseranas semipalmata</i>	V		10 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs in the tropics, increasing numbers in central and northern NSW and vagrants to south-east NSW. Inhabits shallow wetlands containing dense rushes or sedges, and nearby dry land used for grazing. It feeds on grasses, bulbs and rhizomes and roosts in tall vegetation within wetland areas. Breeding is occurs predominately in monsoonal areas and is unlikely in SE NSW. Nests are formed in trees over deep water.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
Major Mitchell's Cockatoo	<i>Lophochroa leadbeateri</i>	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs in arid and semi-arid NSW, regularly as far east as Bourke and Griffith and occasionally further east as vagrants. Occupies habitat in arid semi-desert scrublands, savannahs and sparse woodlands, where there is fresh surface water and large hollow trees for nesting. These birds have been recorded in forest, woodland and shrub land, including mulga, mallee, Acacia, Eucalyptus and Callitris associations. It has also been recorded in cropping areas throughout its range. Large areas of suitable habitat are required for a viable population to exist.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.	Likely. Potential foraging and breeding habitat present throughout the Pilliga forests.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Likelihood of occurrence in the Narromine to Curban area (Segment 8)	Likelihood of occurrence in Curban to Pilliga area (Segment 9)	Likelihood of occurrence in Pilliga area (Segment 10)	Likelihood of occurrence in Pilliga to Narrabri area (Segment 11)
Malleefowl	<i>Leipoa ocellata</i>	E	V	Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs in semi-arid to arid mallee country in the south-west of NSW. Its NSW stronghold is centred on Mallee Cliffs NP, extending east to Balranald and with scattered records north to Mungo NP. There are also populations in the Scotia mallee (W of the Darling River), central NSW (chiefly Yathong, Nombinnie and Round Hill NR), and Dubbo (Goonoo forest). Occasional records exist from the Pilliga, around Cobar and Goulburn River NP. Inhabits predominately mallee communities, apparently preferring areas of sandy soil, abundant leaf litter, dense canopy and an abundance of food shrubs and herbs (especially legumes). Less frequently found in other eucalypt woodlands such as Eucalyptus microcarpa, Ironbark and E. populnea woodlands with thick understorey, and Mulga and native Cypress Pine communities.	Nil. No suitable habitat present.	Nil. No suitable habitat present.	Unlikely. A small area of potential habitat within Pilliga East State Forest, however the species is considered extinct in the Pilliga ().	Unlikely - the species is considered extinct in the Pilliga and is highly unlikely to persist in roadside remnants along the Newell Highway.
Masked Owl	<i>Tyto novaehollandiae</i>	V		4 records within 20km, last recorded 2006 (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs across NSW except NW corner. Most common on the coast. Inhabits dry eucalypt woodlands from sea level to 1100 metres. Roosts and breeds in large (>40cm) hollows and sometime caves in moist eucalypt forested gullies. Hunts along the edges of forests and roadsides. Home range between 500 hectares and 1000 hectares. Prey mostly terrestrial mammals but arboreal species may also be taken.	Possible. May breed in larger remnants and forage in adjacent agricultural land and roadsides.	Possible. May breed in larger remnants and forage in adjacent agricultural land and roadsides.	Likely. Would breed and forage in the area.	Possible. May breed in larger remnants and forage in adjacent agricultural land and roadsides.

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Painted Honeyeater	<i>Grantiella picta</i>	V	V	19 records within 20km (OEH 2020a); Breeding known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Nomadic, occurring in low densities across most of NSW. Highest concentrations and almost all breeding occur on inland slopes of the Great Dividing Range. Inhabits Boree, Brigalow and Box Gum woodlands and Box-Ironbark forests. Specialist forager on the fruits of mistletoes, preferably of the <i>Amyema</i> genus. Nests in outer tree canopy.	Possible. May occur in larger remnants where mistletoe is present.	Possible. May occur in larger remnants where mistletoe is present.	Likely. Pilliga is an important area for this species.	Likely. Potential foraging and breeding habitat present in larger remnants.
Powerful Owl	<i>Ninox strenua</i>	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs from the coast to the western slopes. Solitary and sedentary species. Inhabits a range of habitats from woodland and open sclerophyll forest to tall open wet forest and rainforest. Prefers large tracts of vegetation. Nests in large tree hollows (> 0.5 metres deep), in large eucalypts (dbh 80-240 cm) that are at least 150 years old. Pairs have high fidelity to a small number of hollow-bearing nest trees and defend a large home range of 400 - 1,450 hectares. Forages within open and closed woodlands as well as open areas.	Low. Outside usual range.	Low. Outside usual range.	Low. Outside usual range. Not known to occur in the Pilliga forest.	Low. Outside usual range.

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Red Goshawk	<i>Erythroricoris radiatus</i>	CE	V	Likely to occur within 20km (DEE 2020a)	Species	Very rare in NSW, generally confined to the Northern Rivers bioregion with most records in the Clarence River catchment with few around the lower Richmond and Tweed Rivers. Inhabitat open woodland and forest, preferring mixed subtropical rainforest, Melaleuca swamp forest and riparian Eucalyptus forest of coastal rivers. Preferred habitats include a mosaic of vegetation types, a large population of birds (prey) and permanent water. Adults have large home ranges (up to 120 km ² in NT), and in NSW appear to move from nesting areas in the ranges to coastal areas to coastal plains. Generally breed in tall trees within 1km of a river or wetland.	Low. Outside usual range. Vagrant individuals may occur on occasion.	Low. Outside usual range. Vagrant individuals may occur on occasion.	Low. Outside usual range. Vagrant individuals may occur on occasion.	Low. Outside usual range. Vagrant individuals may occur on occasion.
Regent Honeyeater	<i>Anthochaera phrygia</i>	CE	CE	1 record within 20km, last recorded 2003 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	In NSW confined to two known breeding areas: the Capertee Valley and Bundarra-Barraba region. Non-breeding flocks occasionally seen in coastal areas foraging in flowering Spotted Gum and Swamp Mahogany forests, presumably in response to drought. Inhabits dry open forest and woodlands, particularly Box-Ironbark woodland and riparian forests of River Sheoak, with an abundance of mature trees, high canopy cover and abundance of mistletoes.	Unlikely. No important foraging habitat present.	Unlikely. No important foraging habitat present.	Possible. May occur in larger remnants on occasion while on migration from the Burraba breeding area to important habitat areas in the south of the Pilliga.	Possible. May occur in larger remnants on occasion while on migration from the Burraba breeding area to important habitat areas in the south of the Pilliga.

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Scarlet Robin	<i>Petroica boodang</i>	V		1 record within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	In NSW occurs from coast to inland slopes. Breeds in drier eucalypt forests and temperate woodlands, often on ridges and slopes, within open understorey of shrubs and grasses and sometimes in open areas. In autumn and winter it migrates to more open habitats such as grassy open woodland or paddocks with scattered trees. Abundant logs and coarse woody debris are important habitat components.	Possible - may occur on occasion in larger remnants.	Possible - may occur on occasion in larger remnants.	Possible - may occur on occasion.	Possible - may occur on occasion in larger remnants.
Speckled Warbler	<i>Chthonicola sagittata</i>	V		324 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Within NSW most frequently reported from the hills and tablelands of the Great Dividing Range, rarely from the coast. Inhabits a wide range of Eucalyptus-dominated communities with a grassy understorey, a sparse shrub layer, often on rocky ridges or in gullies. Sedentary and requires large, relatively undisturbed remnants to persist in an area. Forages on the ground for seeds and insects, and nests in a slight hollow in the ground or at the base of a low dense plant.	Possible - may occur on occasion in larger remnants.	Possible - may occur on occasion in larger remnants.	Likely - could occur throughout the Pilliga.	Present - recorded in the Bohena Creek area. Would occur in larger remnants in this section.

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Spotted Harrier	<i>Circus assimilis</i>	V		28 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs throughout Australian mainland, except in densely forested or wooded habitats of the coast, escarpment and ranges, and rarely in Tasmania. Individuals disperse widely in NSW and comprise a single population. Inhabits grassy open woodland including acacia and mallee remnants, inland riparian woodland, grassland and shrub steppe (eg chenopods). Most commonly in native grassland, but also in agricultural land, foraging over open habitats including edges of inland wetlands. Builds a stick nest in a tree and lays eggs in spring (or sometimes autumn).	Present - recorded south of the Macquarie River on two occasions and near Gilgandra. Would forage over agricultural land and forested remnants.	Likely. Would forage over agricultural land and forested remnants.	Unlikely. Preferred open country habitats not present.	Likely. Would forage over agricultural land and forested remnants.
Square-tailed Kite	<i>Lophoictinia isura</i>	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs across NSW, resident in North, northeast and along west-flowing rivers. Summer breeding migrant to southeast of state. Inhabits a variety of habitats including woodlands and open forests, with preference for timbered watercourses. Favours productive forests on the coastal plain, box-ironbark-gum woodlands on the inland slopes, and Coolibah/River Red Gum on the inland plains. In Sydney area nests in mature living trees within 100m of ephemeral/permanent watercourse. Large home range > 100 km ² .	Likely. Potential foraging and breeding habitat present in larger remnants.	Likely. Potential foraging and breeding habitat present in larger remnants.	Likely. Potential foraging and breeding habitat present throughout the Pilliga forests.	Likely. Potential foraging and breeding habitat present in larger remnants.

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Squatter Pigeon	<i>Geophaps scripta</i>	CE	V	May occur within 20km (DEE 2020a)	Species	Found from north Queensland to the North West Slopes of NSW and extending down to the Liverpool Plains and Dubbo. Today they are very rare in the southern parts of their range. Was previously considered extinct in NSW, however there have been recent sightings at Dhinna Dhinawan National Park and the Bruxner Highway near Texas on the border of NSW and Queensland. Grassy woodlands and plains, preferring sandy areas and usually close to water.	Low. Outside usual range. Not observed during surveys.	Low. Outside usual range. Not observed during surveys.	Low. Outside usual range. Not observed during surveys.	Low. Outside usual range. Not observed during surveys.
Superb Parrot	<i>Polytelis swainsonii</i>	V	V	49 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs as a single population in the South-west Slopes and Riverina bioregions. Two core breeding areas: between Cowra and Yass – Grenfell, Cootamundra and Coolac in the SW Slopes, and along the Murray, Edward and Murrumbidgee Rivers in the Riverina. Birds breeding in the SW slopes migrate north to the Namoi/Gwydir Rivers for winter. Inhabits Box Gum, Box – Cypress Pine and Boree woodlands and River Red Gum Forest. Nest in hollow trees, in tall riparian River Red Gum communities (Riverina area) or open Box Gum woodland or isolated paddock trees (SW Slopes). Mainly forages in grassy box woodlands, up to 10km from breeding sites.	Likely - may occur as non-breeding flocks in remnant vegetation outside the breeding season.	Present - recorded in a roadside remnant. Likely to be non-breeding visitors to the area.	Low - preferred grassy woodland habitat not present.	Likely - may occur as non-breeding flocks in remnant vegetation outside the breeding season.

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Swift Parrot	<i>Lathamus discolor</i>	E	CE	1 record within 20km, last recorded 2000 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Migratory, travelling to the mainland from March to October. Breeds in Tasmania from September to January. On the mainland, it mostly occurs in the southeast foraging on winter flowering eucalypts and lerps, with records of the species between Adelaide and Brisbane. Principal over-winter habitat is box-ironbark communities on the inland slopes and plains. Eucalyptus robusta, Corymbia maculata and C. gummifera dominated coastal forests are also important habitat.	Unlikely. May occur on rare occasions.	Unlikely. May occur on rare occasions.	Unlikely. May occur on rare occasions. Important habitat for this species is identified in the eastern Pilliga. Only one record occurs within 20 kilometres of the laignment.	Unlikely. May occur on rare occasions.
Turquoise Parrot	<i>Neophema pulchella</i>	V		98 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs from coast to inland slopes. In coastal area, most common between Hunter and Northern Rivers, and further south in S Coast. Inhabits open eucalypt woodlands and forests, typically with a grassy understorey. Favours edges of woodlands adjoining grasslands or timbered creek lines and ridges. Feeds on the seeds of native and introduced grasses and other herbs. Grasslands and open areas provide important foraging habitat for this species while woodlands provide important roosting and breeding habitat. Nests in tree hollows, logs or posts from August to December.	Likely. Would occur in woodland patches and riparian vegetation adjacent to agricultural land.	Likely. Would occur in woodland patches and riparian vegetation adjacent to agricultural land.	Likely. Would occur in forest on the edges of the Pilliga	Likely. Would occur in woodland patches and riparian vegetation adjacent to agricultural land.

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Varied Sittella	<i>Daphoenositta chrysoptera</i>	V		98 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Sedentary, occurs across NSW from the coast to the far west. Inhabits eucalypt forests and woodlands, especially rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland. Sensitive to habitat isolation and loss of structural complexity, and adversely affected by dominance of Noisy Miners. Cleared agricultural land is potentially a barrier to movement. Builds a cup-shaped nest of plant fibres and cobwebs in an upright tree fork high in the living tree canopy, and often re-uses the same fork or tree in successive years.	Present. Would occur in larger remnants.	Possible. May occur in larger remnants.	Present. Recorded on a number of occasions during surveys in the Pilliga. Foraging and breeding habitat present.	Likely. Would occur in larger remnants.
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	V		5 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Primarily coastal but may extend inland over major river systems. Breeds close to water, mainly in tall open forest/woodland but also in dense forest, rainforest, closed scrub or remnant trees. Usually forages over large expanses of open water, but also over open terrestrial habitats (eg grasslands).	Low. Limited open water present. May occur along the Macquarie River on occasion. No large stick nests observed near water.	Low. Limited open water present. May occur along the Castlereagh River on occasion. No large stick nests observed near water.	Unlikely. No suitable foraging habitat present.	Low. Limited open water present. May occur along the Namoi River on occasion. No large stick nests observed near water.

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White-fronted Chat	<i>Epthianura albifrons</i>	V		Recorded as a predicted species within the BAM-C	Ecosystem	This species occurs from southern Queensland to Western Australia and down to Tasmania, mostly in temperate to arid climates and very rarely in sub-tropical areas. It is found in damp open habitats, particularly wetlands containing saltmarsh areas that are bordered by open grasslands. Along the coast they are found in estuarine and marshy habitats with vegetation <1m tall, and in open grasslands and areas bordering wetlands. Inland, they are often observed in grassy plains, saltlakes and salt pans along waterway margins.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
White-throated Needletail	<i>Hirundapus caudacutus</i>		V, C,J,K	21 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a)	n/a	Recorded along NSW coast to the western slopes and occasionally from the inland plains. Breeds in northern hemisphere. Almost exclusively aerial while in Australia. Occur above most habitat types, but are more frequently recorded above more densely vegetated habitats (rainforest, open forest and heathland) than over woodland or treeless areas.	Possible. May occur on occasion.	Possible. May occur on occasion.	Possible. May occur on occasion.	Possible. May occur on occasion.

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MAMMALS										
Black-striped Wallaby	<i>Macropus dorsalis</i>	E		3488 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Occurs on the far north coast and western slopes of NSW. On the north-west slopes occurs in Brigalow remnants to south of Narrabri. Preferred habitats characterised by dense low (up to 3m) woody or shrubby vegetation, near open grassy foraging areas. On the north-west slopes associated with dense vegetation including brigalow, ooline and vine-thickets. On the north-coast closely associated with dry rainforest but also recorded from moist eucalypt forest with dense understorey.	Nil - outside known range	Unlikely - outside known range. May occur in forested patches near Baradine.	Likely - main distribution is the Pilliga area	Likely - main distribution is the Pilliga area and may occur in forested areas near Narrabri
Brush-tailed Rock-wallaby	<i>Petrogale penicillata</i>	E	V	38 records within 20km, last recorded 2005 (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs from the Shoalhaven north to the Queensland border. Now mostly extinct west of the Great Dividing Range, except in the Warrumbungles and Mt Kaputar. Occurs on rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges facing north. Diet consists of vegetation in adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present

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Corben's Long-eared Bat	<i>Nyctophilus corbeni</i>	V	V	40 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Little known about the biology or social structure of these bats - rarely recorded and scattered distribution. Limited distribution that is restricted to the Murray-Darling Basin and western slopes in south-eastern Australia. Occur in a wide range of habitats including River Red Gum, Black Box, Allocasuarina, Belah, Mallee, open woodlands and savannahs, but are most common in box, ironbark and cypress open forests and buloke woodlands of inland northern NSW. In SA known to roost in tree hollows less than 3m above the ground with multiple small entrances, elsewhere they roost in fissures in branches and under exfoliating bark. Tree hollows used as maternity sites.	Likely. Could forage and breed in woodland remnants.	Likely. Could forage and breed in woodland remnants.	Present. Recorded at Trap site 1 (Coolangala Creek). Large areas of foraging and breeding habitat present.	Likely. Could forage and breed in woodland remnants.
Eastern Cave Bat	<i>Vespadelus troughtoni</i>	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs in NE NSW south to Kempsey and west to the Warrumbungles. Inhabits rainforest margins, wet and dry sclerophyll forests through to drier forests and woodlands in semi-arid environments. All records are within close proximity to sandstone or volcanic escarpments. Roosts in overhangs and caves, mines, boulder piles, abandoned Fairy Martin nests and occasionally in buildings, and regularly switches between alternate roost colonies. Forages over a small area, but are capable of flying 500 metres over clear paddocks.	Unlikely. Outside known range. No breeding habitat nearby.	Possible. May occur near outlier hills associated with the Warrumbungles.	Possible. Known to occur in the Pilliga. No breeding habitat present near the proposal site.	Possible. Known to occur in the Pilliga. No breeding habitat present near the proposal site.

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Eastern Pygmy-possum	<i>Cercartetus nanus</i>	V		7 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs along the east coast of NSW, and inland to the Pilliga, Dubbo, Parkes and Wagga Wagga. Inhabits range of habitats from coastal heath and woodland through open and closed forests, subalpine heath and rainforest. Inhabits rainforest, sclerophyll forests and heath. Banksia spp. and myrtaceous shrubs and trees are favoured food sources and nesting subject sites in drier habitats. Diet mostly pollen and nectar from Banksia spp., Eucalyptus spp., Callistemon spp. and insects. Nests in hollows in trees, under the bark of Eucalypts, forks of tea-trees, abandoned bird nests and Xanthorrhoea bases.	Nil. No suitable habitat present.	Nil. No suitable habitat present.	Likely. Known to occur in the Pilliga	Possible. May occur in larger remnants connected to the Pilliga.
Greater Broad-nosed Bat	<i>Scoteanax ruepellii</i>	V		Recorded as a predicted species within the BAM-C	Ecosystem	Occurs on the east coast and Great Dividing Range. Inhabits a variety of habitats from woodland to wet and dry sclerophyll forests and rainforest, also remnant paddock trees and timber-lined creeks, typically below 500m asl. Forages in relatively uncluttered areas, using natural or man-made openings in denser habitats. Usually roosts in tree hollows or fissures but also under exfoliating bark or in the roofs of old buildings. Females congregate in maternal roosts in suitable hollow trees.	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.

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Greater Glider	<i>Petauroides volans</i>		V	May occur within 20km (DEE 2020a)	Species	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 metres above sea level. It prefers taller montane, moist eucalypt forest with relatively old trees and abundant hollows.	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	V	V	5 records within 20km (OEH 2020a); Foraging, feeding or related behaviour may occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Roosts in camps within 20 kilometres of a regular food source, typically in gullies, close to water and in vegetation with a dense canopy. Forages in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths, swamps and street trees, particularly in eucalypts, melaleucas and banksias. Highly mobile with movements largely determined by food availability (Eby and Law 2008). Will also forage in urban gardens and cultivated fruit crops.	Low - proposal occurs along the edge of the species' range. Individuals may forage on site on occasion.	Low - proposal occurs along the edge of the species' range. Individuals may forage on site on occasion.	Low - proposal occurs along the edge of the species' range. Individuals may forage on site on occasion.	Low - proposal occurs along the edge of the species' range. Individuals may forage on site on occasion.

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Koala	<i>Phascolarctos cinereus</i>	V	V	523 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Occurs from coast to inland slopes and plains. Restricted to areas of preferred feed trees in eucalypt woodlands and forests. Home range varies depending on habitat quality, from < 2 to several hundred hectares.	Likely. One local record south of Narromine. May occur on occasion in roadside vegetation and riparian areas.	Possible. May occur on occasion in roadside remnants and riparian vegetation.	Present. Recorded at two locations during surveys. Large areas of habitat present.	Likely - would occur in larger remnants, particularly those connected to the Pilliga forests.
Large Bent-winged Bat	<i>Miniopterus orianae oceanensis</i>	V		2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Eco system	Generally occurs east of the Great Dividing Range along NSW coast (Churchill 2008). Inhabits various habitats from open grasslands to woodlands, wet and dry sclerophyll forests and rainforest. Essentially a cave bat but may also roost in road culverts, stormwater tunnels and other man-made structures. Only 4 known maternity caves in NSW, near Wee Jasper, Bungonia, Kempsey and Texas. Females may travel hundreds of kilometres to the nearest maternal colony.	Likely. Probable calls recorded. Would forage throughout the area. Limited roosting habitat present.	Likely. Probable calls recorded. Would forage throughout the area. Limited roosting habitat present.	Present. Definite calls recorded. Would forage throughout the area. No roosting habitat present.	Likely. Would forage throughout the area. Limited roosting habitat present.

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Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	V	V	3 records within 20km (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs from the coast to the western slopes of the divide. Largest numbers of records from sandstone escarpment country in the Sydney Basin and Hunter Valley (Hoye and Schulz 2008). Roosts in caves and mines and most commonly recorded from dry sclerophyll forests and woodlands. An insectivorous species that flies over the canopy or along creek beds (Churchill 2008). In southern Sydney appears to be largely restricted to the interface between sandstone escarpments and fertile valleys.	Unlikely. No suitable breeding habitat and no preferred foraging habitat present.	Unlikely. No suitable breeding habitat and no preferred foraging habitat present.	Likely. Probable call recorded in the Pilliga. No breeding habitat present within 2 kilometres of the proposal site, and no preferred foraging habitat present.	Unlikely. No suitable breeding habitat and no preferred foraging habitat present.
Little Pied Bat	<i>Chalinolobus picatus</i>	V		202 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Found in caves, rock outcrops, mine shafts, tunnels, tree hollows and buildings in dry open forest and woodland, mulga woodlands, chenopod shrublands, cypress-pine forest, mallee, and Bimble box communities. They feed on moths and other flying invertebrates.	Likely. Probable calls recorded. Would forage and breed throughout woodland patches in the area.	Likely. Probable calls recorded. Would forage and breed throughout woodland patches in the area.	Present. Definite calls recorded. Would forage and breed throughout the Pilliga.	Likely. Probable calls recorded. Would forage and breed throughout woodland patches in the area.
Pilliga Mouse	<i>Pseudomys pilligaensis</i>	V	V	59 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Mainly confined to low-nutrient deep sands of the Pilliga region, though an individual was also recorded from the Warrumbungles following major fires in 2013. Appears to prefer areas with sparse groundcover. Occur in highest numbers in: recently burnt moist gullies; areas dominated by broombush; and areas with bloodwood overstorey and Acacia burrowii understorey.	Nil - no suitable habitat, outside known range.	Nil - no suitable habitat, outside known range.	Likely. Many records and large amounts of habitat present in the Pilliga.	Unlikely. May occur on rare occasions in forest connected to the Pilliga.

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Rufous Bettong	<i>Aepyprymnus rufescens</i>	V		2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Inhabits a variety of forests from tall, moist eucalypt forest to open woodland, with a tussock grass understorey. A dense cover of tall native grasses is the preferred shelter. Sleeps during the day in cone-shaped nests constructed of grass in a shallow depression at the base of a tussock or fallen log. At night feeds on grasses, herbs, seeds, flowers, roots, tubers, fungi and occasionally insects. The original range from Coen in north Queensland to central Victoria has been reduced to a patchy distribution from Cooktown, Queensland, to north-eastern NSW. In NSW it has largely vanished from inland areas, although there are unconfirmed records from the Pilliga and Torrington districts.	Nil - no suitable habitat, outside known range.	Unlikely. May occur on rare occasions in forest connected to the Pilliga.	Possible. Previously thought to be extinct in the Pilliga, but there have been recent observations. Could occur on occasion in the proposal site.	Unlikely. May occur on rare occasions in forest connected to the Pilliga.
Spotted-tailed Quoll	<i>Dasyurus maculatus</i>	V	E	1 record within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Inhabits a range of environments including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Den sites are in hollow-bearing trees, fallen logs, small caves, rock crevices, boulder fields and rocky-cliff faces. Females occupy home ranges of up to 750 hectares and males up to 3,500 hectares, usually traversed along densely vegetated creek lines.	Unlikely. Limited suitable habitat present.	Unlikely. Limited suitable habitat present.	Likely. Known to occur in the Pilliga. May occur on occasion in the proposal site.	Likely. Known to occur in the Pilliga. May occur on occasion in larger remnants.

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Squirrel Glider	<i>Petaurus norfolcensis</i>	V		14 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs along the drier inland slopes as well as coastal habitats. Inhabits woodland and open forest with a Eucalyptus, Corymbia or Angophora overstorey and a shrubby understorey of Acacia or Banksia. Key habitat components include reliable winter and early-spring flowering Eucalypts, Banksia or other nectar sources, and hollow-bearing trees for roost and nest sites (van der Ree and Suckling 2008, Quin et al 2004), with social groups moving between multiple hollows. Social groups include one or two adult males and females with offspring, and have home ranges of 5-10ha within NSW (van der Ree and Suckling 2008, Kavanagh 2004).	Unlikely. No large patches of vegetation present, few local records.	Unlikely. May occur on rare occasions in forest connected to the Pilliga.	Present. Recorded in the proposal site. Would forage and breed throughout the Pilliga.	Possible. May occur in forest and linear remnants connected to the Pilliga.
Stripe-faced Dunnart	<i>Sminthopsis macroura</i>	V		Recorded as a predicted species within the BAM-C	Ecosystem	Widespread across northern and central Australia. In NSW rare on the Central and North West Slopes, with eastern-most records in recent times around Dubbo, Coonabarabran, Wyallda and Ashford. Inhabit native dry grasslands and low dry shrublands, often along drainage lines. Shelter in soil cracks, grass tussocks or under rocks and logs. Prefers relatively ungrazed habitats with higher diversity and understorey cover.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.	Unlikely. Occurs at the eastern extent of its range, however not recorded within 20km.

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Yellow-bellied Sheathtail-bat	<i>Saccolaimus flaviventris</i>	V		1011 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Migrates from tropics to SE Aus in summer. Forages across a range of habitats including those with and without trees, from wet and dry sclerophyll forest, open woodland, Acacia shrubland, mallee, grasslands and desert. Roosts communally in large tree hollows and buildings.	Present. Recorded during surveys. Would forage and breed throughout the area.	Likely. Would forage and breed throughout the area.	Present. Recorded during surveys. Would forage and breed throughout the area.	Present. Recorded during surveys. Would forage and breed throughout the area.
REPTILES										
Border Thick-tailed Gecko	<i>Uvidicolus sphyrurus</i>	V	V	Likely to occur within 20km (DEE 2020a)	Species	The Border Thick-tailed Gecko occurs in the New England Tableland, Nandewar and Brigalow Belt South Bioregions in northern NSW and in south-east Queensland. The Border Thick-tailed Gecko is a nocturnal species that shelters by day and is most commonly found in undisturbed habitat remnants on rocky outcrops and stony hills within eucalypt and cypress-pine open forest or woodland between 500-1100 metres elevation.	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.	Unlikely. Distribution is north of proposal site. Limited suitable habitat likely to be present
Five-clawed Worm-skink	<i>Anomalopus mackayi</i>	E	V	1 record within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a)	Ecosystem	Patchily distributed on the north-west slopes and plains of NSW between Ashford, Mungindi and Walgett and north int Queensland. Inhabits deep burrows and soil cracks in grassy White Box woodland on moist black soils and River Red Gum - Coolibah - Bimble Box woodland on cracking clays. Has also been recorded in grassland areas and open paddocks with scattered trees.	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.	Moderate - potential habitat present in red gum and white box communties along the northern side of the Pilliga

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Pale-headed Snake	<i>Hoplocephalus bitorquatus</i>	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs north from Tuggerah along the coast and to the western side of the Great Divide, historically recorded as far west as Mungindi and Quambone. Inhabits dry eucalypt forests and woodlands, cypress woodland and occasionally in rainforest or moist eucalypt forest. West of the Great Dividing Range in NSW the species, has been recently recorded in sites dominated by Narrow-leaved Ironbark, Black Box and Silver-leaf Ironbark woodland and Coolabah (Fitzgerald et al 2010). In near-coastal areas has been recorded in Broad-leaved Ironbark, Spotted Gum, Forest Red Gum and Grey Gum forests (Fitzgerald et al 2010). Favours streamside areas, particularly in drier habitats. Shelter during the day between loose bark and tree-trunks, or in hollow trunks and limbs of dead trees.	Nil. Outside known range.	Nil. Outside known range.	Present. Individual recorded near a creekline in the Pilliga. Likely to occur in association with riparian areas throughout the Pilliga.	Likely. Known to occur along the Namoi River. Likely to occur in association with riparian areas also at Narrabri Creek and Bohena Creek.
Pink-tailed Worm-lizard	<i>Aprasia parapulchella</i>	V	V	Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Populations occur in the Queanbeyan/Canberra district, Cooma, Yass, Bathurst, Albury and West Wyalong areas. Inhabits grassland and open woodland with substantial embedded rock cover in sunny situations. Recorded in both native and non-native grasslands. Usually recorded under small rocks (150 - 600 mm basal area) shallowly embedded in the soil (2 - 5 cm, and use ant burrows under these rocks.	Nil. Outside known range.	Unlikely - may occur near outlier hills associated with the Warrumbungles. No rocky habitat present in the proposal site.	Nil. Outside known range. No suitable habitat.	Unlikely. Outside known range.

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Striped Legless Lizard	<i>Delma impar</i>	V	V	Known to occur within 20km (DEE 2020a)	Species	Occurs in the Southern Tablelands, South-west Slopes and possibly the Riverina. Found in natural or secondary grassland or open areas in grassy eucalypt woodland. May occur in modified grasslands with high exotic grass cover. Shelters in base of grass tussocks, under rocks or logs or in soil cracks (Smith and Robertson 1999).	Unlikely. Known distribution is south of proposal, mainly around Canberra and Goulburn areas. Limited suitable habitat likely to be present	Nil. Outside known range.	Nil. Outside known range.	Nil. Outside known range.

FROGS

Sloane's Froglet	<i>Crinia sloanei</i>	V		Recorded as a potential candidate species within the BAM-C	Species	Typically associated with periodically inundated areas in grassland, woodland and disturbed habitats. Majority of records are from the Riverina.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.
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MIGRATORY BIRDS										
Common Sandpiper	<i>Actitis hypoleucos</i>		C,J,K	May occur within 20km (DEE 2020a)	n/a	Does not breed in Australia. When in Australia it is found on all coastlines and in inland areas, but is concentrated in the north and west with important areas in WA, the NT and Qld. Utilises a wide range of coastal and inland wetlands with varying salinity levels.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.

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Curlew Sandpiper	<i>Calidris ferruginea</i>	E	CE, C,J,K	May occur within 20km (DEE 2020a)	Species/Eco system	Breeds in northern hemisphere. In Australia generally occupies littoral and estuarine habitats. In NSW mainly found in intertidal mudflats on sheltered coasts. Roosts on beaches, spits or islands on the coast/in wetlands, or in saltmarsh on rocky shores.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
Eastern Curlew	<i>Numenius madagascariensis</i>		CE, C,J,K	May occur within 20km (DEE 2020a)	n/a	Within Australia, the species has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. It is most commonly associated with sheltered coasts, and all internationally important sites for this species in Australia are on the coast. The birds are also found in saltworks and sewage farms. Breeds in Russia and north-eastern China.	Unlikely. No suitable wetland areas present. Proposal would impact farm dams, generally with little emergent vegetation. No mapped important areas likely to occur in proposal site.	Unlikely. No suitable wetland areas present. Proposal would impact farm dams, generally with little emergent vegetation. No mapped important areas likely to occur in proposal site.	Nil. No wetland areas present in the Pilliga.	Unlikely. No suitable wetland areas present. Proposal would impact farm dams, generally with little emergent vegetation. No mapped important areas likely to occur in proposal site.

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Fork-tailed Swift	<i>Apus pacificus</i>		C,J,K	2 records within 20km, last recorded 2005 (OEH 2020a)	n/a	Recorded in all regions of NSW. Non-breeding, and almost exclusively aerial while in Australia. Occurs over urban and rural areas as well as areas of native vegetation.	Present. Large flock recorded south of Gilgandra.	Likely. Would occur on occasion above the proposal.	Likely. Would occur on occasion above the proposal.	Likely. Would occur on occasion above the proposal.
Glossy Ibis	<i>Plegadis falcinellus</i>		C	5 records within 20km (OEH 2020a)	n/a	Occurs throughout eastern and northern Australia, east of the Kimberley and Eyre Peninsula. Largest areas of prime habitat are inland and northern floodplains, with largest numbers in the Top End and Channel Country. Preferred habitats are fresh water marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation. Breeds at limited locations, with most records from the Murray Darling Basin (NSW), western Riverina (VIC), south-east (SA), Channel Country (Qld/ SA) and lower Ord/Keep Rivers (WA).	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.

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Latham's Snipe	<i>Gallinago hardwickii</i>		C,J,K	5 records within 20km (OEH 2020a); May occur within 20km (DEE 2020a)	n/a	Occurs along the coast and west of the great dividing range. Non breeding visitor to Australia. Inhabit permanent and ephemeral wetlands up to 2000 metres asl. Typically in open, freshwater wetlands with low, dense vegetation (incl. swamps, flooded grasslands and heathlands). Can also occur in saline/brackish habitats and in modified or artificial habitats close to human activity.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.

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Marsh Sandpiper	<i>Tringa stagnatilis</i>		C,J,K	2 records within 20km, last recorded 2007 (OEH 2020a)	n/a	Breeds in N Hemisphere. Occurs in coastal and inland wetlands, including freshwater and estuarine habitats, throughout Australia. All regions of NSW but particularly central and south coasts and western slopes and plains. Sites of national importance in NSW include Parkes wetlands, Macquarie Marshes and Tullakool Evaporation Ponds.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.

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Pectoral Sandpiper	<i>Calidris melanotos</i>		J,K	May occur within 20km (DEE 2020a)	n/a	Widespread but scattered records across NSW, east of the divide and in the Riverina and Lower Western regions. Breeds in the northern hemisphere. In Australasia, prefers shallow fresh to saline wetlands and is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands. Usually in coastal or near-coastal habitats, and prefers wetlands with open mudflats and low emergent or fringing vegetation such as grass or samphire.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.
Rufous Fantail	<i>Rhipidura rufifrons</i>		B	Known to occur within 20km (DEE 2020a)	n/a	Found along NSW coast and ranges. Inhabits rainforest, dense wet forests, swamp woodlands and mangroves. During migration, it may be found in more open habitats or urban areas (Birds Australia 2008).	Unlikely - may occur on rare occasions. The proposal site is located within the core non-breeding range, but not the core breeding range	Unlikely - may occur on rare occasions. The proposal site is located within the core non-breeding range, but not the core breeding range	Unlikely - may occur on rare occasions. The proposal site is located within the core non-breeding range, but not the core breeding range	Unlikely - may occur on rare occasions. The proposal site is located within the core non-breeding range, but not the core breeding range

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Likelihood of occurrence in the Narromine to Curban area (Segment 8)	Likelihood of occurrence in Curban to Pilliga area (Segment 9)	Likelihood of occurrence in Pilliga area (Segment 10)	Likelihood of occurrence in Pilliga to Narrabri area (Segment 11)
Satin Flycatcher	<i>Myiagra cyanoleuca</i>		B	Known to occur within 20km (DEE 2020a)	n/a	In NSW widespread on and east of the Great Divide, sparsely scattered on the western slopes, very occasional records on the western plains. Inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, often near wetlands and watercourses. On migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests. Generally not in rainforests.	Unlikely. Proposal outside core non-breeding and core breeding range.	Unlikely. Proposal outside core non-breeding and core breeding range.	Unlikely. Proposal outside core non-breeding and core breeding range.	Unlikely. Proposal outside core non-breeding and core breeding range.
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		C,J,K	3 records within 20km, last recorded 2007 (OEH 2020a); Known to occur within 20km (DEE 2020a)	n/a	Spends the non-breeding season in Australia with small numbers occurring regularly in New Zealand. Most of the population migrates to Australia, mostly to the south-east and are widespread in both inland and coastal locations and in both freshwater and saline habitats. Many inland records are of birds on passage. In Australasia, prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. Breeds in northern Siberia.	Possible. A small area of PCT 247 (Lignum shrubland wetland) is present south of Narromine. This may provide habitat for this species during wet periods, but would predominantly be dry. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Most records in the area are associated with the Narromine Wetlands and Backwater Cowal. These areas would not be impacted by the proposal.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Castlereagh River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed.	Unlikely. No suitable wetland areas present.	Unlikely. No suitable wetland areas present. Various farm dams, generally with little emergent vegetation, also occur along the alignment. Dense areas of emergent reeds are present in the Namoi River. This river would be crossed by a large bridge, and no clearing of reedbeds is proposed. There would be no impact on Narrabri Lake, where better quality habitat is located.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Likelihood of occurrence in the Narromine to Curban area (Segment 8)	Likelihood of occurrence in Curban to Pilliga area (Segment 9)	Likelihood of occurrence in Pilliga area (Segment 10)	Likelihood of occurrence in Pilliga to Narrabri area (Segment 11)
White-throated Needletail	<i>Hirundapus caudacutus</i>		V C,J,K	21 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a)	n/a	Recorded along NSW coast to the western slopes and occasionally from the inland plains. Breeds in northern hemisphere. Almost exclusively aerial while in Australia. Occur above most habitat types, but are more frequently recorded above more densely vegetated habitats (rainforest, open forest and heathland) than over woodland or treeless areas.	Possible. Would occur on occasion above the proposal.	Possible. Would occur on occasion above the proposal.	Possible. Would occur on occasion above the proposal.	Possible. Would occur on occasion above the proposal.
Yellow Wagtail	<i>Motacilla flava</i>		C,J,K	May occur within 20km (DEE 2020a)	n/a	This species breeds in temperate Europe and Asia. They occur within Australia in open country habitat with disturbed ground and some water. Recorded in short grass and bare ground, swamp margins, sewage ponds, saltmarshes, playing fields, airfields, ploughed land and town lawns.	Unlikely. Proposal outside core non-breeding and core breeding range.	Unlikely. Proposal outside core non-breeding and core breeding range.	Unlikely. Proposal outside core non-breeding and core breeding range.	Unlikely. Proposal outside core non-breeding and core breeding range.

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Table C3 Potential Candidate Threatened Species by IBRA subregion

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
BIRDS											
Australasian Bittern	E	E	1 record within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Predicted	Predicted
Australian Bustard	E		Recorded as a potential candidate species within the BAM-C	Species	Known	Known	Known	Predicted	Predicted	Known	Predicted
Australian Painted Snipe	E	E	3 records within 20km, last recorded 2008 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Predicted
Barking Owl	V		333 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Known	Known	Known	Known	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Black-breasted Buzzard	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Predicted	Known	Predicted	Known	Not present
Black Falcon	V		6 records within 20km (OEH 2020a)	Ecosystem	Known	Known/Predicted	Known/Predicted	Known/Predicted	Known/Predicted	Known/Predicted	Known/Predicted
Black-chinned Honeyeater (eastern subspecies)	V		3 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Black-necked Stork	E		Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Predicted	Known	Known	Known
Blue-billed Duck	V		Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Predicted	Known	Known	Predicted
Brolga	V		10 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Predicted	Known	Known	Predicted

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Brown Treecreeper (eastern subspecies)	V		120 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Not present	Known	Not present	Known	Known
Bush Stone-curlew	E		11 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Known	Known	Known	Known	Known	Known	Predicted
Curlew Sandpiper	E	CE	May occur within 20km (DEE 2020a)	Species/ Ecosystem	Known	Not present	Not present	Not present	Not present	Not present	Not present
Diamond Firetail	V		30 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Not present	Not present	Known	Known	Known	Known
Dusky Woodswallow	V		58 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Eastern Curlew		CE, C,J,K	May occur within 20km (DEE 2020a)	Species/ Ecosystem							
Flame Robin	V		Recorded as a predicted species within the BAM-C	Ecosystem	Known	Predicted	Predicted	Known	Not present	Known	Not present

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Freckled Duck	V		1 record within 20km, last recorded 2001 (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Predicted	Known	Known	Predicted
Gilbert's Whistler	V		Recorded as a predicted species within the BAM-C	Ecosystem	Known	Predicted	Predicted	Known	Known	Not present	Not present
Glossy Black-Cockatoo	V		107 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Known	Known	Known	Known	Known	Known	Known
Grey-crowned Babbler (eastern subspecies)	V		474 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Grey Falcon	E		Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Predicted	Known	Not present

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Hooded Robin (south-eastern form)	V		21 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Little Eagle	V		18 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Known	Known	Known	Known	Known
Little Lorikeet	V		22 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Not present	Not present	Known	Known	Known	Known
Magpie Goose	V		10 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Not present

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narramine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Major Mitchell's Cockatoo	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Known	Known	Predicted	Not present	Not present
Malleefowl	E	V	Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Predicted	Not present	Known	Predicted	Predicted	Not present
Masked Owl	V		4 records within 20km, last recorded 2006 (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Known	Known	Known	Known	Known
Painted Honeyeater	V	V	19 records within 20km (OEH 2020a); Breeding known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narramine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Powerful Owl	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Not present	Not present	Known	Not present	Predicted	Not present
Red Goshawk	CE	V	Likely to occur within 20km (DEE 2020a)	Species	Not present	Not present	Not present	Not present	Not present	Not present	Not present
Regent Honeyeater	CE	CE	1 record within 20km, last recorded 2003 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Not present	Not present	Known	Not present	Known	Predicted
Scarlet Robin	V		1 record within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Not present	Known	Known	Not present	Known	Not present

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Speckled Warbler	V		324 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Spotted Harrier	V		28 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Square-tailed Kite	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Known	Known	Known	Known	Known	Known	Known
Squatter Pigeon	CE	V	May occur within 20km (DEE 2020a)	Species	Not present	Predicted	Predicted	Not present	Not present	Not present	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Superb Parrot	V	V	49 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Known	Known	Known	Known	Not present
Swift Parrot	E	CE	1 record within 20km, last recorded 2000 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Not present	Not present	Known	Predicted	Known	Predicted
Turquoise Parrot	V		98 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narramine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Varied Sittella	V		98 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
White-bellied Sea-Eagle		V	5 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem							
White-fronted Chat	V		Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Predicted	Known	Predicted
White-throated Needletail		V, C,J,K	21 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a)	n/a							
Corben's Long-eared Bat	V	V	40 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Predicted	Predicted	Known	Known	Known	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Eastern Cave Bat	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Not present	Not present	Not present	Known	Known	Known	Known
Greater Broad-nosed Bat	V		Recorded as a predicted species within the BAM-C	Ecosystem	Not present	Not present	Not present	Predicted	Not present	Known	Not present
Grey-headed Flying-fox	V	V	5 records within 20km (OEH 2020a); Foraging, feeding or related behaviour may occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Predicted	Not present	Known	Not present	Known	Known
Large Bent-winged Bat	V		2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Not present	Not present	Known	Not present	Known	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Large-eared Pied Bat	V	V	3 records within 20km (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Known	Not present	Not present	Known	Not present	Known	Known
Little Pied Bat	V		202 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Yellow-bellied Sheath-tail-bat	V		1011 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Known
Black-striped Wallaby	E		3488 records within 20km (OEH 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Not present	Not present	Not present	Known	Known	Known (north of Gunnedah)	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narramine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Brush-tailed Rock-wallaby	E	V	38 records within 20km, last recorded 2005 (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Known	Not present	Not present	Known	Not present	Known	Not present
Eastern Pygmy-possum	V		7 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Known	Not present	Not present	Known	Known	Known	Predicted
Greater Glider		V	May occur within 20km (DEE 2020a)	Species							
Koala	V	V	523 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/ Ecosystem	Known	Known	Known	Known	Known	Known	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Pilliga Mouse	V	V	59 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Not present	Not present	Not present	Known	Known	Predicted	Not present
Rufous Bettong	V		2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Not present	Not present	Not present	Known	Known	Predicted	Predicted
Spotted-tailed Quoll	V	E	1 record within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a predicted species within the BAM-C	Ecosystem	Known	Known	Known	Known	Known	Known	Predicted
Squirrel Glider	V		14 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Known	Not present	Not present	Known	Known	Known	Known
Stripe-faced Dunnart	V		Recorded as a predicted species within the BAM-C	Ecosystem	Not present	Known	Known	Predicted	Predicted	Predicted	Known

Common name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Inland Slopes (Borrow Pit A)	Bogan-Macquarie (Borrow Pit B, Narromine Compound, alignment to just north of Macquarie River)	Castlereagh-Barwon (Oxley Highway - Castlereagh River, Hubbards Lane to Box Ridge Road, Quanda, Curban compound)	Pilliga (Borrow Pit C, Borrow Pit D, alignment from north of Macquarie River to Oxley Highway, Castlereagh River to Hubbards Lane, Box Ridge Road to Quanda, Quanda to Caledonia Road, Aloes Road to Sparrow Road)	Pilliga Outwash (Narrabri Compound, alignment north of Baradine Road to Aloes Road, Sparrow Road to north of Namoi River)	Liverpool Plains (north of Namoi River to Killarney Gap Road)	Northern Basalts (north of Killarney Gap road)
Border Thick-tailed Gecko	V	V	Likely to occur within 20km (DEE 2020a)	Species	Not present	Not present	Not present	Not present	Not present	Predicted	Known
Five-clawed Worm-skink	E	V	1 record within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a)	Ecosystem	Not present	Not present	Known	Not present	Known	Not present	Known
Pale-headed Snake	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Predicted	Predicted	Known	Known	Known	Known	Known
Pink-tailed Worm-lizard	V	V	Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Known	Not present	Not present	Predicted	Not present	Known	Not present
Striped Legless Lizard	V	V	Known to occur within 20km (DEE 2020a)	Species	Known	Not present	Not present	Not present	Not present	Not present	Not present
Sloane's Froglet	V		Recorded as a potential candidate species within the BAM-C	Species	Not present	Known	Known	Predicted	Known	Not present	Not present

TABLE C4 Likelihood of occurrence of potential candidate threatened fauna species at compound sites

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Sloane's Froglet	<i>Crinia sloanei</i>	V		Recorded as a potential candidate species within the BAM-C	Species	Typically associated with periodically inundated areas in grassland, woodland and disturbed habitats. Majority of records are from the Riverina.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.
Australian Bustard	<i>Ardeotis australis</i>	E		Recorded as a potential candidate species within the BAM-C	Species	Occurs in inland Australia. In NSW mainly found in the north-west corner, less often in the lower western and central west plains regions, with occasional vagrants east to the western slopes and riverine plain. Breeding confined to the north-west region. Mainly inhabits tussock and hummock grasslands, also occurs in low shrublands and low open grassy woodlands. Breeds on bare ground on low sandy ridges or stony rises in ecotones between grassland and shrubland cover. Travels long distances, presumably in response to habitat and climatic conditions.	Unlikely. On eastern edge of distribution, no recent records. Site predominantly cropped. Not observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. Site cropped. Not observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.
Barking Owl	<i>Ninox connivens</i>	V		333 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs from coast to inland slopes and plains, though is rare in dense, wet forests east of the Great Dividing Range and sparse in higher parts of the tablelands and in the arid zone. Inhabits eucalypt woodlands, open forest, swamp woodlands, and, especially in inland areas, timber along watercourses. Roosts along creek lines in dense, tall understorey foliage (eg in <i>Acacia</i> and <i>Casuarina</i>), or dense eucalypt canopy. Nests in hollows of large, old eucalypts including <i>Eucalyptus camaldulensis</i> , <i>Eucalyptus albens</i> , <i>Eucalyptus polyanthemos</i> and <i>Eucalyptus blakelyi</i> . Birds and mammals important prey during breeding. Territories range from 30 to 200 hectares.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Black-breasted Buzzard	Hamirostra melanosternon	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Sparsely distributed in areas of less than 500mm rainfall, north from north-western NSW. Inhabits a range of inland habitats, especially along timbered watercourses which is the preferred breeding habitat. Also hunts over grasslands and sparsely timbered woodlands. Breeds from August to October near water in a tall tree.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.
Bush Stone-curlew	Burhinus grallarius	E		11 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Scattered distribution across NSW. Inhabits lowland grassy woodland and open forest and, in coastal areas, Casuarina and Melaleuca woodlands, saltmarsh and mangroves. Requires a low, sparse groundcover, some fallen timber and leaf litter, and a general lack of a shrubby understory (DEC 2006).	Low. Predominantly cropped. No local records. Not observed during surveys	Low. Site does not contain native vegetation. No nearby records. No observed during surveys.	Possible. Limited woodland habitat present. Not observed during surveys. ***Buffer Narrabri records?***
Curlew Sandpiper	Calidris ferruginea	E	CE	May occur within 20km (DEE 2020a)	Species/Ecosystem	Breeds in northern hemisphere. In Australia generally occupies littoral and estuarine habitats. In NSW mainly found in intertidal mudflats on sheltered coasts. Roosts on beaches, spits or islands on the coast/in wetlands, or in saltmarsh on rocky shores.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
Eastern Curlew	Numenius madagascariensis		CE, C,J,K	May occur within 20km (DEE 2020a)	Species/Ecosystem	Within Australia, the species has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. It is most commonly associated with sheltered coasts, and all internationally important sites for this species in Australia are on the coast. The birds are also found in saltworks and sewage farms. Breeds in Russia and north-eastern China.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Glossy Black-Cockatoo	<i>Calyptorhynchus lathami</i>	V		107 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Widespread but uncommon from coast to southern tablelands and central western plains. Feeds almost exclusively on the seeds of <i>Allocasuarina</i> species. Prefers woodland and open forests, rarely away from <i>Allocasuarina</i> . Roost in leafy canopy trees, preferably eucalypts, usually <1km from feeding site. Nests in large (approx. 20cm) hollows in trees, stumps or limbs, usually in Eucalypts (Higgins 1999).	Unlikely. Not recorded in the Narramine areas during surveys. Site mostly cropped. No foraging habitat present. Unlikely to breed on site given lack of foraging habitat and distance from water.	Nil. No native vegetation or hollow-bearing trees present.	Unlikely. Site mostly cropped. Limited potential foraging habitat present. Unlikely to breed on site given lack of foraging habitat and distance from water.
Little Eagle	<i>Hieraaetus morphnoides</i>	V		18 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs throughout NSW except most densely forested parts of the Dividing Range escarpment. Occupies habitats rich in prey within open eucalypt forest, woodland or open woodland. Sheoak or acacia woodlands and riparian woodlands of interior NSW are also used. For nest sites it requires a tall living tree within a remnant patch, where pairs build a large stick nest in winter and lay in early spring.	Unlikely. Limited native vegetation. No nest trees observed.	Nil. No native vegetation or large trees present.	Unlikely. Limited native vegetation. No nest trees observed.
Major Mitchell's Cockatoo	<i>Lophochroa leadbeateri</i>	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs in arid and semi-arid NSW, regularly as far east as Bourke and Griffith and occasionally further east as vagrants. Occupies habitat in arid semi-desert scrublands, savannahs and sparse woodlands, where there is fresh surface water and large hollow trees for nesting. These birds have been recorded in forest, woodland and shrub land, including mulga, mallee, Acacia, Eucalyptus and <i>Callitris</i> associations. It has also been recorded in cropping areas throughout its range (Queensland Government EPA Agency, 2007). Large areas of suitable habitat are required for a viable population to exist (Webster et al undated).	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Masked Owl	Tyto novaehollandiae	V		4 records within 20km, last recorded 2006 (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs across NSW except NW corner. Most common on the coast. Inhabits dry eucalypt woodlands from sea level to 1100 metres. Roosts and breeds in large (>40cm) hollows and sometime caves in moist eucalypt forested gullies. Hunts along the edges of forests and roadsides. Home range between 500 hectares and 1000 hectares. Prey mostly terrestrial mammals but arboreal species may also be taken.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.
Powerful Owl	Ninox strenua	V		Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs from the coast to the western slopes. Solitary and sedentary species. Inhabits a range of habitats from woodland and open sclerophyll forest to tall open wet forest and rainforest. Prefers large tracts of vegetation. Nests in large tree hollows (> 0.5 metres deep), in large eucalypts (dbh 80-240 cm) that are at least 150 years old. Pairs have high fidelity to a small number of hollow-bearing nest trees and defend a large home range of 400 - 1,450 hectares. Forages within open and closed woodlands as well as open areas.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.
Red Goshawk	Erythrorhynchus radiatus	CE	V	Likely to occur within 20km (DEE 2020a)	Species	Very rare in NSW, generally confined to the Northern Rivers bioregion with most records in the Clarence River catchment with few around the lower Richmond and Tweed Rivers. Inhabitat open woodland and forest, preferring mixed subtropical rainforest, Melaleuca swamp forest and riparian Eucalyptus forest of coastal rivers. Preferred habitats include a mosaic of vegetation types, a large population of birds (prey) and permanent water. Adults have large home ranges (up to 120 km ² in NT), and in NSW appear to move from nesting areas in the ranges to coastal areas to coastal plains. Generally breed in tall trees within 1km of a river or wetland.	Nil. Outside usual range (not recorded in IBRA subregion).	Nil. Outside usual range (not recorded in IBRA subregion). Site does not contain native vegetation.	Nil. Outside usual range (not recorded in IBRA subregion).

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narromine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Regent Honeyeater	<i>Anthochaera phrygia</i>	CE	CE	1 record within 20km, last recorded 2003 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	In NSW confined to two known breeding areas: the Capertee Valley and Bundarra-Barraba region. Non-breeding flocks occasionally seen in coastal areas foraging in flowering Spotted Gum and Swamp Mahogany forests, presumably in response to drought. Inhabits dry open forest and woodlands, particularly Box-Ironbark woodland and riparian forests of River Sheoak, with an abundance of mature trees, high canopy cover and abundance of mistletoes.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
Square-tailed Kite	<i>Lophoictinia isura</i>	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs across NSW, resident in North, northeast and along west-flowing rivers. Summer breeding migrant to southeast of state. Inhabits a variety of habitats including woodlands and open forests, with preference for timbered watercourses. Favours productive forests on the coastal plain, box-ironbark-gum woodlands on the inland slopes, and Coolibah/River Red Gum on the inland plains. In Sydney area nests in mature living trees within 100m of ephemeral/permanent watercourse. Large home range > 100 km ² .	Unlikely. Limited native vegetation. No nest trees observed.	Nil. No native vegetation or large trees present.	Unlikely. Limited native vegetation. No nest trees observed.
Squatter Pigeon	<i>Geophaps scripta scripta</i>	CE	V	May occur within 20km (DEE 2020a)	Species	Found from north Queensland to the North West Slopes of NSW and extending down to the Liverpool Plains and Dubbo. Today they are very rare in the southern parts of their range. Grassy woodlands and plains, preferring sandy areas and usually close to water.	Low. Outside usual range. Site predominantly cropped. Not observed during surveys.	Low. Outside usual range. Not observed during surveys. Site does not contain native vegetation.	Low. Outside usual range (not recorded in IBRA subregion).

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narromine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Superb Parrot	<i>Polytelis swainsonii</i>	V	V	49 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs as a single population in the South-west Slopes and Riverina bioregions. Two core breeding areas: between Cowra and Yass – Grenfell, Cootamundra and Coolac in the SW Slopes, and along the Murray, Edward and Murrumbidgee Rivers in the Riverina. Birds breeding in the SW slopes migrate north to the Namoi/Gwydir Rivers for winter. Inhabits Box Gum, Box – Cypress Pine and Boree woodlands and River Red Gum Forest. Nest in hollow trees, in tall riparian River Red Gum communities (Riverina area) or open Box Gum woodland or isolated paddock trees (SW Slopes). Mainly forages in grassy box woodlands, up to 10km from breeding sites.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.
Swift Parrot	<i>Lathamus discolor</i>	E	CE	1 record within 20km, last recorded 2000 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Migratory, travelling to the mainland from March to October. Breeds in Tasmania from September to January. On the mainland, it mostly occurs in the southeast foraging on winter flowering eucalypts and lerps, with records of the species between Adelaide and Brisbane. Principal over-winter habitat is box-ironbark communities on the inland slopes and plains. Eucalyptus robusta, Corymbia maculata and C. gummifera dominated coastal forests are also important habitat.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	V		5 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Primarily coastal but may extend inland over major river systems. Breeds close to water, mainly in tall open forest/woodland but also in dense forest, rainforest, closed scrub or remnant trees. Usually forages over large expanses of open water, but also over open terrestrial habitats (eg grasslands).	Unlikely. Limited native vegetation. No nest trees observed.	Nil. No native vegetation or large trees present.	Unlikely. Limited native vegetation. No nest trees observed.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Brush-tailed Rock-wallaby	<i>Petrogale penicillata</i>	E	V	38 records within 20km, last recorded 2005 (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs from the Shoalhaven north to the Queensland border. Now mostly extinct west of the Great Dividing Range, except in the Warrumbungles and Mt Kaputar. Occurs on rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges facing north. Diet consists of vegetation in adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present
Eastern Cave Bat	<i>Vespadelus troungtoni</i>	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs in NE NSW south to Kempsey and west to the Warrumbungles. Inhabits rainforest margins, wet and dry sclerophyll forests through to drier forests and woodlands in semi-arid environments. All records are within close proximity to sandstone or volcanic escarpments. Roosts in overhangs and caves, mines, boulder piles, abandoned Fairy Martin nests and occasionally in buildings, and regularly switches between alternate roost colonies. Forages over a small area, but are capable of flying 500 metres over clear paddocks.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. No breeding habitat nearby. Limited native vegetation present. Limited connectivity to larger areas of suitable habitat.
Eastern Pygmy-possum	<i>Cercartetus nanus</i>	V		7 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs along the east coast of NSW, and inland to the Pillaga, Dubbo, Parkes and Wagga Wagga. Inhabits range of habitats from coastal heath and woodland through open and closed forests, subalpine heath and rainforest. Inhabits rainforest, sclerophyll forests and heath. Banksia spp. and myrtaceous shrubs and trees are favoured food sources and nesting subject sites in drier habitats. Diet mostly pollen and nectar from Banksia spp., Eucalyptus spp., Callistemon spp. and insects. Nests in hollows in trees, under the bark of Eucalypts, forks of tea-trees, abandoned bird nests and Xanthorrhoea bases.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Greater Glider	Petauroides volans		V	May occur within 20km (DEE 2020a)	Species	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 metres above sea level. It prefers taller montane, moist eucalypt forest with relatively old trees and abundant hollows.	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present
Grey-headed Flying-fox	Pteropus poliocephalus	V	V	5 records within 20km (OEH 2020a); Foraging, feeding or related behaviour may occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Roosts in camps within 20 kilometres of a regular food source, typically in gullies, close to water and in vegetation with a dense canopy. Forages in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths, swamps and street trees, particularly in eucalypts, melaleucas and banksias. Highly mobile with movements largely determined by food availability (Eby and Law 2008). Will also forage in urban gardens and cultivated fruit crops.	Nil. No breeding camps present.	Nil. No breeding camps present.	Nil. No breeding camps present.
Koala	Phascolarctos cinereus	V	V	523 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs from coast to inland slopes and plains. Restricted to areas of preferred feed trees in eucalypt woodlands and forests. Home range varies depending on habitat quality, from < 2 to several hundred hectares.	Likely. Within 10km of a record in roadside vegetation. May occur in native woodland vegetation on occasion.	Nil. No native vegetation present.	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narramine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Large Bent-winged Bat	Miniopterus orianae oceanensis	V		2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Generally occurs east of the Great Dividing Range along NSW coast. Inhabits various habitats from open grasslands to woodlands, wet and dry sclerophyll forests and rainforest. Essentially a cave bat but may also roost in road culverts, stormwater tunnels and other man-made structures. Only 4 known maternity caves in NSW, near Wee Jasper, Bungonia, Kempsey and Texas. Females may travel hundreds of kilometres to the nearest maternal colony.	Nil. No breeding caves present.	Nil. No breeding caves present.	Nil. No breeding caves present.
Large-eared Pied Bat	Chalinolobus dwyeri	V	V	3 records within 20km (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs from the coast to the western slopes of the divide. Largest numbers of records from sandstone escarpment country in the Sydney Basin and Hunter Valley. Roosts in caves and mines and most commonly recorded from dry sclerophyll forests and woodlands. An insectivorous species that flies over the canopy or along creek beds. In southern Sydney appears to be largely restricted to the interface between sandstone escarpments and fertile valleys.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Unlikely. No breeding habitat nearby. Limited native vegetation present.
Rufous Bettong	Aepyprymnus rufescens	V		2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Inhabits a variety of forests from tall, moist eucalypt forest to open woodland, with a tussock grass understorey. A dense cover of tall native grasses is the preferred shelter. Sleeps during the day in cone-shaped nests constructed of grass in a shallow depression at the base of a tussock or fallen log. At night feeds on grasses, herbs, seeds, flowers, roots, tubers, fungi and occasionally insects. The original range from Coen in north Queensland to central Victoria has been reduced to a patchy distribution from Cooktown, Queensland, to north-eastern NSW. In NSW it has largely vanished from inland areas, although there are unconfirmed records from the Pilliga and Torrington districts.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narromine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Squirrel Glider	Petaurus norfolcensis	V		14 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs along the drier inland slopes as well as coastal habitats. Inhabits woodland and open forest with a Eucalyptus, Corymbia or Angophora overstorey and a shrubby understorey of Acacia or Banksia. Key habitat components include reliable winter and early-spring flowering Eucalypts, Banksia or other nectar sources, and hollow-bearing trees for roost and nest sites (van der Ree and Suckling 2008, Quin et al 2004), with social groups moving between multiple hollows. Social groups include one or two adult males and females with offspring, and have home ranges of 5-10ha within NSW.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.
Curlew Sandpiper	Calidris ferruginea	E	CE, C,J,K	May occur within 20km (DEE 2020a)	Species/Ecosystem	Breeds in northern hemisphere. In Australia generally occupies littoral and estuarine habitats. In NSW mainly found in intertidal mudflats on sheltered coasts. Roosts on beaches, spits or islands on the coast/in wetlands, or in saltmarsh on rocky shores.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
Border Thick-tailed Gecko	Uvidicolus sphyrurus	V	V	Likely to occur within 20km (DEE 2020a)	Species	The Border Thick-tailed Gecko occurs in the New England Tableland, Nandewar and Brigalow Belt South Bioregions in northern NSW and in south-east Queensland. The Border Thick-tailed Gecko is a nocturnal species that shelters by day and is most commonly found in undisturbed habitat remnants on rocky outcrops and stony hills within eucalypt and cypress-pine open forest or woodland between 500-1100 metres elevation.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).

Common name	Scientific name	BC Act Status	EPBC Act Status	Source	Credit type (BC Act)	Habitat association	Segment 1 - Narromine multi-function compound	Segment 2 - Curban multi-function compound	Segment 3 - Narrabri multi-function compound
Pale-headed Snake	Hoplocephalus bitorquatus	V		8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs north from Tuggerah along the coast and to the western side of the Great Divide, historically recorded as far west as Mungindi and Quambone. Inhabits dry eucalypt forests and woodlands, cypress woodland and occasionally in rainforest or moist eucalypt forest. West of the Great Dividing Range in NSW the species, has been recently recorded in sites dominated by Narrow-leaved Ironbark, Black Box and Silver-leaf Ironbark woodland and Coolabah (Fitzgerald et al 2010). In near-coastal areas has been recorded in Broad-leaved Ironbark, Spotted Gum, Forest Red Gum and Grey Gum forests (Fitzgerald et al 2010). Favours streamside areas, particularly in drier habitats. Shelter during the day between loose bark and tree-trunks, or in hollow trunks and limbs of dead trees.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. No connectivity to riparian habitat.
Pink-tailed Worm-lizard	Aprasia parapulchella	V	V	Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Populations occur in the Queanbeyan/Canberra district, Cooma, Yass, Bathurst, Albury and West Wyalong areas. Inhabits grassland and open woodland with substantial embedded rock cover in sunny situations. Recorded in both native and non-native grasslands. Usually recorded under small rocks (150 - 600 mm basal area) shallowly embedded in the soil (2 - 5 cm, and use ant burrows under these rocks.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.
Striped Legless Lizard	Delma impar	V	V	Known to occur within 20km (DEE 2020a)	Species	Occurs in the Southern Tablelands, South-west Slopes and possibly the Riverina. Found in natural or secondary grassland or open areas in grassy eucalypt woodland. May occur in modified grasslands with high exotic grass cover. Shelters in base of grass tussocks, under rocks or logs or in soil cracks.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.

Table C5 Likelihood of occurrence of threatened species at Borrow Pits

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Sloane's Froglet	Recorded as a potential candidate species within the BAM-C	Species	Typically associated with periodically inundated areas in grassland, woodland and disturbed habitats. Majority of records are from the Riverina.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.	Low. Recent research has found no evidence of the species in the northern portion of the range, and previous records are likely to be misidentifications.
Australian Bustard	Recorded as a potential candidate species within the BAM-C	Species	Occurs in inland Australia. In NSW mainly found in the north-west corner, less often in the lower western and central west plains regions, with occasional vagrants east to the western slopes and riverine plain. Breeding confined to the north-west region. Mainly inhabits tussock and hummock grasslands, also occurs in low shrublands and low open grassy woodlands. Breeds on bare ground on low sandy ridges or stony rises in ecotones between grassland and shrubland cover. Travels long distances, presumably in response to habitat and climatic conditions.	Unlikely. On eastern edge of distribution, no recent records. Site predominantly cropped. Not observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. Site predominantly cropped. Not observed during surveys.	Unlikely. On eastern edge of distribution, no recent records. No observed during surveys.
Barking Owl	333 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs from coast to inland slopes and plains, though is rare in dense, wet forests east of the Great Dividing Range and sparse in higher parts of the tablelands and in the arid zone. Inhabits eucalypt woodlands, open forest, swamp woodlands, and, especially in inland areas, timber along watercourses. Roosts along creek lines in dense, tall understorey foliage (eg in Acacia and Casuarina), or dense eucalypt canopy. Nests in hollows of large, old eucalypts including Eucalyptus camaldulensis, Eucalyptus albens, Eucalyptus polyanthemos and Eucalyptus blakelyi. Birds and mammals important prey during breeding. Territories range from 30 to 200 hectares.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Black-breasted Buzzard	Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Sparsely distributed in areas of less than 500mm rainfall, north from north-western NSW. Inhabits a range of inland habitats, especially along timbered watercourses which is the preferred breeding habitat. Also hunts over grasslands and sparsely timbered woodlands. Breeds from August to October near water in a tall tree.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.
Bush Stone-curlew	11 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Scattered distribution across NSW. Inhabits lowland grassy woodland and open forest and, in coastal areas, Casuarina and Melaleuca woodlands, saltmarsh and mangroves. Requires a low, sparse groundcover, some fallen timber and leaf litter, and a general lack of a shrubby understory (DEC 2006).	Unlikely. Limited woodland habitat present. Not observed during surveys. No local records.	Unlikely. Limited woodland habitat present. Not observed during surveys. No local records.	Unlikely. Limited woodland habitat present. Not observed during surveys. No local records.	Possible. Limited woodland habitat present. Not observed during surveys. Located within 10 kilometres of a recent record and could occur on occasion.
Curlew Sandpiper	May occur within 20km (DEE 2020a)	Species/Ecosystem	Breeds in northern hemisphere. In Australia generally occupies littoral and estuarine habitats. In NSW mainly found in intertidal mudflats on sheltered coasts. Roosts on beaches, spits or islands on the coast/in wetlands, or in saltmarsh on rocky shores.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
Curlew Sandpiper	May occur within 20km (DEE 2020a)	Species/Ecosystem	Breeds in northern hemisphere. In Australia generally occupies littoral and estuarine habitats. In NSW mainly found in intertidal mudflats on sheltered coasts. Roosts on beaches, spits or islands on the coast/in wetlands, or in saltmarsh on rocky shores.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
Eastern Curlew	May occur within 20km (DEE 2020a)	Species/Ecosystem	Within Australia, the species has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. It is most commonly associated with sheltered coasts, and all internationally important sites for this species in Australia are on the coast. The birds are also found in saltworks and sewage farms. Breeds in Russia and north-eastern China.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Glossy Black-Cockatoo	107 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Widespread but uncommon from coast to southern tablelands and central western plains. Feeds almost exclusively on the seeds of Allocasuarina species. Prefers woodland and open forests, rarely away from Allocasuarina. Roost in leafy canopy trees, preferably eucalypts, usually <1km from feeding site. Nests in large (approx. 20cm) hollows in trees, stumps or limbs, usually in Eucalypts (Higgins 1999).	Unlikely. Not recorded in the Narromine areas during surveys. No foraging habitat present. Unlikely to breed on site given lack of foraging habitat and distance from water.	Unlikely. Not recorded in the Narromine areas during surveys. No foraging habitat present. Unlikely to breed on site given lack of foraging habitat and distance from water.	Unlikely. Not recorded in the Narromine areas during surveys. No foraging habitat present. Unlikely to breed on site given lack of foraging habitat and distance from water.	Unlikely. Site mostly cleared. Limited foraging habitat present. Unlikely to nest on site.
Little Eagle	18 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs throughout NSW except most densely forested parts of the Dividing Range escarpment. Occupies habitats rich in prey within open eucalypt forest, woodland or open woodland. Sheoak or acacia woodlands and riparian woodlands of interior NSW are also used. For nest sites it requires a tall living tree within a remnant patch, where pairs build a large stick nest in winter and lay in early spring.	Unlikely. Limited native vegetation. No nest trees observed.	Unlikely. Limited native vegetation. No nest trees observed.	Unlikely. Limited native vegetation. No nest trees observed.	Unlikely. Limited native vegetation. No nest trees observed.
Major Mitchell's Cockatoo	Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs in arid and semi-arid NSW, regularly as far east as Bourke and Griffith and occasionally further east as vagrants. Occupies habitat in arid semi-desert scrublands, savannahs and sparse woodlands, where there is fresh surface water and large hollow trees for nesting. These birds have been recorded in forest, woodland and shrub land, including mulga, mallee, Acacia, Eucalyptus and Callitris associations. It has also been recorded in cropping areas throughout its range. Large areas of suitable habitat are required for a viable population to exist.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Masked Owl	4 records within 20km, last recorded 2006 (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs across NSW except NW corner. Most common on the coast. Inhabits dry eucalypt woodlands from sea level to 1100 metres. Roosts and breeds in large (>40cm) hollows and sometime caves in moist eucalypt forested gullies. Hunts along the edges of forests and roadsides. Home range between 500 hectares and 1000 hectares. Prey mostly terrestrial mammals but arboreal species may also be taken.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.
Powerful Owl	Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs from the coast to the western slopes. Solitary and sedentary species. Inhabits a range of habitats from woodland and open sclerophyll forest to tall open wet forest and rainforest. Prefers large tracts of vegetation. Nests in large tree hollows (> 0.5 metres deep), in large eucalypts (dbh 80-240 cm) that are at least 150 years old. Pairs have high fidelity to a small number of hollow-bearing nest trees and defend a large home range of 400 - 1,450 hectares. Forages within open and closed woodlands as well as open areas.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.	Nil. Outside usual range. No suitable breeding habitat (hollow-bearing trees along drainage lines) present.
Red Goshawk	Likely to occur within 20km (DEE 2020a)	Species	Very rare in NSW, generally confined to the Northern Rivers bioregion with most records in the Clarence River catchment with few around the lower Richmond and Tweed Rivers. Inhabitat open woodland and forest, preferring mixed subtropical rainforest, Melaleuca swamp forest and riparian Eucalyptus forest of coastal rivers. Preferred habitats include a mosaic of vegetation types, a large population of birds (prey) and permanent water. Adults have large home ranges (up to 120 km ² in NT), and in NSW appear to move from nesting areas in the ranges to coastal areas to coastal plains. Generally breed in tall trees within 1km of a river or wetland.	Nil. Outside usual range (not recorded in IBRA subregion).	Nil. Outside usual range (not recorded in IBRA subregion).	Nil. Outside usual range (not recorded in IBRA subregion).	Nil. Outside usual range (not recorded in IBRA subregion).

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Regent Honeyeater	1 record within 20km, last recorded 2003 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	In NSW confined to two known breeding areas: the Capertee Valley and Bundarra-Barraba region. Non-breeding flocks occasionally seen in coastal areas foraging in flowering Spotted Gum and Swamp Mahogany forests, presumably in response to drought. Inhabits dry open forest and woodlands, particularly Box-Ironbark woodland and riparian forests of River Sheoak, with an abundance of mature trees, high canopy cover and abundance of mistletoes.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
Square-tailed Kite	8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs across NSW, resident in North, northeast and along west-flowing rivers. Summer breeding migrant to southeast of state. Inhabits a variety of habitats including woodlands and open forests, with preference for timbered watercourses. Favours productive forests on the coastal plain, box-ironbark-gum woodlands on the inland slopes, and Coolibah/River Red Gum on the inland plains. In Sydney area nests in mature living trees within 100m of ephemeral/permanent watercourse. Large home range > 100 km ² .	Unlikely. Limited native vegetation. No nest trees observed.	Unlikely. Limited native vegetation. No nest trees observed.	Unlikely. Limited native vegetation. No nest trees observed.	Unlikely. Limited native vegetation. No nest trees observed.
Squatter Pigeon	May occur within 20km (DEE 2020a)	Species	Found from north Queensland to the North West Slopes of NSW and extending down to the Liverpool Plains and Dubbo. Today they are very rare in the southern parts of their range. Grassy woodlands and plains, preferring sandy areas and usually close to water.	Low. Outside usual range (not recorded in IBRA subregion).	Low. Outside usual range. Not observed during surveys.	Low. Outside usual range. Not observed during surveys.	Low. Outside usual range (not recorded in IBRA subregion).

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Superb Parrot	49 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs as a single population in the South-west Slopes and Riverina bioregions. Two core breeding areas: between Cowra and Yass – Grenfell, Cootamundra and Coolac in the SW Slopes, and along the Murray, Edward and Murrumbidgee Rivers in the Riverina. Birds breeding in the SW slopes migrate north to the Namoi/Gwydir Rivers for winter. Inhabits Box Gum, Box – Cypress Pine and Boree woodlands and River Red Gum Forest. Nest in hollow trees, in tall riparian River Red Gum communities (Riverina area) or open Box Gum woodland or isolated paddock trees (SW Slopes). Mainly forages in grassy box woodlands, up to 10km from breeding sites.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.	Nil. Non-breeding vagrant species to the area.
Swift Parrot	1 record within 20km, last recorded 2000 (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Migratory, travelling to the mainland from March to October. Breeds in Tasmania from September to January. On the mainland, it mostly occurs in the southeast foraging on winter flowering eucalypts and lerps, with records of the species between Adelaide and Brisbane. Principal over-winter habitat is box-ironbark communities on the inland slopes and plains. Eucalyptus robusta, Corymbia maculata and C. gummifera dominated coastal forests are also important habitat.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.	Nil. No important habitat present.
White-bellied Sea-Eagle	5 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Primarily coastal but may extend inland over major river systems. Breeds close to water, mainly in tall open forest/woodland but also in dense forest, rainforest, closed scrub or remnant trees. Usually forages over large expanses of open water, but also over open terrestrial habitats (eg grasslands).	Nil. Not near large waterbody. No nest trees observed.	Nil. Not near large waterbody. No nest trees observed.	Nil. No nest trees observed.	Nil. Not near large waterbody. No nest trees observed.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Brush-tailed Rock-wallaby	38 records within 20km, last recorded 2005 (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs from the Shoalhaven north to the Queensland border. Now mostly extinct west of the Great Dividing Range, except in the Warrumbungles and Mt Kaputar. Occurs on rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges facing north. Diet consists of vegetation in adjacent to rocky areas eating grasses and forbs as well as the foliage and fruits of shrubs and trees.	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present
Eastern Cave Bat	8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs in NE NSW south to Kempsey and west to the Warrumbungles. Inhabits rainforest margins, wet and dry sclerophyll forests through to drier forests and woodlands in semi-arid environments. All records are within close proximity to sandstone or volcanic escarpments. Roosts in overhangs and caves, mines, boulder piles, abandoned Fairy Martin nests and occasionally in buildings, and regularly switches between alternate roost colonies. Forages over a small area, but are capable of flying 500 metres over clear paddocks (Churchill 2008, Parnaby et al 2008).	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. No breeding habitat nearby. Limited native vegetation present. Limited connectivity to larger areas of suitable habitat.
Eastern Pygmy-possum	7 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs along the east coast of NSW, and inland to the Pillaga, Dubbo, Parkes and Wagga Wagga. Inhabits range of habitats from coastal heath and woodland through open and closed forests, subalpine heath and rainforest (Tulloch and Dickman 1995). Inhabits rainforest, sclerophyll forests and heath. Banksia spp. and myrtaceous shrubs and trees are favoured food sources and nesting subject sites in drier habitats. Diet mostly pollen and nectar from Banksia spp., Eucalyptus spp., Callistemon spp. and insects (Ward and Turner 2008). Nests in hollows in trees, under the bark of Eucalypts, forks of tea-trees, abandoned bird nests and Xanthorrhoea bases (Ward and Turner 2008, Tulloch and Dickman 2006).	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. Limited connectivity to larger areas of suitable habitat in adjacent state forest.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Greater Glider	May occur within 20km (DEE 2020a)	Species	The greater glider is restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (Wombat State Forest), with an elevational range from sea level to 1200 metres above sea level. It prefers taller montane, moist eucalypt forest with relatively old trees and abundant hollows.	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present	Nil. No suitable habitat present
Grey-headed Flying-fox	5 records within 20km (OEH 2020a); Foraging, feeding or related behaviour may occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Roosts in camps within 20 kilometres of a regular food source, typically in gullies, close to water and in vegetation with a dense canopy. Forages in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths, swamps and street trees, particularly in eucalypts, melaleucas and banksias. Highly mobile with movements largely determined by food availability (Eby and Law 2008). Will also forage in urban gardens and cultivated fruit crops.	Nil. No breeding camps present.	Nil. No breeding camps present.	Nil. No breeding camps present.	Nil. No breeding camps present.
Koala	523 records within 20km (OEH 2020a); Known to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Occurs from coast to inland slopes and plains. Restricted to areas of preferred feed trees in eucalypt woodlands and forests. Home range varies depending on habitat quality, from < 2 to several hundred hectares.	Likely. Within 10km of a record in roadside vegetation near Narrromine. May occur in native woodland vegetation on occasion.	Likely. Within 10km of a record in roadside vegetation near Narrromine. May occur in native woodland vegetation on occasion.	Likely. Within 10km of a record in roadside vegetation near Narrromine. May occur in native woodland vegetation on occasion.	Likely. Within 10km of a record in roadside vegetation. May occur in native woodland vegetation on occasion.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Large Bent-winged Bat	2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C; Recorded as a predicted species within the BAM-C	Species/Ecosystem	Generally occurs east of the Great Dividing Range along NSW coast (Churchill 2008). Inhabits various habitats from open grasslands to woodlands, wet and dry sclerophyll forests and rainforest. Essentially a cave bat but may also roost in road culverts, stormwater tunnels and other man-made structures. Only 4 known maternity caves in NSW, near Wee Jasper, Bungonia, Kempsey and Texas. Females may travel hundreds of kilometres to the nearest maternal colony (Churchill 2008).	Nil. No breeding caves present.	Nil. No breeding caves present.	Nil. No breeding caves present.	Nil. No breeding caves present.
Large-eared Pied Bat	3 records within 20km (OEH 2020a); Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs from the coast to the western slopes of the divide. Largest numbers of records from sandstone escarpment country in the Sydney Basin and Hunter Valley (Hoye and Schulz 2008). Roosts in caves and mines and most commonly recorded from dry sclerophyll forests and woodlands. An insectivorous species that flies over the canopy or along creek beds (Churchill 2008). In southern Sydney appears to be largely restricted to the interface between sandstone escarpments and fertile valleys.	Unlikely. No breeding habitat nearby. Limited native vegetation present.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Nil. Outside known range (not known from IBRA subregion). No breeding habitat nearby.	Unlikely. No breeding habitat nearby. Limited native vegetation present.
Rufous Bettong	2 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Inhabits a variety of forests from tall, moist eucalypt forest to open woodland, with a tussock grass understorey. A dense cover of tall native grasses is the preferred shelter. Sleeps during the day in cone-shaped nests constructed of grass in a shallow depression at the base of a tussock or fallen log. At night feeds on grasses, herbs, seeds, flowers, roots, tubers, fungi and occasionally insects. The original range from Coen in north Queensland to central Victoria has been reduced to a patchy distribution from Cooktown, Queensland, to north-eastern NSW. In NSW it has largely vanished from inland areas, although there are unconfirmed records from the Pilliga and Torrington districts.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Squirrel Glider	14 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs along the drier inland slopes as well as coastal habitats. Inhabits woodland and open forest with a Eucalyptus, Corymbia or Angophora overstorey and a shrubby understorey of Acacia or Banksia. Key habitat components include reliable winter and early-spring flowering Eucalypts, Banksia or other nectar sources, and hollow-bearing trees for roost and nest sites (van der Ree and Suckling 2008, Quin et al 2004), with social groups moving between multiple hollows. Social groups include one or two adult males and females with offspring, and have home ranges of 5-10ha within NSW (van der Ree and Suckling 2008, Kavanagh 2004).	Unlikely. Limited native vegetation present. No connectivity to larger areas of suitable habitat.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Possible. Narrow strip of vegetation present. Some connectivity to Jacks Creek State Forest.
Border Thick-tailed Gecko	Likely to occur within 20km (DEE 2020a)	Species	The Border Thick-tailed Gecko occurs in the New England Tableland, Nandewar and Brigalow Belt South Bioregions in northern NSW and in south-east Queensland. The Border Thick-tailed Gecko is a nocturnal species that shelters by day (NSW OEH 2013p) and is most commonly found in undisturbed habitat remnants on rocky outcrops and stony hills within eucalypt and cypress-pine open forest or woodland between 500-1100 metres elevation.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion).
Pale-headed Snake	8 records within 20km (OEH 2020a); Recorded as a potential candidate species within the BAM-C	Species	Occurs north from Tuggerah along the coast and to the western side of the Great Divide, historically recorded as far west as Mungindi and Quambone. Inhabits dry eucalypt forests and woodlands, cypress woodland and occasionally in rainforest or moist eucalypt forest. West of the Great Dividing Range in NSW the species, has been recently recorded in sites dominated by Narrow-leaved Ironbark, Black Box and Silver-leaf Ironbark woodland and Coolabah (Fitzgerald et al 2010). In near-coastal areas has been recorded in Broad-leaved Ironbark, Spotted Gum, Forest Red Gum and Grey Gum forests (Fitzgerald et al 2010). Favours streamside areas, particularly in drier habitats. Shelter during the day between loose bark and tree-trunks, or in hollow trunks and limbs of dead trees.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range.	Nil. Outside known range (not known from IBRA subregion).	Unlikely. Limited native vegetation present. No connectivity to riparian habitat.

Common name	Source	Credit type (BC Act)	Habitat association	Segment 4 - Borrow Pit A	Segment 5 - Borrow Pit B	Segment 6 - Borrow Pit C	Segment 7 - Borrow Pit D
Pink-tailed Worm-lizard	Likely to occur within 20km (DEE 2020a); Recorded as a potential candidate species within the BAM-C	Species	Populations occur in the Queanbeyan/Canberra district, Cooma, Yass, Bathurst, Albury and West Wyalong areas. Inhabits grassland and open woodland with substantial embedded rock cover in sunny situations. Recorded in both native and non-native grasslands. Usually recorded under small rocks (150 - 600 mm basal area) shallowly embedded in the soil (2 - 5 cm, and use ant burrows under these rocks.	Possible. Rocky habitat present. Known to occur in the IBRA subregion. Suitable vegetation types present.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion). No surface rock present.	Nil. Outside known range (not known from IBRA subregion). No surface rock present.
Striped Legless Lizard	Known to occur within 20km (DEE 2020a)	Species	Occurs in the Southern Tablelands, South-west Slopes and possibly the Riverina. Found in natural or secondary grassland or open areas in grassy eucalypt woodland. May occur in modified grasslands with high exotic grass cover. Shelters in base of grass tussocks, under rocks or logs or in soil cracks (Smith and Robertson 1999).	Unlikely. Rocky habitat present. Known to occur in the IBRA subregion. No suitable vegetation types present.	Nil. Outside known range (not known from IBRA subregion).	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.	Nil. Outside known range (not known from IBRA subregion). No rocky habitat present.

TECHNICAL REPORT

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Biodiversity development assessment report

Appendix D Survey effort and timing

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



Table D1 Credit species survey month matrix

Key: Blue fill: approved survey months
 Bold black: surveys undertaken in these months

Species	Presence	Survey months					
<i>Ardeotis australis</i> Australian Bustard	No (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Burhinus grallarius</i> Bush Stone-curlew	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Hoplocephalus bitorquatus</i> Pale-headed Snake	Yes (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Lophoictinia isura</i> Square-tailed Kite	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Ninox connivens</i> Barking Owl	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Swainsona murrayana</i> Slender Darling Pea	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Tyto novaehollandiae</i> Masked Owl	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Hieraaetus morphnoides</i> Little Eagle	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	No (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec

Species	Presence	Survey months					
<i>Aepyprymnus rufescens</i> Rufous Bettong	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Aprasia parapulchella</i> Pink-tailed Legless Lizard	No (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Bertya opponens</i> Coolabah Bertya	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Diuris tricolor</i> Pine Donkey Orchid	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Calyptorhynchus lathami</i> Glossy Black-Cockatoo	Yes (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Cercartetus nanus</i> Eastern Pygmy-possum	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Lepidium aschersonii</i> Spiny Peppercross	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Petaurus norfolcensis</i> Squirrel Glider	Yes (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Phascolarctos cinereus</i> Koala	Yes (surveyed)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec

Species	Presence	Survey months					
<i>Polygala linariifolia</i> Native Milkwort	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Pterostylis cobarensis</i> Greenhood Orchid	Yes (surveyed) *Survey months are outside of the months specified in Bionet.	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Commersonia procumbens</i>	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Tylophora linearis</i>	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec
<i>Lepidium monoplacoides</i> Winged Peppergrass	Yes (assumed present)	Jan	Feb	Mar	Apr	May	Jun
		Jul	Aug	Sep	Oct	Nov	Dec

Table D2 Diurnal fauna surveys by month

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
14/11/2018	Active search											X	
14/11/2018	Active search											X	
20/11/2018	Active search											X	
20/11/2018	Active search											X	
21/11/2018	Active search											X	
21/11/2018	Active search											X	
21/11/2018	Active search											X	
22/11/2018	Active search											X	
19/03/2019	Active search			X									
20/03/2019	Active search			X									
20/03/2019	Active search			X									
21/03/2019	Active search			X									
20/03/2019	Active search			X									
23/03/2019	Active search			X									
22/03/2019	Active search			X									
25/03/2019	Active search			X									
25/03/2019	Active search			X									
26/03/2019	Active search			X									
26/03/2019	Active search			X									
25/03/2019	Active search			X									
25/03/2019	Active search			X									
28/09/2019	Active search									X			
28/09/2019	Active search									X			
29/09/2019	Active search									X			
29/09/2019	Active search									X			
30/09/2019	Active search									X			
30/09/2019	Active search									X			
1/10/2019	Active search									X			
25/09/2018	Bird survey									X			

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
19/03/2019	Bird survey			X									
19/03/2019	Bird survey			X									
19/03/2019	Bird survey			X									
19/03/2019	Bird survey			X									
20/03/2019	Bird survey			X									
20/03/2019	Bird survey			X									
20/03/2019	Bird survey			X									
19/03/2019	Bird survey			X									
19/03/2019	Bird survey			X									
19/03/2019	Bird survey			X									
21/03/2019	Bird survey			X									
20/03/2019	Bird survey			X									
21/03/2019	Bird survey			X									
22/03/2019	Bird survey			X									
23/03/2019	Bird survey			X									
26/03/2019	Bird survey			X									
26/03/2019	Bird survey			X									
25/03/2019	Bird survey			X									
28/03/2019	Bird survey			X									
25/03/2019	Bird survey			X									
25/03/2019	Bird survey			X									
26/03/2019	Bird survey			X									
26/03/2019	Bird survey			X									
25/03/2019	Bird survey			X									
26/03/2019	Bird survey			X									
27/09/2019	Bird survey									X			
27/09/2019	Bird survey									X			
28/09/2019	Bird survey									X			
28/09/2019	Bird survey									X			
29/09/2019	Bird survey									X			
29/09/2019	Bird survey									X			

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30/09/2019	Bird survey									X			
1/10/2019	Bird survey										X		
28/08/2019	Bridge search for roosting bats								X			X	
14/11/2018	Camera (3 days)											X	
14/11/2018	Camera (3 days)											X	
14/11/2018	Camera (3 days)											X	
19/03/2019	Camera			X									
20/03/2019	Camera			X									
20/03/2019	Camera			X									
22/03/2019	Camera			X									
22/03/2019	Camera			X									
25/03/2019	Camera			X									
29/08/2019	Camera (4 weeks)								X				
29/08/2019	Camera (4 weeks)								X				
29/08/2019	Camera (4 weeks)								X				
29/08/2019	Camera (4 weeks)								X				
29/08/2019	Camera (4 weeks)								X				
24/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
24/09/2018	General fauna survey									X			
24/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
24/09/2018	General fauna survey									X			
24/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
24/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
24/09/2018	General fauna survey									X			
25/09/2018	General fauna survey									X			
26/09/2019	General fauna survey									X			

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
27/09/2018	General fauna survey									X			
27/09/2018	General fauna survey									X			
27/09/2018	General fauna survey									X			
27/09/2018	General fauna survey									X			
27/09/2018	General fauna survey									X			
27/09/2018	General fauna survey									X			
27/09/2018	General fauna survey									X			
28/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
26/09/2018	General fauna survey									X			
12/11/2018	General fauna survey											X	
13/11/2018	General fauna survey											X	
13/11/2018	General fauna survey											X	
13/11/2018	General fauna survey											X	
13/11/2018	General fauna survey											X	
14/11/2018	General fauna survey											X	
14/11/2018	General fauna survey											X	
19/11/2018	General fauna survey											X	
19/11/2018	General fauna survey											X	
20/11/2018	General fauna survey											X	
21/11/2018	General fauna survey											X	
21/11/2018	General fauna survey											X	
22/11/2018	General fauna survey											X	
22/11/2018	General fauna survey											X	
22/11/2018	General fauna survey											X	

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
22/11/2018	General fauna survey											X	
23/11/2018	General fauna survey											X	
20/03/2019	General fauna survey			X									
20/03/2019	General fauna survey			X									
22/03/2019	General fauna survey			X									
22/03/2019	General fauna survey			X									
22/03/2019	General fauna survey			X									
25/03/2019	General fauna survey			X									
26/03/2019	General fauna survey			X									
26/03/2019	General fauna survey			X									
27/03/2019	General fauna survey			X									
27/03/2019	General fauna survey			X									
27/03/2019	General fauna survey			X									
26/03/2019	General fauna survey			X									
26/03/2019	General fauna survey			X									
26/08/2019	General fauna survey								X				
26/08/2019	General fauna survey								X				
27/08/2019	General fauna survey								X				
28/08/2019	General fauna survey								X				
28/08/2019	General fauna survey								X				
28/08/2019	General fauna survey								X				
30/08/2019	General fauna survey								X				
27/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
29/09/2019	General fauna survey									X			
30/09/2019	General fauna survey									X			

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30/09/2019	General fauna survey									X			
30/09/2019	General fauna survey									X			
30/09/2019	General fauna survey									X			
30/09/2019	General fauna survey									X			
30/09/2019	General fauna survey									X			
2/10/2019	General fauna survey										X		
2/10/2019	General fauna survey										X		
2/10/2019	General fauna survey										X		
3/10/2019	General fauna survey										X		
12/11/2018	Scat search											X	
13/11/2018	Scat search											X	
12/11/2018	Scat search											X	
13/11/2018	Scat search											X	
13/11/2018	Scat search											X	
14/11/2018	Scat search											X	
14/11/2018	Scat search											X	
14/11/2018	Scat search											X	
21/03/2019	Scat search			X									
20/03/2019	Scat search			X									
20/03/2019	Scat search			X									
21/03/2019	Scat search			X									
19/03/2019	Scat search			X									
21/03/2019	Scat search			X									
21/03/2019	Scat search			X									
21/03/2019	Scat search			X									
21/03/2019	Scat search			X									
22/03/2019	Scat search			X									
15/11/2018	Scat search											X	
26/08/2019	Scat search								X				

Table D3 Nocturnal fauna surveys by month

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
25/09/2018	Anabat									X			
12/11/2018	Anabat											X	
13/11/2018	Anabat											X	
13/11/2018	Anabat											X	
14/11/2018	Anabat											X	
14/11/2018	Anabat											X	
17/11/2018	Anabat											X	
19/11/2018	Anabat											X	
20/11/2018	Anabat											X	
20/11/2018	Anabat											X	
21/11/2018	Anabat											X	
22/11/2018	Anabat											X	
19/03/2019	Anabat			X									
19/03/2019	Anabat			X									
19/03/2019	Anabat			X									
12/11/2018	Call playback											X	
13/11/2018	Call playback											X	
13/11/2018	Call playback											X	
14/11/2018	Call playback											X	
14/11/2018	Call playback											X	
19/11/2018	Call playback											X	
19/11/2018	Call playback											X	
20/11/2018	Call playback											X	
20/11/2018	Call playback											X	
21/11/2018	Call playback											X	
21/11/2018	Call playback											X	
20/03/2019	Call playback			X									
20/03/2019	Call playback			X									
20/03/2019	Call playback			X									

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
21/03/2019	Call playback			X									
21/03/2019	Call playback			X									
26/08/2019	Call playback								X				
26/08/2019	Call playback								X				
27/08/2019	Call playback								X				
27/08/2019	Call playback								X				
27/08/2019	Call playback								X				
28/08/2019	Call playback								X				
28/08/2019	Call playback								X				
28/08/2019	Call playback								X				
29/08/2019	Call playback								X				
29/08/2019	Call playback								X				
29/08/2019	Call playback								X				
29/08/2019	Call playback								X				
30/08/2019	Call playback								X				
30/08/2019	Call playback								X				
30/08/2019	Call playback								X				
29/09/2019	Call playback												
1/10/2019	Call playback									X			
1/10/2019	Call playback										X		
1/10/2019	Call playback										X		
1/10/2019	Call playback										X		
14/11/2018	Call playback											X	
12/11/2018	Frog survey (Frog ID)											X	
12/11/2018	Frog survey (Frog ID)											X	
13/11/2018	Frog survey (Frog ID)											X	
13/11/2018	Frog survey (Frog ID)											X	

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20/11/2018	Frog survey (Frog ID)											X	
20/11/2018	Frog survey (Frog ID)											X	
20/11/2018	Frog survey (Frog ID)											X	
21/11/2018	Frog survey (Frog ID)											X	
21/11/2018	Frog survey (Frog ID)											X	
22/11/2018	Frog survey (Frog ID)											X	
22/11/2018	Frog survey (Frog ID)											X	
22/11/2018	Frog survey (Frog ID)											X	
22/11/2018	Frog survey (Frog ID)											X	
21/03/2019	Frog survey (Frog ID)			X									
22/03/2019	Frog survey (Frog ID)			X									
26/08/2019	Frog survey (Frog ID)								X				
27/08/2019	Frog survey (Frog ID)								X				
30/08/2019	Frog survey (Frog ID)								X				
30/08/2019	Frog survey (Frog ID)								X				
30/08/2019	Frog survey (Frog ID)								X				
1/10/2019	Frog survey										X		
19/03/2019	Harp Net (4 nights)			X									
19/03/2019	Harp Net (4 nights)			X									

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
25/03/2019	Harp Net (4 nights)			X									
12/11/2018	Harp Net (evening)											X	
12/11/2018	Harp Net (evening)											X	
13/11/2018	Harp Net (evening)											X	
14/11/2018	Harp Net (evening)											X	
17/11/2018	Harp Net (evening)											X	
19/11/2018	Harp Net (evening)											X	
13/11/2018	Harp Net (evening)											X	
18/03/2019	Pitfall line			X									
18/03/2019	Pitfall line			X									
19/03/2019	Pitfall line			X									
19/03/2019	Pitfall line			X									
19/03/2019	Pitfall line			X									
19/03/2019	Pitfall line			X									
26/03/2019	Pitfall line			X									
26/03/2019	Pitfall line			X									
26/03/2019	Pitfall line			X									
26/03/2019	Pitfall line			X									
26/03/2019	Pitfall line			X									
14/11/2018	Spotlighting											X	
14/11/2018	Spotlighting											X	
14/11/2018	Spotlighting											X	
14/11/2018	Spotlighting											X	
14/11/2018	Spotlighting											X	
14/11/2018	Spotlighting											X	
28/03/2019	Spotlighting											X	

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
19/11/2018	Spotlighting											X	
19/11/2018	Spotlighting											X	
19/11/2018	Spotlighting											X	
19/11/2018	Spotlighting											X	
19/11/2018	Spotlighting											X	
20/11/2018	Spotlighting											X	
20/11/2018	Spotlighting											X	
20/11/2018	Spotlighting											X	
21/11/2018	Spotlighting											X	
21/11/2018	Spotlighting											X	
21/11/2018	Spotlighting											X	
21/11/2018	Spotlighting											X	
22/11/2018	Spotlighting											X	
26/08/2019	Spotlighting								X				
27/08/2019	Spotlighting								X				
28/08/2019	Spotlighting								X				
29/08/2019	Spotlighting								X				
30/08/2019	Spotlighting								X				
18/03/2019	Spotlighting			X									
19/03/2019	Spotlighting			X									
20/03/2019	Spotlighting			X									
21/03/2019	Spotlighting			X									
23/03/2019	Spotlighting			X									
19/03/2019	Trapping			X									
19/03/2019	Trapping			X									
19/03/2019	Trapping			X									
19/03/2019	Trapping			X									
18/03/2019	Trapping			X									
19/03/2019	Trapping			X									
26/03/2019	Trapping			X									

Date	Survey type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
26/03/2019	Trapping			X									
26/03/2019	Trapping			X									
26/03/2019	Trapping			X									
26/03/2019	Trapping			X									

Table D4 Fauna survey effort

Survey type	Autumn	Winter	Spring	Total*
General fauna (including birds)	13 x 0.5 person hours	7 x 0.5 person hours	65 x 0.5 person hours	42.5 person hours
Bird surveys	25 x 0.5 person hours		7 x 0.5 person hours	16 person hours
Active searches	13 x 0.5 person hours		15 x 0.5 person hours	14 person hours
Scat search	10 x 0.5 person hours	1 x 0.5 person hours	9 x 0.5 person hours	10 person hours
Camera	8 x 4 days	5 x 30 days	3 x 3 days	191 camera days
Anabat	3 units x 4 nights		6 units x 1 night, 2 units x 3 nights, 1 unit x 7 nights	31 nights
Spotlighting	5 x 3 hours x 2 people	5 x 3 hours x 2 people	20 x 2 hrs x 2 people	140 person hours
Call playback	5 x 2 person hours	15 x 0.5 person hours	16 x 0.5 person hours	25.5 hours
Frog survey	2 x frog ID	5 x Frog ID	13 x Frog ID	21 Frog ID
Harp Nets (4 nights)	3 x 4 nights			12 trap nights
Harp Nets (evening only)			7 x evenings	7 trap evenings
Pitfall line (5 buckets)	11 lines x 4 nights			220 trap nights
Pitfall line (2 funnels)	11 lines x 4 nights			88 trap nights
Elliott trapping (10 A)	11 lines x 4 nights + 2 lines x 4 nights			520 trap nights
Elliott trapping (10 B)	11 lines x 4 nights			440 trap nights
Bridge search		1 x 0.25 person hours	1 x 0.25 person hours	0.5 person hours
Hollow-bearing tree transects				12 transects

* Note that many bird surveys and general fauna surveys lasted more than 30 minutes. Time given here is the minimum effort.

TECHNICAL REPORT

1

Biodiversity development assessment report

Appendix E Flora survey results

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



GF	Family	Exotic	Scientific name	Common Name	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	T1-P1	T1-P2	T1-P3	T1-P4	T1-P5	T1-P6	T1-P7	T1-P8	T1-P9	T1-P10	T1-P11	T1-P12	T1-P13	T1-P14	T1-P15	T1-P16	T1-P17	T1-P18	T1-P19	T1-P20	
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
GG	Poaceae		<i>Sporobolus caroli</i>	Fairy Grass	0.1		10	0.1		0.1		0.1						0.1	0.1			0.1											
GG	Poaceae		<i>Sporobolus creber</i>	Western Rat-tail Grass																0.1													
GG	Poaceae		<i>Sporobolus spp.</i>																														
GG	Poaceae		<i>Themeda triandra</i>	Kangaroo Grass																0.2													
GG	Poaceae		<i>Thyridolepis mitchelliana</i>	Mulga Mitchell Grass							5	5					0.1									0.1							
GG	Poaceae		<i>Tragus australianus</i>	Small Burrgrass	10	5	5											0.1															
EX	Poaceae	*	<i>Urochloa panicoides</i>	Urochloa Grass									0.1	0.1								0.1											
EX	Poaceae	*	<i>Vulpia bromoides</i>	Squirrel Tail Fescue												0.1																	
EX	Poaceae	*	<i>Vulpia myuros</i>	Rat's Tail fescue																													
GG	Poaceae		<i>Walwhalleya subxerophila</i>	Gilgai Grass													0.1																
SG	Polygonaceae		<i>Duma florulenta</i>	Lignum																													
EX	Polygonaceae	*	<i>Emex spinosa</i>	-																													
EX	Polygonaceae	*	<i>Emex spp.</i>																														
FG	Polygonaceae		<i>Persicaria decipiens</i>	Slender Knotweed																													
EX	Polygonaceae	*	<i>Polygonum aviculare</i>	Wireweed													0.1																
FG	Polygonaceae		<i>Rumex brownii</i>	Swamp Dock										0.1						0.1	0.1	0.1								0.1	0.1		
FG	Polygonaceae		<i>Rumex crystallinus</i>	Shiny Dock																													
FG	Portulacaceae		<i>Calandrinia eremaea</i>	-						0.1	0.1	0.1																		0.1			
FG	Portulacaceae		<i>Portulaca oleracea</i>	Pigweed	0.1	0.1	0.1	0.1	0.1				0.1										0.1	0.1	0.1								
EX	Portulacaceae	*	<i>Portulaca pilosa</i>	Akulikuli												0.1																	
FG	Portulacaceae		<i>Portulaca spp.</i>																														
FG	Portulacaceae		<i>Portulaca spp.</i>																														
SG	Proteaceae		<i>Grevillea floribunda</i>	Seven Dwarfs Grevillea																													
SG	Proteaceae		<i>Hakea leucoptera</i>	Needlewood																								0.1					
SG	Proteaceae		<i>Persoonia sericea</i>	-																													
EG	Pteridaceae		<i>Cheilanthes distans</i>	Bristly Cloak Fern																													
EG	Pteridaceae		<i>Cheilanthes sieberi</i>	-							1	0.5														0.1	0.1			0.1			
OG	Ranunculaceae		<i>Clematis microphylla</i>	Small-leaved Clematis																													
SG	Rhamnaceae		<i>Cryptandra amara</i>	Bitter Cryptandra																													
SG	Rhamnaceae		<i>Cryptandra spp.</i>																														
FG	Rubiaceae		<i>Asperula gemella</i>	Twin-leaved Bedstraw																													
EX	Rubiaceae	*	<i>Galium aparine</i>	Goosegrass																	0.1												
FG	Rubiaceae		<i>Galium gaudichaudii</i>	Rough Bedstraw																													
SG	Rubiaceae		<i>Psydrax odorata</i>	Shiny-leaved Canthium																										0.1			
SG	Rutaceae		<i>Boronia occidentalis</i>	-																													
SG	Rutaceae		<i>Geijera parviflora</i>	Wilga						0.1													10	0.5				0.2	0.1	0.5	0.2		
SG	Rutaceae		<i>Philotheca brevifolia</i>	-																													
SG	Rutaceae		<i>Philotheca ciliata</i>	-																													
SG	Santalaceae		<i>Exocarpos spp.</i>																														
TG	Sapindaceae		<i>Alectryon oleifolius</i>	Western Rosewood			0.1																										
TG	Sapindaceae		<i>Atalaya hemiglauca</i>	Whitewood																								0.1					
SG	Sapindaceae		<i>Dodonaea boronifolia</i>																														
SG	Sapindaceae		<i>Dodonaea hetromorpha</i>																														
SG	Sapindaceae		<i>Dodonaea spp.</i>																														
SG	Sapindaceae		<i>Dodonaea viscosa</i>	Hopbush																													
SG	Sapindaceae		<i>Dodonaea viscosa subsp. angustissima</i>	Narrow-leaved Hopbush																													
SG	Sapindaceae		<i>Dodonaea viscosa subsp. cuneata</i>	Wedge-leaf hop-bush																													
SG	Sapindaceae		<i>Dodonaea viscosa subsp. mucronata</i>	-																													
SG	Sapindaceae		<i>Dodonaea viscosa subsp. spatulata</i>	-													0.1							0.1				0.1	5		0.1		
SG	Scrophulariaceae		<i>Eremophila debilis</i>	Winter Apple																			0.1		0.1								
SG	Scrophulariaceae		<i>Eremophila glabra</i>	Tarbush																								0.3					
SG	Scrophulariaceae		<i>Eremophila longifolia</i>	Berrigan																								0.5					
SG	Scrophulariaceae		<i>Eremophila mitchellii</i>	Budda				5									1												0.3				
SG	Scrophulariaceae		<i>Eremophila spp.</i>												0.1																		
SG	Scrophulariaceae		<i>Myoporum montanum</i>	Western Boobialla																													
HT	Solanaceae	*	<i>Cestrum parqui</i>	Green Cestrum																													

[illegible]

GF	Family	Exotic	Scientific name	Common Name	T1-P21	T1-P22	T1-P23	T1-P24	T1-P25	T2-P1	T2-P2	T2-P3	T2-P4	T2-P5	T2-P6	T2-P7	T2-P8	T2-P9	T2-P10	T2-P11	T2-P14	T2-P15	T2-P16	T2-P17	T2-P18	T2-P19	T2-P20	T2-P21	T2-P22
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet																		0.1							
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet																									
FG	Acanthaceae		<i>Brunoniella</i> spp.																										
FG	Acanthaceae		<i>Brunoniella</i> spp.																										
FG	Acanthaceae		<i>Rostellularia adscendens</i>	-																									
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>adscendens</i>	-																									
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>pogonanthera</i>	-																									
FG	Aizoaceae		<i>Tetragonia tetragoniodes</i>	New Zealand Spinach																									
FG	Aizoaceae		<i>Zaleya galericulata</i>	Hogweed				0.2														0.1	0.3	0.2		0.1			
FG	Amaranthaceae		<i>Alternanthera denticulata</i>	Lesser Joyweed	0.1			0.1		0.1	0.1		0.1										0.1		0.1		0.1	0.1	
FG	Amaranthaceae		<i>Alternanthera nodiflora</i>	Common Joyweed											0.1														
HT	Amaranthaceae	*	<i>Alternanthera pungens</i>	Khaki Weed					0.3																				
FG	Amaranthaceae		<i>Alternanthera</i> spp.									0.2																	
EX	Amaranthaceae	*	<i>Gomphrena celosioides</i>	Gomphrena Weed									0.1																
FG	Amaryllidaceae		<i>Calostemma purpureum</i>	Garland Lily												0.1					0.1	0.2							
EX	Anacardiacee	*	<i>Schinus molle</i> var. <i>areira</i>	Pepper Tree					0.2																				
FG	Anthericaceae		<i>Arthropodium gaudichaudii</i>	-																									
FG	Anthericaceae		<i>Arthropodium minus</i>	-																									
FG	Anthericaceae		<i>Arthropodium</i> spp.																										
FG	Anthericaceae		<i>Dichopogon fimbriatus</i>	Nodding Chocolate Lily																						0.1			
FG	Anthericaceae		<i>Thysanotus</i> spp.																										
FG	Anthericaceae		<i>Thysanotus tuberosus</i>	Common Fringe Lily																									
SG	Apiaceae	*	<i>Apiaceae</i> sp.																										
FG	Apiaceae		<i>Centella asiatica</i>	Indian Pennywort																									
FG	Apiaceae		<i>Daucus glochidiatus</i>	Native Carrot																									
FG	Apiaceae		<i>Eryngium paludosum</i>	Long Eryngium									0.1																
FG	Apiaceae		<i>Eryngium</i> spp.																										
TG	Apocynaceae		<i>Alstonia constricta</i>	Bitter Bark																									
OG	Apocynaceae		<i>Parsonsia eucalyptophylla</i>	Gargaloo																									
OG	Apocynaceae		<i>Tylophora linearis</i>	-																									
FG	Asphodelaceae		<i>Bulbine bulbosa</i>	Bulbine Lily																									
FG	Asteraceae		<i>Actinobole uliginosum</i>	Flannel Cudweed																									
EX	Asteraceae	*	<i>Arctotheca calendula</i>	Capeweed		0.1		0.1			0.1								0.5			0.1			0.1		0.1	0.2	
HT	Asteraceae	*	<i>Bidens subalternans</i>	Greater Beggars Ticks																				0.1					
FG	Asteraceae		<i>Brachyscome lineariloba</i>	Hard-headed Daisy																									
FG	Asteraceae		<i>Brachyscome multifida</i>	Cut-leaved Daisy																									
FG	Asteraceae		<i>Brachyscome</i> spp.																										
FG	Asteraceae		<i>Calotis anthemoides</i>	Cut-leaved Burr-daisy																									
FG	Asteraceae		<i>Calotis cuneifolia</i>	Purple Burr-daisy												0.1													
FG	Asteraceae		<i>Calotis hispidula</i>	Bogan Flea							0.2															0.1	0.3		
FG	Asteraceae		<i>Calotis lappulacea</i>	Yellow Burr-daisy			0.1						0.1									0.1		0.1					
FG	Asteraceae		<i>Calotis</i> spp.								0.1																		
HT	Asteraceae	*	<i>Carthamus lanatus</i>	Saffron Thistle		0.1	0.1				0.1								0.1			0.1				0.1		0.1	
SG	Asteraceae		<i>Cassinia arcuata</i>	Drooping Bush																									
SG	Asteraceae		<i>Cassinia</i> sp.																										
EX	Asteraceae	*	<i>Centaurea melitensis</i>	Maltese Cockspur																									
EX	Asteraceae	*	<i>Chondrilla juncea</i>	Skeleton Weed																									
FG	Asteraceae		<i>Chrysocephalum apiculatum</i>	Common Everlasting												0.1			0.1										
FG	Asteraceae		<i>Chthonocephalus pseudevax</i>	Ground heads																									
EX	Asteraceae	*	<i>Conyza bonariensis</i>	Flaxleaf Fleabane																	0.1								
EX	Asteraceae	*	<i>Conyza sumatrensis</i>	Tall Fleabane																		0.1							
FG	Asteraceae		<i>Cortula</i> sp.																										
FG	Asteraceae		<i>Eclipta platyglossa</i>	-																									
FG	Asteraceae		<i>Glossocardia bidens</i>	Cobbler's Tack																									
FG	Asteraceae	*	<i>Gnaphalium</i> spp.	-																									
EX	Asteraceae	*	<i>Hedypnois rhagadioloides</i>	Cretan Weed		0.1																							
FG	Asteraceae		<i>Hyalosperma</i> spp.																									0.2	
FG	Asteraceae		<i>Hyalosperma</i> spp.								0.8																		
EX	Asteraceae	*	<i>Hypochaeris glabra</i>	Smooth Catsear																	0.1	0.1				0.1	0.2		
EX	Asteraceae	*	<i>Hypochaeris radicata</i>	Flatweed, Catsear															0.1										
FG	Asteraceae		<i>Isoetopsis graminifolia</i>	Grass Cushions							0.1																	0.1	

GF	Family	Exotic	Scientific name	Common Name	T1-P21	T1-P22	T1-P23	T1-P24	T1-P25	T2-P1	T2-P2	T2-P3	T2-P4	T2-P5	T2-P6	T2-P7	T2-P8	T2-P9	T2-P10	T2-P11	T2-P14	T2-P15	T2-P16	T2-P17	T2-P18	T2-P19	T2-P20	T2-P21	T2-P22
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FG	Chenopodiaceae		<i>Dysphania melanocarpa</i>	Black Crumbweed																									
FG	Chenopodiaceae	*	<i>Dysphania multifida</i>	Scented Goosefoot				0.1																					
FG	Chenopodiaceae		<i>Dysphania pumilo</i>	Small Crumbweed		0.1	0.1	0.1																					
FG	Chenopodiaceae		<i>Einadia hastata</i>	Berry Saltbush										0.1		0.1	3												
FG	Chenopodiaceae		<i>Einadia nutans</i>	Climbing Saltbush				0.1		0.2	0.1	0.1		0.1			0.2	0.1	0.1		0.1	0.1	0.1	0.1		0.1	0.4	0.1	0.1
FG	Chenopodiaceae		<i>Einadia polygonoides</i>	-	0.1																								
FG	Chenopodiaceae		<i>Einadia trigonos</i>	Fishweed				0.1																					
SG	Chenopodiaceae		<i>Enchylaena tomentosa</i>	Ruby Saltbush										0.2															
SG	Chenopodiaceae		<i>Maireana aphylla</i>	Leafless Bluebush																									
FG	Chenopodiaceae		<i>Maireana enchylaenoides</i>	Wingless Bluebush				0.1						0.1								0.1			0.1	0.1	0.1	0.1	
SG	Chenopodiaceae		<i>Maireana microphylla</i>	Small-leaf Bluebush														0.1									0.1		
SG	Chenopodiaceae		<i>Maireana</i> spp.																										
SG	Chenopodiaceae		<i>Rhagodia spinescens</i>	Spiny Saltbush																									
SG	Chenopodiaceae		<i>Salsola australis</i>	-																		0.1	0.1				0.1		
SG	Chenopodiaceae		<i>Salsola kali</i>	-					0.1		0.6																		
SG	Chenopodiaceae		<i>Sclerolaena birchii</i>	Galvanized Burr		0.1	0.1	0.1																			0.2	0.1	
SG	Chenopodiaceae		<i>Sclerolaena divaricata</i>	Tangled Copperburr																									
SG	Chenopodiaceae		<i>Sclerolaena muricata</i>	Black Rolypoly	0.1			1		0.3	0.3	0.2							0.1			0.1	0.3	5			0.5		
SG	Chenopodiaceae		<i>Sclerolaena muricata</i> var. <i>villosa</i>	Black Rolypoly																									
FG	Commelinaceae		<i>Commelina cyanea</i>	-											0.1		0.1												
FG	Commelinaceae		<i>Commelina</i> spp.																						0.1				
OG	Convolvulaceae		<i>Convolvulus erubescens</i>	Blushing Bindweed		0.1					0.1											0.1			0.1	0.1	0.1		
FG	Convolvulaceae		<i>Dichondra repens</i>	Kidney Weed	0.1																0.2		0.1			0.1			
HT	Crassulaceae	*	<i>Bryophyllum delagoense</i>	Mother-of-millions									20	40															
FG	Crassulaceae		<i>Crassula colorata</i>	-																									
FG	Crassulaceae		<i>Crassula</i> spp.																										
EX	Cucurbitaceae	*	<i>Citrullus lanatus</i>	Watermelon					0.1										0.1		0.1				0.1				
TG	Cupressaceae		<i>Callitris glaucophylla</i>	White Cypress Pine									10		3	30	10	10			12				1	0.2			
GG	Cyperaceae		<i>Baumea</i> spp.																										
GG	Cyperaceae		<i>Carex appressa</i>	Tall Sedge																									
GG	Cyperaceae		<i>Carex inversa</i>	-	0.1										0.5			0.1	0.1		0.2					0.1			
GG	Cyperaceae		<i>Carex</i> spp.						0.2																				
GG	Cyperaceae		<i>Cyathochaeta diandra</i>	-																									
HT	Cyperaceae	*	<i>Cyperus eragrostis</i>	Umbrella Sedge																									
GG	Cyperaceae		<i>Cyperus lucidus</i>	Leafy Flat Sedge																									
GG	Cyperaceae		<i>Cyperus</i> spp.										2															0.1	
GG	Cyperaceae		<i>Eleocharis</i> spp.								0.2																		
GG	Cyperaceae		<i>Eleocharis</i> spp.								45																		
GG	Cyperaceae		<i>Fimbristylis dichotoma</i>	Common Fringe-sedge																									
GG	Cyperaceae		<i>Gahnia apsera</i>	Rough Saw-sedge																									
GG	Cyperaceae		<i>Lepidosperma laterale</i>	-												0.1	0.1	0.1											
GG	Cyperaceae		<i>Schoenus apogon</i>	Common Bog-rush																									
GG	Cyperaceae		<i>Schoenus kennyi</i>	-																									
GG	Cyperaceae		<i>Schoenus</i> spp.																										
SG	Dilleniaceae		<i>Hibbertia linearis</i>	-																									
SG	Dilleniaceae		<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower																									
SG	Ericaceae		<i>Brachyloma daphnoides</i>	Daphne Heath																									
SG	Ericaceae		<i>Lissanthe strigosa</i>	Peach Heath																									
SG	Ericaceae		<i>Melichrus urceolatus</i>	Urn-heath																									
SG	Ericaceae		<i>Styphelia triflora</i>	Pink Five-Corners																									
SG	Euphorbiaceae		<i>Beyeria viscosa</i>	Pinkwood																									
FG	Euphorbiaceae		<i>Euphorbia drummondii</i>	Caustic Weed		0.1	0.1		0.1															0.1			0.1	0.1	
FG	Euphorbiaceae		<i>Euphorbia</i> spp.											0.1															
SG	Euphorbiaceae		<i>Ricinocarpos bowmanii</i>	Western Wedding Bush																									
SG	Fabaceae		<i>Acacia boormanii</i>	Snowy River Wattle																									
TG	Fabaceae		<i>Acacia burrowii</i>	Burrow's Wattle																									
TG	Fabaceae		<i>Acacia caroleae</i>	Carol's Wattle																									
TG	Fabaceae		<i>Acacia cheelii</i>	Motherumbah																									
TG	Fabaceae		<i>Acacia dealbata</i>	Silver Wattle																									
SG	Fabaceae		<i>Acacia deanei</i>	Deans Wattle													0.1												
SG	Fabaceae		<i>Acacia deanei</i> subsp. <i>deanei</i>	Deane's Wattle																									

GF	Family	Exotic	Scientific name	Common Name	T1-P21	T1-P22	T1-P23	T1-P24	T1-P25	T2-P1	T2-P2	T2-P3	T2-P4	T2-P5	T2-P6	T2-P7	T2-P8	T2-P9	T2-P10	T2-P11	T2-P14	T2-P15	T2-P16	T2-P17	T2-P18	T2-P19	T2-P20	T2-P21	T2-P22
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
GG	Poaceae		<i>Sporobolus caroli</i>	Fairy Grass									0.1															0.1	
GG	Poaceae		<i>Sporobolus creber</i>	Western Rat-tail Grass																									
GG	Poaceae		<i>Sporobolus spp.</i>										1																
GG	Poaceae		<i>Themeda triandra</i>	Kangaroo Grass												0.2													
GG	Poaceae		<i>Thyridolepis mitchelliana</i>	Mulga Mitchell Grass																									
GG	Poaceae		<i>Tragus australianus</i>	Small Burrgrass								2													0.1				
EX	Poaceae	*	<i>Urochloa panicoides</i>	Urochloa Grass																									
EX	Poaceae	*	<i>Vulpia bromoides</i>	Squirrel Tail Fescue																									
EX	Poaceae	*	<i>Vulpia myuros</i>	Rat's Tail fescue					10																				
GG	Poaceae		<i>Walwhalleya subxerophila</i>	Gilgai Grass																									
SG	Polygonaceae		<i>Duma florulenta</i>	Lignum	0.2																								
EX	Polygonaceae	*	<i>Emex spinosa</i>	-																	0.1								
EX	Polygonaceae	*	<i>Emex spp.</i>								0.1																		
FG	Polygonaceae		<i>Persicaria decipiens</i>	Slender Knotweed											0.1														
EX	Polygonaceae	*	<i>Polygonum aviculare</i>	Wireweed							0.1																		
FG	Polygonaceae		<i>Rumex brownii</i>	Swamp Dock				0.1	0.1									0.1			0.1								
FG	Polygonaceae		<i>Rumex crystallinus</i>	Shiny Dock							0.1																		
FG	Portulacaceae		<i>Calandrinia eremaea</i>	-																									
FG	Portulacaceae		<i>Portulaca oleracea</i>	Pigweed						0.1	0.1	0.2	0.1									0.1		0.1			0.1		
EX	Portulacaceae	*	<i>Portulaca pilosa</i>	Akulikuli																									
FG	Portulacaceae		<i>Portulaca spp.</i>									0.1						0.1											
FG	Portulacaceae		<i>Portulaca spp.</i>									0.1																	
SG	Proteaceae		<i>Grevillea floribunda</i>	Seven Dwarfs Grevillea																									
SG	Proteaceae		<i>Hakea leucoptera</i>	Needlewood																									
SG	Proteaceae		<i>Persoonia sericea</i>	-																									
EG	Pteridaceae		<i>Cheilanthes distans</i>	Bristly Cloak Fern																									
EG	Pteridaceae		<i>Cheilanthes sieberi</i>	-										0.1			0.3				0.1								
OG	Ranunculaceae		<i>Clematis microphylla</i>	Small-leaved Clematis																									
SG	Rhamnaceae		<i>Cryptandra amara</i>	Bitter Cryptandra																									
SG	Rhamnaceae		<i>Cryptandra spp.</i>																										
FG	Rubiaceae		<i>Asperula gemella</i>	Twin-leaved Bedstraw												0.1													
EX	Rubiaceae	*	<i>Galium aparine</i>	Goosegrass					0.2																				
FG	Rubiaceae		<i>Galium gaudichaudii</i>	Rough Bedstraw																									
SG	Rubiaceae		<i>Psyrax odorata</i>	Shiny-leaved Canthium																									
SG	Rutaceae		<i>Boronia occidentalis</i>	-																									
SG	Rutaceae		<i>Geijera parviflora</i>	Wilga									0.5	20						0.1					5				
SG	Rutaceae		<i>Philotheca brevifolia</i>	-																									
SG	Rutaceae		<i>Philotheca ciliata</i>	-																									
SG	Santalaceae		<i>Exocarpos spp.</i>																										
TG	Sapindaceae		<i>Alectryon oleifolius</i>	Western Rosewood																				3			1		
TG	Sapindaceae		<i>Atalaya hemiglauca</i>	Whitewood																									
SG	Sapindaceae		<i>Dodonaea boronifolia</i>																										
SG	Sapindaceae		<i>Dodonaea hetromorpha</i>																										
SG	Sapindaceae		<i>Dodonaea spp.</i>																										
SG	Sapindaceae		<i>Dodonaea viscosa</i>	Hopbush																									
SG	Sapindaceae		<i>Dodonaea viscosa subsp. angustissima</i>	Narrow-leaved Hopbush																									
SG	Sapindaceae		<i>Dodonaea viscosa subsp. cuneata</i>	Wedge-leaf hop-bush																									
SG	Sapindaceae		<i>Dodonaea viscosa subsp. mucronata</i>	-																									
SG	Sapindaceae		<i>Dodonaea viscosa subsp. spatulata</i>	-									0.1			0.2													
SG	Scrophulariaceae		<i>Eremophila debilis</i>	Winter Apple																									
SG	Scrophulariaceae		<i>Eremophila glabra</i>	Tarbush																									
SG	Scrophulariaceae		<i>Eremophila longifolia</i>	Berrigan																			0.2		0.1				
SG	Scrophulariaceae		<i>Eremophila mitchellii</i>	Budda																			0.5						
SG	Scrophulariaceae		<i>Eremophila spp.</i>																										
SG	Scrophulariaceae		<i>Myoporum montanum</i>	Western Boobialla													0.1	0.1											
HT	Solanaceae	*	<i>Cestrum parqui</i>	Green Cestrum					0.1																				
HT	Solanaceae	*	<i>Lycium ferocissimum</i>	African Boxthorn	0.1					0.1																	0.1		
SG	Solanaceae		<i>Lycium spp.</i>																										
SG	Solanaceae		<i>Solanum cinereum</i>	Narrawa Burr																									
SG	Solanaceae		<i>Solanum erianthum</i>	Potato Tree																									
FG	Solanaceae		<i>Solanum esuriale</i>	Quena	0.1	0.1				0.1													0.2	0.1	0.1			0.3	

GF	Family	Exotic	Scientific name	Common Name	T1-P21	T1-P22	T1-P23	T1-P24	T1-P25	T2-P1	T2-P2	T2-P3	T2-P4	T2-P5	T2-P6	T2-P7	T2-P8	T2-P9	T2-P10	T2-P11	T2-P14	T2-P15	T2-P16	T2-P17	T2-P18	T2-P19	T2-P20	T2-P21	T2-P22
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SG	Solanaceae		<i>Solanum ferocissimum</i>	Spiny Potato Bush																									
EX	Solanaceae	*	<i>Solanum nigrum</i>	Black-berry Nightshade																									
SG	Thymelaeaceae		<i>Pimelea linifolia</i>	Slender Rice Flower																									
SG	Thymelaeaceae		<i>Pimelea microcephala</i>	Shrubby Rice-flower											0.1														
SG	Thymelaeaceae		<i>Pimelea neo-anglica</i>	Poison Pimelea																									
SG	Thymelaeaceae		<i>Pimelea spp.</i>											0.1															
EX	Urticaceae	*	<i>Urtica urens</i>	Small Nettle																	0.1								
EX	Verbenaceae	*	<i>Glandularia aristigera</i>	Mayne's Pest									0.2		0.1			0.1	0.2						0.1				
HT	Verbenaceae	*	<i>Phyla canescens</i>	-						5																			
HT	Verbenaceae	*	<i>Phyla nodiflora</i>	Lippia																									
EX	Verbenaceae	*	<i>Verbena bonariensis</i>	Purpletop				0.1		0.1																			
EX	Verbenaceae	*	<i>Verbena officinalis</i>	Common Verbena																									
OG	Xanthorrhoeaceae		<i>Xanthorrhoea acaulis</i>	-																									
OG	Zamiaceae		<i>Macrozamia glaucophylla</i>	-																									
FG	Zygophyllaceae		<i>Tribulus micrococcus</i>	Yellow Vine																									
EX	Zygophyllaceae	*	<i>Tribulus terrestris</i>	Caltrop						0.2											0.1	0.1	0.1	25	0.2		0.1		

GF	Family	Exotic	Scientific name	Common Name	T2-P23	T2-P24	T2-P25	T2-P26	T2-P27	T2-P28	T2-P29	T2-P30	T2-P31	T2-P32	T2-P33	T2-P34	T2-P35	T2-P36	T2-P37	T1-MP1	T1-MP2	T1-MP3	T1-MP4	T1-MP5	T1-MP6	T1-MP7
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
SG	Fabaceae		<i>Acacia decora</i>	Western Silver Wattle																						
TG	Fabaceae		<i>Acacia decurrens</i>	Black Wattle																						
SG	Fabaceae		<i>Acacia hakeoides</i>	Hakea Wattle																						
TG	Fabaceae		<i>Acacia harpophylla</i>	Brigalow																						
TG	Fabaceae		<i>Acacia homalophylla</i>	Yarran										5												
SG	Fabaceae		<i>Acacia lineata</i>	Streaked Wattle																		0.1	0.2			
SG	Fabaceae		<i>Acacia mariae</i>	Golden-top Wattle																						
SG	Fabaceae		<i>Acacia montana</i>	Mallee Wattle																						
SG	Fabaceae		<i>Acacia murrayana</i>	Murray's Wattle																						
SG	Fabaceae		<i>Acacia parvipinnula</i>	Silver-stemmed Wattle																						
TG	Fabaceae		<i>Acacia pendula</i>	Weeping Myall																						
SG	Fabaceae		<i>Acacia penninervis</i>	Mountain Hickory																						
SG	Fabaceae		<i>Acacia rubida</i>	Red-stemmed Wattle																						
SG	Fabaceae		<i>Acacia spectabilis</i>	Mudgee Wattle																0.4	1					
SG	Fabaceae		<i>Acacia spp.</i>												0.8											
SG	Fabaceae		<i>Acacia spp.</i>																							
SG	Fabaceae		<i>Acacia stenophylla</i>																							
SG	Fabaceae		<i>Acacia triptera</i>	Spurwing Wattle																						
SG	Fabaceae		<i>Bossiaea spp.</i>																							
SG	Fabaceae		<i>Daviesia ulicifolia</i>	Gorse Bitter Pea																						
FG	Fabaceae		<i>Desmodium brachypodum</i>	Large Tick-trefoil																						
OG	Fabaceae		<i>Desmodium spp.</i>																							
OG	Fabaceae		<i>Desmodium varians</i>	Slender Tick-trefoil																						
SG	Fabaceae		<i>Dillwynia sericea</i>	Showy Parrot-pea																0.1	0.5					
SG	Fabaceae		<i>Dillwynia sp.</i>																							
OG	Fabaceae		<i>Glycine clandestina</i>	-		0.1		0.1					0.1				0.3	0.1								
OG	Fabaceae		<i>Glycine microphylla</i>	Small-leaf Glycine																						
OG	Fabaceae		<i>Glycine tabacina</i>	-								0.1						0.1								
OG	Fabaceae		<i>Hardenbergia violacea</i>	Purple Coral Pea																						
SG	Fabaceae		<i>Hovea apiculata</i>	-																						
EX	Fabaceae	*	<i>Lotus spp.</i>																							
EX	Fabaceae	*	<i>Medicago arabica</i>	Spotted Burr Medic																						
EX	Fabaceae	*	<i>Medicago laciniata</i>	Cut-leaved Medic																						
EX	Fabaceae	*	<i>Medicago minima</i>	Woolly Burr Medic		0.1				0.1																
EX	Fabaceae	*	<i>Medicago polymorpha</i>	Burr Medic							0.1						0.1	0.1								
EX	Fabaceae	*	<i>Medicago praecox</i>	Small-leaved Burr Medic																						
EX	Fabaceae		<i>Medicago trunculata</i>	Barrel Medic																						
FG	Fabaceae		<i>Neptunia gracilis</i>	Native Sensitive Plant																						
SG	Fabaceae		<i>Pultenaea microphylla</i>	-																						
SG	Fabaceae		<i>Pultenaea microphylla</i>	-																						
SG	Fabaceae		<i>Pultenaea sp.</i>																							
SG	Fabaceae		<i>Senna artemisioides</i>	Silver Cassia									0.2													
FG	Fabaceae		<i>Senna barclayana</i>	Smooth Senna																						
SG	Fabaceae		<i>Senna sp.</i>																							
FG	Fabaceae		<i>Swainsona galegifolia</i>	Smooth Darling-pea																						
EX	Fabaceae	*	<i>Trifolium arvense</i>	Haresfoot Clover						0.1	0.1															
EX	Fabaceae	*	<i>Trifolium glomeratum</i>	Clustered Clover						0.1	3															
EX	Fabaceae	*	<i>Trifolium sp.</i>																							
EX	Fabaceae	*	<i>Trifolium subterraneum</i>	Subterranean Clover						0.1																
EX	Fabaceae	*	<i>Vicia spp.</i>																							
EX	Geraniaceae	*	<i>Erodium botrys</i>	Long Storksbill				0.1																		
FG	Geraniaceae		<i>Erodium crinitum</i>	Blue Storksbill																						
FG	Goodeniaceae		<i>Brunonia australis</i>																							
FG	Goodeniaceae		<i>Goodenia cycloptera</i>	-																						
FG	Goodeniaceae		<i>Goodenia fascicularis</i>	-					0.1								0.1									
FG	Goodeniaceae		<i>Goodenia glabra</i>																							
FG	Goodeniaceae		<i>Goodenia hederacea</i>	Forest Goodenia																						
FG	Goodeniaceae		<i>Goodenia rotundifolia</i>	-																0.1		0.1				
FG	Haloragaceae		<i>Gonocarpus elatus</i>																							
GG	Juncaceae		<i>Juncus continuus</i>	-																						
GG	Juncaceae		<i>Juncus spp.</i>							0.1	0.1	0.1		0.2					0.1							

GF	Family	Exotic	Scientific name	Common Name	T2-P23	T2-P24	T2-P25	T2-P26	T2-P27	T2-P28	T2-P29	T2-P30	T2-P31	T2-P32	T2-P33	T2-P34	T2-P35	T2-P36	T2-P37	T1-MP1	T1-MP2	T1-MP3	T1-MP4	T1-MP5	T1-MP6	T1-MP7
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
GG	Juncaceae		<i>Juncus subsecundus</i>	-																						
FG	Lamiaceae		<i>Ajuga australis</i>	Austral Bugle																						
EX	Lamiaceae	*	<i>Marrubium vulgare</i>	White Horehound													0.3	0.2								
FG	Lamiaceae		<i>Plectranthus parviflorus</i>	Cocksbur Flower																						
EX	Lamiaceae	*	<i>Salvia reflexa</i>	Mintweed																						
EX	Lamiaceae	*	<i>Salvia verbenaca</i>	Vervain																						
FG	Lamiaceae		<i>Teucrium betchei</i>	-																						
SG	Lamiaceae		<i>Westringia cheelii</i>	-																10	0.2					
OG	Lauraaceae		<i>Cassytha pubescens</i>	-																						
GG	Lomandraceae		<i>Lomandra filiformis</i>	Wattle Mat-Rush				0.3								0.1										
GG	Lomandraceae		<i>Lomandra glauca</i>	Pale Mat-rush																						
GG	Lomandraceae		<i>Lomandra leucocephala</i>	Wooly Mat-rush																0.3	0.2	0.1	0.1	1	0.8	
GG	Lomandraceae		<i>Lomandra longifolia</i>	Spiny-headed Mat-rush																					0.1	
GG	Lomandraceae		<i>Lomandra multiflora</i>	Many-flowered Mat-rush	0.1							0.2								0.3				0.1		
GG	Lomandraceae		<i>Lomandra spp.</i>																							
OG	Loranthaceae		<i>Amyema miquelii</i>	-																						
OG	Loranthaceae		<i>Amyema quandang</i>	-																						
OG	Loranthaceae		<i>Amyema spp.</i>																							
SG	Malvaceae		<i>Abutilon oxycarpum</i>	Straggly Lantern-bush																						
SG	Malvaceae		<i>Abutilon spp.</i>						0.1																	
TG	Malvaceae		<i>Brachychiton populneus</i>	Kurrajong		2		0.1																		
EX	Malvaceae	*	<i>Malva parviflora</i>	Small-flowered Mallow																						
EX	Malvaceae	*	<i>Malva spp.</i>																							
EX	Malvaceae	*	<i>Modiola caroliniana</i>	Red-flowered Mallow																						
FG	Malvaceae		<i>Sida corrugata</i>	Corrugated Sida				0.2				0.1	0.1			0.1	0.1	0.2	0.1							
FG	Malvaceae		<i>Sida cunninghamii</i>	Ridged Sida														0.2								
FG	Malvaceae		<i>Sida hackettiana</i>	Golden Rod																						
EX	Malvaceae	*	<i>Sida rhombifolia</i>	Paddy's Lucerne																						
EX	Malvaceae	*	<i>Sida spinosa</i>	-																						
EX	Malvaceae	*	<i>Sida spp.</i>																							
EG	Marsileaceae		<i>Marsilea drummondii</i>	Common Nardoo																						
TG	Meliaceae		<i>Melia azedarach</i>	White Cedar																						
SG	Myrtaceae		<i>Acacia sp</i>																							
TG	Myrtaceae		<i>Angophora floribunda</i>	Rough-barked Apple																						
SG	Myrtaceae		<i>Callistemon linearis</i>	Narrow-leaved Bottlebrush																						
SG	Myrtaceae		<i>Calytrix tetragona</i>	Common Fringe-myrtle																	0.1					
TG	Myrtaceae		<i>Corymbia trachyphloia</i>	White Bloodwood																						
SG	Myrtaceae		<i>Darwinia spp.</i>																							
TG	Myrtaceae		<i>Eucalyptus albens</i>	White Box																						
TG	Myrtaceae		<i>Eucalyptus blakelyi</i>	Blakely's Red Gum														12								
TG	Myrtaceae		<i>Eucalyptus camaldulensis</i>	River Red Gum										3												
TG	Myrtaceae		<i>Eucalyptus chloroclada</i>	Dirty Gum			0.2																			
TG	Myrtaceae		<i>Eucalyptus clodacalyx</i>	-																						
TG	Myrtaceae		<i>Eucalyptus conica</i>	Fuzzy Box				3											5							
TG	Myrtaceae		<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark																5	12	8	5		12	4
TG	Myrtaceae		<i>Eucalyptus cumaldulensis</i>	-								8														
TG	Myrtaceae		<i>Eucalyptus dwyeri</i>	-	3																					
TG	Myrtaceae		<i>Eucalyptus fibrosa</i>	Red-Ironbark																						
TG	Myrtaceae		<i>Eucalyptus melanophloia</i>	Silver-leaved Ironbark																						
TG	Myrtaceae		<i>Eucalyptus melliodora</i>	Yellow Box Gum													12	10								
TG	Myrtaceae		<i>Eucalyptus microcarpa</i>	Grey Box Gum													12									
TG	Myrtaceae		<i>Eucalyptus pilligaensis</i>	Narrow-leaved Grey Box				15	25				1			6						2	8			
TG	Myrtaceae		<i>Eucalyptus populnea</i>	Bimble Box		20						4							2							
TG	Myrtaceae		<i>Eucalyptus populnea subsp. bimbil</i>	Bimble Box																						
TG	Myrtaceae		<i>Eucalyptus sideroxylon</i>	Mugga Ironbark											5								2			
TG	Myrtaceae		<i>Eucalyptus spp.</i>																							
TG	Myrtaceae		<i>Eucalyptus spp.</i>																							
TG	Myrtaceae		<i>Eucalyptus viridis</i>	Green Mallee																						
SG	Myrtaceae		<i>Harmogia densifolia</i>	-																						
SG	Myrtaceae		<i>Homoranthus flavescens</i>	-																						
SG	Myrtaceae		<i>Kunzea parviflora</i>	Violet Kunzea																	0.1					

[illegible]

GF	Family	Exotic	Scientific name	Common Name	T2-P23	T2-P24	T2-P25	T2-P26	T2-P27	T2-P28	T2-P29	T2-P30	T2-P31	T2-P32	T2-P33	T2-P34	T2-P35	T2-P36	T2-P37	T1-MP1	T1-MP2	T1-MP3	T1-MP4	T1-MP5	T1-MP6	T1-MP7
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
GG	Poaceae		<i>Sporobolus caroli</i>	Fairy Grass																						
GG	Poaceae		<i>Sporobolus creber</i>	Western Rat-tail Grass																						
GG	Poaceae		<i>Sporobolus spp.</i>																							
GG	Poaceae		<i>Themeda triandra</i>	Kangaroo Grass																						
GG	Poaceae		<i>Thyridolepis mitchelliana</i>	Mulga Mitchell Grass	1	0.1	0.1																			
GG	Poaceae		<i>Tragus australianus</i>	Small Burrgrass						0.1																
EX	Poaceae	*	<i>Urochloa panicoides</i>	Urochloa Grass																						
EX	Poaceae	*	<i>Vulpia bromoides</i>	Squirrel Tail Fescue							0.1															
EX	Poaceae	*	<i>Vulpia myuros</i>	Rat's Tail fescue																						
GG	Poaceae		<i>Walwhalleya subxerophila</i>	Gilgai Grass																						
SG	Polygonaceae		<i>Duma florulenta</i>	Lignum																						
EX	Polygonaceae	*	<i>Emex spinosa</i>	-																						
EX	Polygonaceae	*	<i>Emex spp.</i>																							
FG	Polygonaceae		<i>Persicaria decipiens</i>	Slender Knotweed																						
EX	Polygonaceae	*	<i>Polygonum aviculare</i>	Wireweed						0.1	0.1															
FG	Polygonaceae		<i>Rumex brownii</i>	Swamp Dock				0.1						0.1				0.1								
FG	Polygonaceae		<i>Rumex crystallinus</i>	Shiny Dock																						
FG	Portulacaceae		<i>Calandrinia eremaea</i>	-																						
FG	Portulacaceae		<i>Portulaca oleracea</i>	Pigweed										0.1												
EX	Portulacaceae	*	<i>Portulaca pilosa</i>	Akulikuli																						
FG	Portulacaceae		<i>Portulaca spp.</i>																							
FG	Portulacaceae		<i>Portulaca spp.</i>																							
SG	Proteaceae		<i>Grevillea floribunda</i>	Seven Dwarfs Grevillea																0.1						
SG	Proteaceae		<i>Hakea leucoptera</i>	Needlewood																						
SG	Proteaceae		<i>Persoonia sericea</i>	-																						
EG	Pteridaceae		<i>Cheilanthes distans</i>	Bristly Cloak Fern																						
EG	Pteridaceae		<i>Cheilanthes sieberi</i>	-	0.1		0.1	0.1	0.1		0.1		0.2							0.1		0.1	0.1	0.1	0.1	0.1
OG	Ranunculaceae		<i>Clematis microphylla</i>	Small-leaved Clematis																						
SG	Rhamnaceae		<i>Cryptandra amara</i>	Bitter Cryptandra												5										
SG	Rhamnaceae		<i>Cryptandra spp.</i>																							
FG	Rubiaceae		<i>Asperula gemella</i>	Twin-leaved Bedstraw																						
EX	Rubiaceae	*	<i>Galium aparine</i>	Goosegrass				0.1																		
FG	Rubiaceae		<i>Galium gaudichaudii</i>	Rough Bedstraw					0.1					0.1			0.1									
SG	Rubiaceae		<i>Psyrax odorata</i>	Shiny-leaved Canthium																						
SG	Rutaceae		<i>Boronia occidentalis</i>	-																						
SG	Rutaceae		<i>Geijera parviflora</i>	Wilga				6	10				0.3			2	1		0.1				1			
SG	Rutaceae		<i>Philotheca brevifolia</i>	-																						
SG	Rutaceae		<i>Philotheca ciliata</i>	-																		0.1				
SG	Santalaceae		<i>Exocarpos spp.</i>																							
TG	Sapindaceae		<i>Alectryon oleifolius</i>	Western Rosewood																						
TG	Sapindaceae		<i>Atalaya hemiglauca</i>	Whitewood																						
SG	Sapindaceae		<i>Dodonaea boronifolia</i>																							
SG	Sapindaceae		<i>Dodonaea hetromorpha</i>																			0.1				
SG	Sapindaceae		<i>Dodonaea spp.</i>																							
SG	Sapindaceae		<i>Dodonaea viscosa</i>	Hopbush																						
SG	Sapindaceae		<i>Dodonaea viscosa subsp. angustissima</i>	Narrow-leaved Hopbush																0.1	0.1	0.1	0.1			
SG	Sapindaceae		<i>Dodonaea viscosa subsp. cuneata</i>	Wedge-leaf hop-bush																						
SG	Sapindaceae		<i>Dodonaea viscosa subsp. mucronata</i>	-																			25			
SG	Sapindaceae		<i>Dodonaea viscosa subsp. spatulata</i>	-									0.1		1	8										
SG	Scrophulariaceae		<i>Eremophila debilis</i>	Winter Apple									0.1				0.3	1	0.1							
SG	Scrophulariaceae		<i>Eremophila glabra</i>	Tarbush		0.2																				
SG	Scrophulariaceae		<i>Eremophila longifolia</i>	Berrigan																						
SG	Scrophulariaceae		<i>Eremophila mitchellii</i>	Budda		1										0.3										
SG	Scrophulariaceae		<i>Eremophila spp.</i>																							
SG	Scrophulariaceae		<i>Myoporum montanum</i>	Western Boobialla																						
HT	Solanaceae	*	<i>Cestrum parqui</i>	Green Cestrum																						
HT	Solanaceae	*	<i>Lycium ferocissimum</i>	African Boxthorn		0.5		0.3	0.2								0.3	0.2								
SG	Solanaceae		<i>Lycium spp.</i>																					0.1		
SG	Solanaceae		<i>Solanum cinereum</i>	Narrawa Burr																						
SG	Solanaceae		<i>Solanum erianthum</i>	Potato Tree																						
FG	Solanaceae		<i>Solanum esuriale</i>	Quena		0.1							0.1				0.1									

[illegible]

GF	Family	Exotic	Scientific name	Common Name	T1-MP8	T1-MP9	T1-MP10	T1-MP11	T1-MP12	T1-MP13	T1-MP14	T1-MP15	T1-MP16	T1-MP17	T1-MP18	T1-MP19	T1-MP20	T1-MP21	T1-MP22	T1-MP23	T1-MP24	T1-MP25	T1-MP26	T1-MP27
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet																				
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet																				
FG	Acanthaceae		<i>Brunoniella</i> spp.																					
FG	Acanthaceae		<i>Brunoniella</i> spp.																					
FG	Acanthaceae		<i>Rostellularia adscendens</i>	-																				
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>adscendens</i>	-																				
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>pogonanthera</i>	-																				
FG	Aizoaceae		<i>Tetragonia tetragoniodes</i>	New Zealand Spinach																				
FG	Aizoaceae		<i>Zaleya galericulata</i>	Hogweed		0.1			0.1								0.1		0.1	0.1				
FG	Amaranthaceae		<i>Alternanthera denticulata</i>	Lesser Joyweed													0.1							
FG	Amaranthaceae		<i>Alternanthera nodiflora</i>	Common Joyweed																				
HT	Amaranthaceae	*	<i>Alternanthera pungens</i>	Khaki Weed																				
FG	Amaranthaceae		<i>Alternanthera</i> spp.																					
EX	Amaranthaceae	*	<i>Gomphrena celosioides</i>	Gomphrena Weed																				
FG	Amaryllidaceae		<i>Calostemma purpureum</i>	Garland Lily																				
EX	Anarcardiaceae	*	<i>Schinus molle</i> var. <i>areira</i>	Pepper Tree																				
FG	Anthericaceae		<i>Arthropodium gaudichaudii</i>	-																				
FG	Anthericaceae		<i>Arthropodium minus</i>	-																				
FG	Anthericaceae		<i>Arthropodium</i> spp.																					
FG	Anthericaceae		<i>Dichopogon fimbriatus</i>	Nodding Chocolate Lily																				
FG	Anthericaceae		<i>Thysanotus</i> spp.																					
FG	Anthericaceae		<i>Thysanotus tuberosus</i>	Common Fringe Lily																				
SG	Apiaceae	*	<i>Apiaceae</i> sp.																					
FG	Apiaceae		<i>Centella asiatica</i>	Indian Pennywort																				
FG	Apiaceae		<i>Daucus glochidiatus</i>	Native Carrot																				
FG	Apiaceae		<i>Eryngium paludosum</i>	Long Eryngium																				
FG	Apiaceae		<i>Eryngium</i> spp.																					
TG	Apocynaceae		<i>Alstonia constricta</i>	Bitter Bark																				
OG	Apocynaceae		<i>Parsonsia eucalyptophylla</i>	Gargaloo																		0.1		
OG	Apocynaceae		<i>Tylophora linearis</i>	-																				
FG	Asphodelaceae		<i>Bulbine bulbosa</i>	Bulbine Lily																				
FG	Asteraceae		<i>Actinobole uliginosum</i>	Flannel Cudweed																				
EX	Asteraceae	*	<i>Arctotheca calendula</i>	Capeweed																				
HT	Asteraceae	*	<i>Bidens subalternans</i>	Greater Beggars Ticks																				
FG	Asteraceae		<i>Brachyscome lineariloba</i>	Hard-headed Daisy																				
FG	Asteraceae		<i>Brachyscome multifida</i>	Cut-leaved Daisy																				
FG	Asteraceae		<i>Brachyscome</i> spp.																					
FG	Asteraceae		<i>Calotis anthemoides</i>	Cut-leaved Burr-daisy																				
FG	Asteraceae		<i>Calotis cuneifolia</i>	Purple Burr-daisy		0.1																		
FG	Asteraceae		<i>Calotis hispidula</i>	Bogan Flea																0.1				
FG	Asteraceae		<i>Calotis lappulacea</i>	Yellow Burr-daisy																				
FG	Asteraceae		<i>Calotis</i> spp.																					
HT	Asteraceae	*	<i>Carthamus lanatus</i>	Saffron Thistle																				
SG	Asteraceae		<i>Cassinia arcuata</i>	Drooping Bush																		0.2		0.5
SG	Asteraceae		<i>Cassinia</i> sp.														0.1							
EX	Asteraceae	*	<i>Centaurea melitensis</i>	Maltese Cockspur																				
EX	Asteraceae	*	<i>Chondrilla juncea</i>	Skeleton Weed																				
FG	Asteraceae		<i>Chrysocephalum apiculatum</i>	Common Everlasting																				
FG	Asteraceae		<i>Chthonocephalus pseudevax</i>	Ground heads																				
EX	Asteraceae	*	<i>Conyza bonariensis</i>	Flaxleaf Fleabane																				
EX	Asteraceae	*	<i>Conyza sumatrensis</i>	Tall Fleabane																				
FG	Asteraceae		<i>Cortula</i> sp.																					
FG	Asteraceae		<i>Eclipta platyglossa</i>	-																				
FG	Asteraceae		<i>Glossocardia bidens</i>	Cobbler's Tack																				
FG	Asteraceae	*	<i>Gnaphalium</i> spp.	-																				
EX	Asteraceae	*	<i>Hedypnois rhagadioloides</i>	Cretan Weed																				
FG	Asteraceae		<i>Hyalosperma</i> spp.																					
FG	Asteraceae		<i>Hyalosperma</i> spp.																					
EX	Asteraceae	*	<i>Hypochaeris glabra</i>	Smooth Catsear																				
EX	Asteraceae	*	<i>Hypochaeris radicata</i>	Flatweed, Catsear																				
FG	Asteraceae		<i>Isoetopsis graminifolia</i>	Grass Cushions																				

[illegible]

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GF	Family	Exotic	Scientific name	Common Name	T1-MP8	T1-MP9	T1-MP10	T1-MP11	T1-MP12	T1-MP13	T1-MP14	T1-MP15	T1-MP16	T1-MP17	T1-MP18	T1-MP19	T1-MP20	T1-MP21	T1-MP22	T1-MP23	T1-MP24	T1-MP25	T1-MP26	T1-MP27
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SG	Fabaceae		<i>Acacia decora</i>	Western Silver Wattle																				
TG	Fabaceae		<i>Acacia decurrens</i>	Black Wattle																0.1				
SG	Fabaceae		<i>Acacia hakeoides</i>	Hakea Wattle																				
TG	Fabaceae		<i>Acacia harpophylla</i>	Brigalow																				
TG	Fabaceae		<i>Acacia homalophylla</i>	Yarran																				
SG	Fabaceae		<i>Acacia lineata</i>	Streaked Wattle																				
SG	Fabaceae		<i>Acacia mariae</i>	Golden-top Wattle														1	50	93			1	20
SG	Fabaceae		<i>Acacia montana</i>	Mallee Wattle																				
SG	Fabaceae		<i>Acacia murrayana</i>	Murray's Wattle			10	1		0.5	2					1								
SG	Fabaceae		<i>Acacia parvipinnula</i>	Silver-stemmed Wattle																				
TG	Fabaceae		<i>Acacia pendula</i>	Weeping Myall																				
SG	Fabaceae		<i>Acacia penninervis</i>	Mountain Hickory																				
SG	Fabaceae		<i>Acacia rubida</i>	Red-stemmed Wattle																				
SG	Fabaceae		<i>Acacia spectabilis</i>	Mudgee Wattle																				
SG	Fabaceae		<i>Acacia spp.</i>			10																		
SG	Fabaceae		<i>Acacia spp.</i>														0.2							
SG	Fabaceae		<i>Acacia stenophylla</i>															0.1						
SG	Fabaceae		<i>Acacia triptera</i>	Spurwing Wattle			35			10	30					18		0.2	40					
SG	Fabaceae		<i>Bossiaea spp.</i>																					
SG	Fabaceae		<i>Daviesia ulicifolia</i>	Gorse Bitter Pea																				
FG	Fabaceae		<i>Desmodium brachypodum</i>	Large Tick-trefoil																				
OG	Fabaceae		<i>Desmodium spp.</i>																					
OG	Fabaceae		<i>Desmodium varians</i>	Slender Tick-trefoil																				
SG	Fabaceae		<i>Dillwynia sericea</i>	Showy Parrot-pea	0.1																			
SG	Fabaceae		<i>Dillwynia sp.</i>																					
OG	Fabaceae		<i>Glycine clandestina</i>	-																				
OG	Fabaceae		<i>Glycine microphylla</i>	Small-leaf Glycine																				
OG	Fabaceae		<i>Glycine tabacina</i>	-																				
OG	Fabaceae		<i>Hardenbergia violacea</i>	Purple Coral Pea																				
SG	Fabaceae		<i>Hovea apiculata</i>	-																				
EX	Fabaceae	*	<i>Lotus spp.</i>																					
EX	Fabaceae	*	<i>Medicago arabica</i>	Spotted Burr Medic																				
EX	Fabaceae	*	<i>Medicago laciniata</i>	Cut-leaved Medic																				
EX	Fabaceae	*	<i>Medicago minima</i>	Woolly Burr Medic																				
EX	Fabaceae	*	<i>Medicago polymorpha</i>	Burr Medic																				
EX	Fabaceae	*	<i>Medicago praecox</i>	Small-leaved Burr Medic																				
EX	Fabaceae		<i>Medicago trunculata</i>	Barrel Medic																				
FG	Fabaceae		<i>Neptunia gracilis</i>	Native Sensitive Plant																				
SG	Fabaceae		<i>Pultenaea microphylla</i>	-																				
SG	Fabaceae		<i>Pultenaea microphylla</i>	-																				
SG	Fabaceae		<i>Pultenaea sp.</i>														0.1							
SG	Fabaceae		<i>Senna artemisioides</i>	Silver Cassia																0.1		0.3	0.2	
FG	Fabaceae		<i>Senna barclayana</i>	Smooth Senna																				
SG	Fabaceae		<i>Senna sp.</i>									0.8												
FG	Fabaceae		<i>Swainsona galegifolia</i>	Smooth Darling-pea																				
EX	Fabaceae	*	<i>Trifolium arvense</i>	Haresfoot Clover																				
EX	Fabaceae	*	<i>Trifolium glomeratum</i>	Clustered Clover																				
EX	Fabaceae	*	<i>Trifolium sp.</i>																					
EX	Fabaceae	*	<i>Trifolium subterraneum</i>	Subterranean Clover																				
EX	Fabaceae	*	<i>Vicia spp.</i>																					
EX	Geraniaceae	*	<i>Erodium botrys</i>	Long Storksbill																				
FG	Geraniaceae		<i>Erodium crinitum</i>	Blue Storksbill																				
FG	Goodeniaceae		<i>Brunonia australis</i>																					
FG	Goodeniaceae		<i>Goodenia cycloptera</i>	-																				
FG	Goodeniaceae		<i>Goodenia fascicularis</i>	-																				
FG	Goodeniaceae		<i>Goodenia glabra</i>																					
FG	Goodeniaceae		<i>Goodenia hederacea</i>	Forest Goodenia										0.1										
FG	Goodeniaceae		<i>Goodenia rotundifolia</i>	-																				
FG	Haloragaceae		<i>Gonocarpus elatus</i>																					
GG	Juncaceae		<i>Juncus continuus</i>	-										5										
GG	Juncaceae		<i>Juncus spp.</i>														0.1							

[illegible]

GF	Family	Exotic	Scientific name	Common Name	T1-MP28	T1-MP29	T1-MP30	T1-MP31	T1-MP32	T1-MP33	T1-MP34	T1-MP35	T1-MP36	T1-MP37	T1-MP38	T1-MP39	T1-MP40	T1-MP41	T1-MP42	T2-MP1	T2-MP2	T2-MP3	T2-MP4	T2-MP5
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet																				
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet																				
FG	Acanthaceae		<i>Brunoniella</i> spp.																					
FG	Acanthaceae		<i>Brunoniella</i> spp.																					
FG	Acanthaceae		<i>Rostellularia adscendens</i>	-																				
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>adscendens</i>	-																				
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>pogonanthera</i>	-																				
FG	Aizoaceae		<i>Tetragonia tetragoniodes</i>	New Zealand Spinach																				
FG	Aizoaceae		<i>Zaleya galericulata</i>	Hogweed			0.1											0.1						
FG	Amaranthaceae		<i>Alternanthera denticulata</i>	Lesser Joyweed																				
FG	Amaranthaceae		<i>Alternanthera nodiflora</i>	Common Joyweed																				
HT	Amaranthaceae	*	<i>Alternanthera pungens</i>	Khaki Weed																				
FG	Amaranthaceae		<i>Alternanthera</i> spp.																					
EX	Amaranthaceae	*	<i>Gomphrena celosioides</i>	Gomphrena Weed																				
FG	Amaryllidaceae		<i>Calostemma purpureum</i>	Garland Lily																				
EX	Anarcardiaceae	*	<i>Schinus molle</i> var. <i>areira</i>	Pepper Tree																				
FG	Anthericaceae		<i>Arthropodium gaudichaudii</i>	-																				
FG	Anthericaceae		<i>Arthropodium minus</i>	-																				
FG	Anthericaceae		<i>Arthropodium</i> spp.																					
FG	Anthericaceae		<i>Dichopogon fimbriatus</i>	Nodding Chocolate Lily																				
FG	Anthericaceae		<i>Thysanotus</i> spp.																					
FG	Anthericaceae		<i>Thysanotus tuberosus</i>	Common Fringe Lily																				
SG	Apiaceae	*	<i>Apiaceae</i> sp.																			0.1		
FG	Apiaceae		<i>Centella asiatica</i>	Indian Pennywort																				
FG	Apiaceae		<i>Daucus glochidiatus</i>	Native Carrot																				
FG	Apiaceae		<i>Eryngium paludosum</i>	Long Eryngium																				
FG	Apiaceae		<i>Eryngium</i> spp.																					
TG	Apocynaceae		<i>Alstonia constricta</i>	Bitter Bark																				
OG	Apocynaceae		<i>Parsonsia eucalyptophylla</i>	Gargaloo			0.1										0.1							
OG	Apocynaceae		<i>Tylophora linearis</i>	-																				
FG	Asphodelaceae		<i>Bulbine bulbosa</i>	Bulbine Lily																				
FG	Asteraceae		<i>Actinobole uliginosum</i>	Flannel Cudweed																				
EX	Asteraceae	*	<i>Arctotheca calendula</i>	Capeweed																				
HT	Asteraceae	*	<i>Bidens subalternans</i>	Greater Beggars Ticks																				
FG	Asteraceae		<i>Brachyscome lineariloba</i>	Hard-headed Daisy																				
FG	Asteraceae		<i>Brachyscome multifida</i>	Cut-leaved Daisy																				
FG	Asteraceae		<i>Brachyscome</i> spp.																					
FG	Asteraceae		<i>Calotis anthemoides</i>	Cut-leaved Burr-daisy																				
FG	Asteraceae		<i>Calotis cuneifolia</i>	Purple Burr-daisy			0.2																	
FG	Asteraceae		<i>Calotis hispidula</i>	Bogan Flea											0.1									
FG	Asteraceae		<i>Calotis lappulacea</i>	Yellow Burr-daisy																				
FG	Asteraceae		<i>Calotis</i> spp.																					
HT	Asteraceae	*	<i>Carthamus lanatus</i>	Saffron Thistle											0.1									
SG	Asteraceae		<i>Cassinia arcuata</i>	Drooping Bush										0.5							0.1			
SG	Asteraceae		<i>Cassinia</i> sp.																					
EX	Asteraceae	*	<i>Centaurea melitensis</i>	Maltese Cockspur																				
EX	Asteraceae	*	<i>Chondrilla juncea</i>	Skeleton Weed												0.1								
FG	Asteraceae		<i>Chrysocephalum apiculatum</i>	Common Everlasting																				
FG	Asteraceae		<i>Chthonocephalus pseudevax</i>	Ground heads																				
EX	Asteraceae	*	<i>Conyza bonariensis</i>	Flaxleaf Fleabane																				
EX	Asteraceae	*	<i>Conyza sumatrensis</i>	Tall Fleabane																				
FG	Asteraceae		<i>Cortula</i> sp.																					
FG	Asteraceae		<i>Eclipta platyglossa</i>	-																				
FG	Asteraceae		<i>Glossocardia bidens</i>	Cobbler's Tack																				
FG	Asteraceae	*	<i>Gnaphalium</i> spp.	-																				
EX	Asteraceae	*	<i>Hedypnois rhagadioloides</i>	Cretan Weed																				
FG	Asteraceae		<i>Hyalosperma</i> spp.																					
FG	Asteraceae		<i>Hyalosperma</i> spp.																					
EX	Asteraceae	*	<i>Hypochaeris glabra</i>	Smooth Catsear																				
EX	Asteraceae	*	<i>Hypochaeris radicata</i>	Flatweed, Catsear																				
FG	Asteraceae		<i>Isoetopsis graminifolia</i>	Grass Cushions																				

[illegible]

GF	Family	Exotic	Scientific name	Common Name	T1-MP28	T1-MP29	T1-MP30	T1-MP31	T1-MP32	T1-MP33	T1-MP34	T1-MP35	T1-MP36	T1-MP37	T1-MP38	T1-MP39	T1-MP40	T1-MP41	T1-MP42	T2-MP1	T2-MP2	T2-MP3	T2-MP4	T2-MP5
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FG	Chenopodiaceae		<i>Dysphania melanocarpa</i>	Black Crumbweed																				
FG	Chenopodiaceae	*	<i>Dysphania multifida</i>	Scented Goosefoot																				
FG	Chenopodiaceae		<i>Dysphania pumilo</i>	Small Crumbweed																				
FG	Chenopodiaceae		<i>Einadia hastata</i>	Berry Saltbush		0.1	0.1	0.1						0.1										
FG	Chenopodiaceae		<i>Einadia nutans</i>	Climbing Saltbush	0.1	0.1	0.1		0.1	0.1				0.1	0.1	0.1		0.1						
FG	Chenopodiaceae		<i>Einadia polygonoides</i>	-																				
FG	Chenopodiaceae		<i>Einadia trigonos</i>	Fishweed																				
SG	Chenopodiaceae		<i>Enchylaena tomentosa</i>	Ruby Saltbush																				
SG	Chenopodiaceae		<i>Maireana aphylla</i>	Leafless Bluebush																				
FG	Chenopodiaceae		<i>Maireana enchylaenoides</i>	Wingless Bluebush			0.1																	
SG	Chenopodiaceae		<i>Maireana microphylla</i>	Small-leaf Bluebush													0.2	0.1						
SG	Chenopodiaceae		<i>Maireana</i> spp.																					
SG	Chenopodiaceae		<i>Rhagodia spinescens</i>	Spiny Saltbush																				
SG	Chenopodiaceae		<i>Salsola australis</i>	-											0.1									
SG	Chenopodiaceae		<i>Salsola kali</i>	-																				
SG	Chenopodiaceae		<i>Sclerolaena birchii</i>	Galvanized Burr											0.1	0.1								
SG	Chenopodiaceae		<i>Sclerolaena divaricata</i>	Tangled Copperburr																				
SG	Chenopodiaceae		<i>Sclerolaena muricata</i>	Black Rolypoly											0.1									
SG	Chenopodiaceae		<i>Sclerolaena muricata</i> var. <i>villosa</i>	Black Rolypoly																				
FG	Commelinaceae		<i>Commelina cyanea</i>	-																				
FG	Commelinaceae		<i>Commelina</i> spp.																					
OG	Convolvulaceae		<i>Convolvulus erubescens</i>	Blushing Bindweed									0.1		0.1									
FG	Convolvulaceae		<i>Dichondra repens</i>	Kidney Weed																				
HT	Crassulaceae	*	<i>Bryophyllum delagoense</i>	Mother-of-millions																				
FG	Crassulaceae		<i>Crassula colorata</i>	-																				
FG	Crassulaceae		<i>Crassula</i> spp.																					
EX	Cucurbitaceae	*	<i>Citrullus lanatus</i>	Watermelon																				
TG	Cupressaceae		<i>Callitris glaucophylla</i>	White Cypress Pine	3		25	5	25	35	1	30	3	15		10	1	0.1	50	15	15	4	0.5	10
GG	Cyperaceae		<i>Baumea</i> spp.																					
GG	Cyperaceae		<i>Carex appressa</i>	Tall Sedge																				
GG	Cyperaceae		<i>Carex inversa</i>	-																				
GG	Cyperaceae		<i>Carex</i> spp.																					
GG	Cyperaceae		<i>Cyathochaeta diandra</i>	-																0.1	0.1			
HT	Cyperaceae	*	<i>Cyperus eragrostis</i>	Umbrella Sedge																				
GG	Cyperaceae		<i>Cyperus lucidus</i>	Leafy Flat Sedge		15																		
GG	Cyperaceae		<i>Cyperus</i> spp.																					
GG	Cyperaceae		<i>Eleocharis</i> spp.																					
GG	Cyperaceae		<i>Eleocharis</i> spp.																					
GG	Cyperaceae		<i>Fimbristylis dichotoma</i>	Common Fringe-sedge																				
GG	Cyperaceae		<i>Gahnia apsera</i>	Rough Saw-sedge																0.1		0.2		
GG	Cyperaceae		<i>Lepidosperma laterale</i>	-				0.1			0.3		0.1											
GG	Cyperaceae		<i>Schoenus apogon</i>	Common Bog-rush																				
GG	Cyperaceae		<i>Schoenus kennyi</i>	-																			0.1	
GG	Cyperaceae		<i>Schoenus</i> spp.																					
SG	Dilleniaceae		<i>Hibbertia linearis</i>	-																				
SG	Dilleniaceae		<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower																	0.1			
SG	Ericaceae		<i>Brachyloma daphnoides</i>	Daphne Heath	0.2				5				0.1											
SG	Ericaceae		<i>Lissanthe strigosa</i>	Peach Heath																				
SG	Ericaceae		<i>Melichrus urceolatus</i>	Urn-heath	0.2				0.1		0.1									0.2	0.1		0.1	0.1
SG	Ericaceae		<i>Styphelia triflora</i>	Pink Five-Corners																0.1				
SG	Euphorbiaceae		<i>Beyeria viscosa</i>	Pinkwood																				
FG	Euphorbiaceae		<i>Euphorbia drummondii</i>	Caustic Weed																				
FG	Euphorbiaceae		<i>Euphorbia</i> spp.																					
SG	Euphorbiaceae		<i>Ricinocarpus bowmanii</i>	Western Wedding Bush																				
SG	Fabaceae		<i>Acacia boormanii</i>	Snowy River Wattle								4												
TG	Fabaceae		<i>Acacia burrowii</i>	Burrow's Wattle																				
TG	Fabaceae		<i>Acacia caroleae</i>	Carol's Wattle																			35	
TG	Fabaceae		<i>Acacia cheelii</i>	Motherumbah																				
TG	Fabaceae		<i>Acacia dealbata</i>	Silver Wattle																				
SG	Fabaceae		<i>Acacia deanei</i>	Deans Wattle	10	2	5	2	0.1	1	5		0.5			3	0.1	0.1				5		
SG	Fabaceae		<i>Acacia deanei</i> subsp. <i>deanei</i>	Deane's Wattle																				

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GF	Family	Exotic	Scientific name	Common Name	T1-MP28	T1-MP29	T1-MP30	T1-MP31	T1-MP32	T1-MP33	T1-MP34	T1-MP35	T1-MP36	T1-MP37	T1-MP38	T1-MP39	T1-MP40	T1-MP41	T1-MP42	T2-MP1	T2-MP2	T2-MP3	T2-MP4	T2-MP5
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SG	Myrtaceae		<i>Leptospermum polygalifolium</i>	Tantoon																				
SG	Myrtaceae		<i>Leptospermum</i> spp.			15																10		
SG	Myrtaceae		<i>Melaleuca erubescens</i>	-																				
SG	Myrtaceae		<i>Melaleuca uncinata</i>	Broombush																				
SG	Myrtaceae		<i>Micromyrtus ciliata</i>	Fringed Heath-myrtle					0.2			4	0.2							0.1			0.5	
SG	Myrtaceae		<i>Micromyrtus sessilis</i>	-																			0.1	
FG	Nyctaginaceae		<i>Boerhavia dominii</i>	Tarvine										0.1										
OG	Oleaceae		<i>Jasminum lineare</i>	Desert Jasmine																				
OG	Oleaceae		<i>Jasminum</i> spp.																					
TG	Oleaceae		<i>Notelaea microcarpa</i>																					
TG	Oleaceae		<i>Notelaea</i> spp.																					
EX	Onagraceae	*	<i>Oenothera mollissima</i>	-																				
OG	Orchidaceae		<i>Cymbidium canaliculatum</i>	Tiger Orchid																		0.1		
FG	Orchidaceae		<i>Orchidaceae</i> sp.																					
FG	Oxalidaceae		<i>Oxalis chnoodes</i>																					
EX	Oxalidaceae	*	<i>Oxalis corniculata</i>	-		0.1										0.1								
FG	Oxalidaceae		<i>Oxalis exilis</i>	-																				
FG	Oxalidaceae		<i>Oxalis perennans</i>	-																				
EX	Oxalidaceae	*	<i>Oxalis pes-caprae</i>	-																				
FG	Oxalidaceae		<i>Oxalis</i> spp.																					
EX	Papaveraceae	*	<i>Fumaria capreolata</i>	Climbing Fumitory																				
FG	Phormiaceae		<i>Dianella caerulea</i>	Blue Flax-Lily																				
FG	Phormiaceae		<i>Dianella longifolia</i>	Blueberry Lily																				
FG	Phormiaceae		<i>Dianella revoluta</i>	Blue Flax-Lily				1			0.5		0.1							0.2	0.1		0.1	
FG	Phrymaceae		<i>Elacholoma prostrata</i>	Small Monkey-flower																				
FG	Phrymaceae		<i>Mimulus gracilis</i>	Slender Monkey-flower																				
FG	Phyllanthaceae		<i>Phyllanthus</i> spp.																					
FG	Phyllanthaceae		<i>Phyllanthus virgatus</i>	-																				
EX	Plantaginaceae		<i>Plantago</i> sp.																					
FG	Plantaginaceae		<i>Plantago turrifera</i>	-																				
EX	Poaceae	*	<i>Aira caryophyllea</i>	Silvery Hairgrass																				
GG	Poaceae		<i>Anthosachne scabra</i>	Wheatgrass																				
GG	Poaceae		<i>Aristida behriana</i>	Bunch Wiregrass																				
GG	Poaceae		<i>Aristida jerichoensis</i>	Jericho Wiregrass					0.1															
GG	Poaceae		<i>Aristida longicollis</i>	-																				
GG	Poaceae		<i>Aristida muricata</i>	-																				
GG	Poaceae		<i>Aristida personata</i>	Purple Wire-grass																				
GG	Poaceae		<i>Aristida ramosa</i>	Purple Wiregrass	0.1			0.1		0.1	0.1	1	0.1			0.1	0.1		0.1	0.1	0.1		0.1	
GG	Poaceae		<i>Aristida</i> spp.												0.1			0.1						
GG	Poaceae		<i>Aristida vagans</i>	Threeawn Speargrass																	0.1			
GG	Poaceae		<i>Astrebula lappacea</i>	Curly Mitchell Grass																				
GG	Poaceae		<i>Austrostipa aristiglumis</i>	Plains Grass																				
GG	Poaceae		<i>Austrostipa nodosa</i>																					
GG	Poaceae		<i>Austrostipa ramosissima</i>	Stout Bamboo Grass																				
GG	Poaceae		<i>Austrostipa scabra</i>	Speargrass	0.1		0.1	0.1	0.3	0.5	0.1	3	0.1				0.2	0.2	0.1					
GG	Poaceae		<i>Austrostipa scabra</i> subsp. <i>falcata</i>	-																				
GG	Poaceae		<i>Austrostipa scabra</i> subsp. <i>scabra</i>	-		0.1																		
GG	Poaceae		<i>Austrostipa</i> sp.											0.3										
GG	Poaceae		<i>Austrostipa</i> spp.											0.1	0.2									
GG	Poaceae		<i>Austrostipa verticillata</i>	Slender Bamboo Grass																				
EX	Poaceae	*	<i>Avena barbata</i>	Bearded Oats																				
EX	Poaceae	*	<i>Avena fatua</i>	Wild Oats																				
GG	Poaceae		<i>Bothriochloa decipiens</i>	Red Grass																				
GG	Poaceae		<i>Bothriochloa macra</i>	Red Grass																				
GG	Poaceae		<i>Bothriochloa</i> spp.																					
EX	Poaceae	*	<i>Bromus catharticus</i>	Prairie Grass																				
EX	Poaceae	*	<i>Bromus molliformis</i>	Soft Brome																				
GG	Poaceae		<i>Bromus</i> spp.																					
HT	Poaceae	*	<i>Cenchrus longispinus</i>	Innocent Weed																				
GG	Poaceae		<i>Chloris divaricata</i>	Slender Chloris																				
HT	Poaceae	*	<i>Chloris gayana</i>	Rhodes Grass																				

GF	Family	Exotic	Scientific name	Common Name	T1-MP28	T1-MP29	T1-MP30	T1-MP31	T1-MP32	T1-MP33	T1-MP34	T1-MP35	T1-MP36	T1-MP37	T1-MP38	T1-MP39	T1-MP40	T1-MP41	T1-MP42	T2-MP1	T2-MP2	T2-MP3	T2-MP4	T2-MP5
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
GG	Poaceae		<i>Sporobolus caroli</i>	Fairy Grass																				
GG	Poaceae		<i>Sporobolus creber</i>	Western Rat-tail Grass																				
GG	Poaceae		<i>Sporobolus</i> spp.																					
GG	Poaceae		<i>Themeda triandra</i>	Kangaroo Grass																				
GG	Poaceae		<i>Thyridolepis mitchelliana</i>	Mulga Mitchell Grass																				
GG	Poaceae		<i>Tragus australianus</i>	Small Burrgrass																				
EX	Poaceae	*	<i>Urochloa panicoides</i>	Urochloa Grass																				
EX	Poaceae	*	<i>Vulpia bromoides</i>	Squirrel Tail Fescue																				
EX	Poaceae	*	<i>Vulpia myuros</i>	Rat's Tail fescue																				
GG	Poaceae		<i>Walwhalleya subxerophila</i>	Gilgai Grass																				
SG	Polygonaceae		<i>Duma florulenta</i>	Lignum																				
EX	Polygonaceae	*	<i>Emex spinosa</i>	-																				
EX	Polygonaceae	*	<i>Emex</i> spp.																					
FG	Polygonaceae		<i>Persicaria decipiens</i>	Slender Knotweed																				
EX	Polygonaceae	*	<i>Polygonum aviculare</i>	Wireweed																				
FG	Polygonaceae		<i>Rumex brownii</i>	Swamp Dock																				
FG	Polygonaceae		<i>Rumex crystallinus</i>	Shiny Dock																				
FG	Portulacaceae		<i>Calandrinia eremaea</i>	-																				
FG	Portulacaceae		<i>Portulaca oleracea</i>	Pigweed											0.1									
EX	Portulacaceae	*	<i>Portulaca pilosa</i>	Akulikuli																				
FG	Portulacaceae		<i>Portulaca</i> spp.																					
FG	Portulacaceae		<i>Portulaca</i> spp.																					
SG	Proteaceae		<i>Grevillea floribunda</i>	Seven Dwarfs Grevillea	0.1																			
SG	Proteaceae		<i>Hakea leucoptera</i>	Needlewood																				
SG	Proteaceae		<i>Persoonia sericea</i>	-																				
EG	Pteridaceae		<i>Cheilanthes distans</i>	Bristly Cloak Fern																				
EG	Pteridaceae		<i>Cheilanthes sieberi</i>	-		0.1	0.1	0.1			0.1	0.1								0.1	0.1		0.1	
OG	Ranunculaceae		<i>Clematis microphylla</i>	Small-leaved Clematis																				
SG	Rhamnaceae		<i>Cryptandra amara</i>	Bitter Cryptandra																				
SG	Rhamnaceae		<i>Cryptandra</i> spp.																					
FG	Rubiaceae		<i>Asperula gemella</i>	Twin-leaved Bedstraw																				
EX	Rubiaceae	*	<i>Galium aparine</i>	Goosegrass																				
FG	Rubiaceae		<i>Galium gaudichaudii</i>	Rough Bedstraw																				
SG	Rubiaceae		<i>Psyrax odorata</i>	Shiny-leaved Canthium																				
SG	Rutaceae		<i>Boronia occidentalis</i>	-																		0.1		
SG	Rutaceae		<i>Geijera parviflora</i>	Wilga			0.3							0.1										
SG	Rutaceae		<i>Philotheca brevifolia</i>	-																				
SG	Rutaceae		<i>Philotheca ciliata</i>	-																				
SG	Santalaceae		<i>Exocarpos</i> spp.						0.2															
TG	Sapindaceae		<i>Alectryon oleifolius</i>	Western Rosewood																				
TG	Sapindaceae		<i>Atalaya hemiglauca</i>	Whitewood																				
SG	Sapindaceae		<i>Dodonaea boronifolia</i>																					
SG	Sapindaceae		<i>Dodonaea hetromorpha</i>																					
SG	Sapindaceae		<i>Dodonaea</i> spp.																					
SG	Sapindaceae		<i>Dodonaea viscosa</i>	Hopbush													0.1							
SG	Sapindaceae		<i>Dodonaea viscosa</i> subsp. <i>angustissima</i>	Narrow-leaved Hopbush																			0.1	
SG	Sapindaceae		<i>Dodonaea viscosa</i> subsp. <i>cuneata</i>	Wedge-leaf hop-bush									1											
SG	Sapindaceae		<i>Dodonaea viscosa</i> subsp. <i>mucronata</i>	-																				
SG	Sapindaceae		<i>Dodonaea viscosa</i> subsp. <i>spatulata</i>	-																				
SG	Scrophulariaceae		<i>Eremophila debilis</i>	Winter Apple																				
SG	Scrophulariaceae		<i>Eremophila glabra</i>	Tarbush																				
SG	Scrophulariaceae		<i>Eremophila longifolia</i>	Berrigan																				
SG	Scrophulariaceae		<i>Eremophila mitchellii</i>	Budda																				
SG	Scrophulariaceae		<i>Eremophila</i> spp.																					
SG	Scrophulariaceae		<i>Myoporum montanum</i>	Western Boobialla																				
HT	Solanaceae	*	<i>Cestrum parqui</i>	Green Cestrum																				
HT	Solanaceae	*	<i>Lycium ferocissimum</i>	African Boxthorn																				
SG	Solanaceae		<i>Lycium</i> spp.																					
SG	Solanaceae		<i>Solanum cinereum</i>	Narrawa Burr				0.1	0.1															
SG	Solanaceae		<i>Solanum erianthum</i>	Potato Tree																				
FG	Solanaceae		<i>Solanum esuriale</i>	Quena											0.1		0.1	0.1						

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GF	Family	Exotic	Scientific name	Common Name	T2-MP6	T2-MP7	T2-MP8	T2-MP9	T2-MP10	T2-MP11	T2-MP12	T2-MP13	T2-MP14	T2-MP15	T2-MP16	T2-MP17	T2-MP18	T2-MP19	T2-MP20	T2-MP21	T2-MP22	T2-MP23	T2-MP24	T2-MP25
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FG	Chenopodiaceae		<i>Dysphania melanocarpa</i>	Black Crumbweed																				
FG	Chenopodiaceae	*	<i>Dysphania multifida</i>	Scented Goosefoot																				
FG	Chenopodiaceae		<i>Dysphania pumilo</i>	Small Crumbweed																				
FG	Chenopodiaceae		<i>Einadia hastata</i>	Berry Saltbush									0.1		0.1									
FG	Chenopodiaceae		<i>Einadia nutans</i>	Climbing Saltbush														0.1			0.1		0.1	0.1
FG	Chenopodiaceae		<i>Einadia polygonoides</i>	-																	0.1			
FG	Chenopodiaceae		<i>Einadia trigonos</i>	Fishweed						0.1										0.1	0.2			
SG	Chenopodiaceae		<i>Enchylaena tomentosa</i>	Ruby Saltbush																0.1	1			
SG	Chenopodiaceae		<i>Maireana aphylla</i>	Leafless Bluebush																	0.1			
FG	Chenopodiaceae		<i>Maireana enchylaenoides</i>	Wingless Bluebush																		0.1		
SG	Chenopodiaceae		<i>Maireana microphylla</i>	Small-leaf Bluebush																	0.1			
SG	Chenopodiaceae		<i>Maireana</i> spp.																					
SG	Chenopodiaceae		<i>Rhagodia spinescens</i>	Spiny Saltbush																	0.2			
SG	Chenopodiaceae		<i>Salsola australis</i>	-																				
SG	Chenopodiaceae		<i>Salsola kali</i>	-																				
SG	Chenopodiaceae		<i>Sclerolaena birchii</i>	Galvanized Burr																			0.1	
SG	Chenopodiaceae		<i>Sclerolaena divaricata</i>	Tangled Copperburr																				
SG	Chenopodiaceae		<i>Sclerolaena muricata</i>	Black Rolypoly																			0.1	
SG	Chenopodiaceae		<i>Sclerolaena muricata</i> var. <i>villosa</i>	Black Rolypoly																	0.1			
FG	Commelinaceae		<i>Commelina cyanea</i>	-								0.1												
FG	Commelinaceae		<i>Commelina</i> spp.																					
OG	Convolvulaceae		<i>Convolvulus erubescens</i>	Blushing Bindweed																				
FG	Convolvulaceae		<i>Dichondra repens</i>	Kidney Weed																		0.1		
HT	Crassulaceae	*	<i>Bryophyllum delagoense</i>	Mother-of-millions																				
FG	Crassulaceae		<i>Crassula colorata</i>	-																				
FG	Crassulaceae		<i>Crassula</i> spp.																					
EX	Cucurbitaceae	*	<i>Citrullus lanatus</i>	Watermelon																				
TG	Cupressaceae		<i>Callitris glaucophylla</i>	White Cypress Pine	15	35		1	10	15	35	15	10	20	0.2	20	25	5	15					10
GG	Cyperaceae		<i>Baumea</i> spp.																					
GG	Cyperaceae		<i>Carex appressa</i>	Tall Sedge																				
GG	Cyperaceae		<i>Carex inversa</i>	-																				
GG	Cyperaceae		<i>Carex</i> spp.																					
GG	Cyperaceae		<i>Cyathochaeta diandra</i>	-																				
HT	Cyperaceae	*	<i>Cyperus eragrostis</i>	Umbrella Sedge																				
GG	Cyperaceae		<i>Cyperus lucidus</i>	Leafy Flat Sedge																				
GG	Cyperaceae		<i>Cyperus</i> spp.																					
GG	Cyperaceae		<i>Eleocharis</i> spp.																					
GG	Cyperaceae		<i>Eleocharis</i> spp.																					
GG	Cyperaceae		<i>Fimbristylis dichotoma</i>	Common Fringe-sedge																				
GG	Cyperaceae		<i>Gahnia apsera</i>	Rough Saw-sedge								0.1												
GG	Cyperaceae		<i>Lepidosperma laterale</i>	-																				
GG	Cyperaceae		<i>Schoenus apogon</i>	Common Bog-rush																				
GG	Cyperaceae		<i>Schoenus kennyi</i>	-		0.1																		
GG	Cyperaceae		<i>Schoenus</i> spp.																					
SG	Dilleniaceae		<i>Hibbertia linearis</i>	-																				
SG	Dilleniaceae		<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower																				
SG	Ericaceae		<i>Brachyloma daphnoides</i>	Daphne Heath																				
SG	Ericaceae		<i>Lissanthe strigosa</i>	Peach Heath		0.1		0.1	0.1									0.1						
SG	Ericaceae		<i>Melichrus urceolatus</i>	Urn-heath	0.1	0.1				0.1								0.1	0.1					
SG	Ericaceae		<i>Styphelia triflora</i>	Pink Five-Corners		0.1																		
SG	Euphorbiaceae		<i>Beyeria viscosa</i>	Pinkwood																				
FG	Euphorbiaceae		<i>Euphorbia drummondii</i>	Caustic Weed																				
FG	Euphorbiaceae		<i>Euphorbia</i> spp.																					
SG	Euphorbiaceae		<i>Ricinocarpos bowmanii</i>	Western Wedding Bush																				
SG	Fabaceae		<i>Acacia boormanii</i>	Snowy River Wattle																				
TG	Fabaceae		<i>Acacia burrowii</i>	Burrow's Wattle																				
TG	Fabaceae		<i>Acacia caroleae</i>	Carol's Wattle																				
TG	Fabaceae		<i>Acacia cheelii</i>	Motherumbah					0.1															
TG	Fabaceae		<i>Acacia dealbata</i>	Silver Wattle																				
SG	Fabaceae		<i>Acacia deanei</i>	Deans Wattle												0.1			0.2					
SG	Fabaceae		<i>Acacia deanei</i> subsp. <i>deanei</i>	Deane's Wattle							0.1	0.5	0.5	0.1	0.1			0.1						

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GF	Family	Exotic	Scientific name	Common Name	T2-MP26
					%
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet	
FG	Acanthaceae		<i>Brunoniella australis</i>	Blue Trumpet	
FG	Acanthaceae		<i>Brunoniella</i> spp.		
FG	Acanthaceae		<i>Brunoniella</i> spp.		
FG	Acanthaceae		<i>Rostellularia adscendens</i>	-	
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>adscendens</i>	-	
FG	Acanthaceae		<i>Rostellularia adscendens</i> var. <i>pogonanthera</i>	-	
FG	Aizoaceae		<i>Tetragonia tetragoniodes</i>	New Zealand Spinach	
FG	Aizoaceae		<i>Zaleya galericulata</i>	Hogweed	
FG	Amaranthaceae		<i>Alternanthera denticulata</i>	Lesser Joyweed	
FG	Amaranthaceae		<i>Alternanthera nodiflora</i>	Common Joyweed	
HT	Amaranthaceae	*	<i>Alternanthera pungens</i>	Khaki Weed	
FG	Amaranthaceae		<i>Alternanthera</i> spp.		
EX	Amaranthaceae	*	<i>Gomphrena celosioides</i>	Gomphrena Weed	
FG	Amaryllidaceae		<i>Calostemma purpureum</i>	Garland Lily	
EX	Anarcardiacee	*	<i>Schinus molle</i> var. <i>areira</i>	Pepper Tree	
FG	Anthericaceae		<i>Arthropodium gaudichaudii</i>	-	
FG	Anthericaceae		<i>Arthropodium minus</i>	-	
FG	Anthericaceae		<i>Arthropodium</i> spp.		
FG	Anthericaceae		<i>Dichopogon fimbriatus</i>	Nodding Chocolate Lily	
FG	Anthericaceae		<i>Thysanotus</i> spp.		
FG	Anthericaceae		<i>Thysanotus tuberosus</i>	Common Fringe Lily	
SG	Apiaceae	*	<i>Apiaceae</i> sp.		
FG	Apiaceae		<i>Centella asiatica</i>	Indian Pennywort	
FG	Apiaceae		<i>Daucus glochidiatus</i>	Native Carrot	
FG	Apiaceae		<i>Eryngium paludosum</i>	Long Eryngium	
FG	Apiaceae		<i>Eryngium</i> spp.		
TG	Apocynaceae		<i>Alstonia constricta</i>	Bitter Bark	
OG	Apocynaceae		<i>Parsonsia eucalyptophylla</i>	Gargaloo	
OG	Apocynaceae		<i>Tylophora linearis</i>	-	
FG	Asphodelaceae		<i>Bulbine bulbosa</i>	Bulbine Lily	
FG	Asteraceae		<i>Actinobole uliginosum</i>	Flannel Cudweed	
EX	Asteraceae	*	<i>Arctotheca calendula</i>	Capeweed	
HT	Asteraceae	*	<i>Bidens subalternans</i>	Greater Beggars Ticks	
FG	Asteraceae		<i>Brachyscome lineariloba</i>	Hard-headed Daisy	
FG	Asteraceae		<i>Brachyscome multifida</i>	Cut-leaved Daisy	
FG	Asteraceae		<i>Brachyscome</i> spp.		
FG	Asteraceae		<i>Calotis anthemoides</i>	Cut-leaved Burr-daisy	
FG	Asteraceae		<i>Calotis cuneifolia</i>	Purple Burr-daisy	
FG	Asteraceae		<i>Calotis hispidula</i>	Bogan Flea	
FG	Asteraceae		<i>Calotis lappulacea</i>	Yellow Burr-daisy	
FG	Asteraceae		<i>Calotis</i> spp.		
HT	Asteraceae	*	<i>Carthamus lanatus</i>	Saffron Thistle	
SG	Asteraceae		<i>Cassinia arcuata</i>	Drooping Bush	
SG	Asteraceae		<i>Cassinia</i> sp.		
EX	Asteraceae	*	<i>Centaurea melitensis</i>	Maltese Cockspur	
EX	Asteraceae	*	<i>Chondrilla juncea</i>	Skeleton Weed	
FG	Asteraceae		<i>Chrysocephalum apiculatum</i>	Common Everlasting	
FG	Asteraceae		<i>Chthonocephalus pseudevax</i>	Ground heads	
EX	Asteraceae	*	<i>Conyza bonariensis</i>	Flaxleaf Fleabane	
EX	Asteraceae	*	<i>Conyza sumatrensis</i>	Tall Fleabane	
FG	Asteraceae		<i>Cortula</i> sp.		
FG	Asteraceae		<i>Eclipta platyglossa</i>	-	
FG	Asteraceae		<i>Glossocardia bidens</i>	Cobbler's Tack	
FG	Asteraceae	*	<i>Gnaphalium</i> spp.	-	
EX	Asteraceae	*	<i>Hedypnois rhagadioloides</i>	Cretan Weed	
FG	Asteraceae		<i>Hyalosperma</i> spp.		
FG	Asteraceae		<i>Hyalosperma</i> spp.		
EX	Asteraceae	*	<i>Hypochoeris glabra</i>	Smooth Catsear	
EX	Asteraceae	*	<i>Hypochoeris radicata</i>	Flatweed, Catsear	
FG	Asteraceae		<i>Isoetopsis graminifolia</i>	Grass Cushions	

GF	Family	Exotic	Scientific name	Common Name	T2-MP26
					%
EX	Asteraceae	*	<i>Lactuca serriola</i>	Prickly Lettuce	
FG	Asteraceae		<i>Leiocarpa panaetioides</i>	Wooly Buttons	
FG	Asteraceae		<i>Leiocarpa tomentosa</i>	Wooly Plover-daisy	
FG	Asteraceae		<i>Leontodon rhagadioloides</i>	Cretan Weed	
FG	Asteraceae		<i>Leptorhynchos spp.</i>		
SG	Asteraceae		<i>Olearia pimeleoides</i>	-	
SG	Asteraceae		<i>Olearia romulosa</i>	Twiggy Daisy Bush	
FG	Asteraceae		<i>Picris spp.</i>		
EX	Asteraceae	*	<i>Silybum marianum</i>	Variegated Thistle	
EX	Asteraceae	*	<i>Sonchus oleraceus</i>	Common Sowthistle	
EX	Asteraceae		<i>Stuartina meulleri</i>		
EX	Asteraceae	*	<i>Taraxacum officinale</i>	Dandelion	
FG	Asteraceae		<i>Triptilodiscus pygmaeus</i>	Common Sunray	
FG	Asteraceae		<i>Vittadinia cuneata</i>	Fuzzweed	
HT	Asteraceae	*	<i>Xanthium spinosum</i>	Bathurst Burr	
FG	Asteraceae		<i>Xerochrysum bracteatum</i>	Golden Everlasting	
FG	Asteraceae		<i>Asteraceae sp.</i>		
EX	Boraginaceae	*	<i>Echium plantagineum</i>	Patersons Curse	
EX	Boraginaceae	*	<i>Echium vulgare</i>	Vipers Bugloss	
FG	Boraginaceae		<i>Hackelia suaveolens</i>	-	
HT	Boraginaceae	*	<i>Heliotropium amplexicaule</i>	Blue Heliotrope	
EX	Boraginaceae	*	<i>Heliotropium europaeum</i>	Potato Weed	
EX	Brassicaceae	*	<i>Brassica rapa</i>	Field Mustard	
EX	Brassicaceae	*	<i>Brassica spp.</i>		
HT	Brassicaceae	*	<i>Brassica tournefortii</i>	Mediterranean Turnip	
EX	Brassicaceae	*	<i>Capsella bursa-pastoris</i>	Shepherd's Purse	
EX	Brassicaceae	*	<i>Hirschfeldia incana</i>	Hairy Brassica	
EX	Brassicaceae	*	<i>Lepidium africanum</i>		
EX	Brassicaceae	*	<i>Lepidium bonariense</i>	-	
EX	Brassicaceae	*	<i>Lepidium didymum</i>	Lesser Swinecress	
FG	Brassicaceae		<i>Lepidium hyssopifolium</i>	Basalt peppercress	
FG	Brassicaceae		<i>Lepidium pseudohyssopifolium</i>	Peppercress	
FG	Brassicaceae	*	<i>Lepidium sp.</i>		
EX	Brassicaceae	*	<i>Rapistrum rugosum</i>	Turnip Weed	
EX	Brassicaceae	*	<i>Sisymbrium erysimoides</i>	Smooth Mustard	
EX	Brassicaceae	*	<i>Sisymbrium irio</i>	London Rocket	
HT	Cactaceae	*	<i>Opuntia aurantiaca</i>	Tiger Pear	
HT	Cactaceae	*	<i>Opuntia stricta</i>	Common Prickly Pear	
FG	Campanulaceae		<i>Lobelia concolor</i>	Poison Pratia	
FG	Campanulaceae		<i>Lobelia purpurascens</i>	Whiteroot	
FG	Campanulaceae		<i>Wahlenbergia communis</i>	Tufted Bluebell	
FG	Campanulaceae		<i>Wahlenbergia gracilis</i>	Sprawling Bluebell	
FG	Campanulaceae		<i>Wahlenbergia spp.</i>	A Wahlenbergia species	
FG	Campanulaceae		<i>Wahlenbergia stricta</i>	Australian Bluebell	
SG	Capparaceae		<i>Apophyllum anomalum</i>	Warrior Bush	
SG	Capparaceae		<i>Capparis mitchelli</i>	Wild Orange	
EX	Caryophyllaceae		<i>Cerastium glomeratum</i>	Mouse-ear Chickweed	
EX	Caryophyllaceae	*	<i>Petrorhagia dubia</i>	-	
EX	Caryophyllaceae	*	<i>Petrorhagia nanteuillii</i>	-	
FG	Caryophyllaceae		<i>Polycarpaea corymbosa</i>	-	
SG	Casuarinaceae		<i>Allocauarina diminuta</i>	-	
TG	Casuarinaceae		<i>Allocauarina luehmannii</i>	Bulloak	
SG	Casuarinaceae		<i>Allocauarina spp.</i>		
TG	Casuarinaceae		<i>Casuarina cristata</i>	Belah	
TG	Casuarinaceae		<i>Casuarina pauper</i>	Black Oak	
SG	Celastraceae		<i>Denhamia cunninghamii</i>	-	
EX	Chenopodiaceae	*	<i>Atriplex prostrata</i>	-	
SG	Chenopodiaceae		<i>Atriplex pseudocampanulata</i>	-	
SG	Chenopodiaceae		<i>Atriplex semibaccata</i>	Creeping Saltbush	
EX	Chenopodiaceae	*	<i>Chenopodium album</i>	Fat Hen	
EX	Chenopodiaceae		<i>Chenopodium sp.</i>		

GF	Family	Exotic	Scientific name	Common Name	T2-MP26
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FG	Chenopodiaceae		<i>Dysphania melanocarpa</i>	Black Crumbweed	
FG	Chenopodiaceae	*	<i>Dysphania multifida</i>	Scented Goosefoot	
FG	Chenopodiaceae		<i>Dysphania pumilo</i>	Small Crumbweed	
FG	Chenopodiaceae		<i>Einadia hastata</i>	Berry Saltbush	
FG	Chenopodiaceae		<i>Einadia nutans</i>	Climbing Saltbush	
FG	Chenopodiaceae		<i>Einadia polygonoides</i>	-	
FG	Chenopodiaceae		<i>Einadia trigonos</i>	Fishweed	
SG	Chenopodiaceae		<i>Enchylaena tomentosa</i>	Ruby Saltbush	
SG	Chenopodiaceae		<i>Maireana aphylla</i>	Leafless Bluebush	
FG	Chenopodiaceae		<i>Maireana enchylaenoides</i>	Wingless Bluebush	
SG	Chenopodiaceae		<i>Maireana microphylla</i>	Small-leaf Bluebush	
SG	Chenopodiaceae		<i>Maireana</i> spp.		
SG	Chenopodiaceae		<i>Rhagodia spinescens</i>	Spiny Saltbush	
SG	Chenopodiaceae		<i>Salsola australis</i>	-	
SG	Chenopodiaceae		<i>Salsola kali</i>	-	
SG	Chenopodiaceae		<i>Sclerolaena birchii</i>	Galvanized Burr	
SG	Chenopodiaceae		<i>Sclerolaena divaricata</i>	Tangled Copperburr	
SG	Chenopodiaceae		<i>Sclerolaena muricata</i>	Black Rolypoly	
SG	Chenopodiaceae		<i>Sclerolaena muricata</i> var. <i>villosa</i>	Black Rolypoly	
FG	Commelinaceae		<i>Commelina cyanea</i>	-	
FG	Commelinaceae		<i>Commelina</i> spp.		
OG	Convolvulaceae		<i>Convolvulus erubescens</i>	Blushing Bindweed	
FG	Convolvulaceae		<i>Dichondra repens</i>	Kidney Weed	
HT	Crassulaceae	*	<i>Bryophyllum delagoense</i>	Mother-of-millions	
FG	Crassulaceae		<i>Crassula colorata</i>	-	
FG	Crassulaceae		<i>Crassula</i> spp.		
EX	Cucurbitaceae	*	<i>Citrullus lanatus</i>	Watermelon	
TG	Cupressaceae		<i>Callitris glaucophylla</i>	White Cypress Pine	
GG	Cyperaceae		<i>Baumea</i> spp.		
GG	Cyperaceae		<i>Carex appressa</i>	Tall Sedge	
GG	Cyperaceae		<i>Carex inversa</i>	-	
GG	Cyperaceae		<i>Carex</i> spp.		
GG	Cyperaceae		<i>Cyathochaeta diandra</i>	-	
HT	Cyperaceae	*	<i>Cyperus eragrostis</i>	Umbrella Sedge	
GG	Cyperaceae		<i>Cyperus lucidus</i>	Leafy Flat Sedge	
GG	Cyperaceae		<i>Cyperus</i> spp.		
GG	Cyperaceae		<i>Eleocharis</i> spp.		
GG	Cyperaceae		<i>Eleocharis</i> spp.		
GG	Cyperaceae		<i>Fimbristylis dichotoma</i>	Common Fringe-sedge	
GG	Cyperaceae		<i>Gahnia apsera</i>	Rough Saw-sedge	
GG	Cyperaceae		<i>Lepidosperma laterale</i>	-	
GG	Cyperaceae		<i>Schoenus apogon</i>	Common Bog-rush	
GG	Cyperaceae		<i>Schoenus kennyi</i>	-	
GG	Cyperaceae		<i>Schoenus</i> spp.		
SG	Dilleniaceae		<i>Hibbertia linearis</i>	-	
SG	Dilleniaceae		<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower	
SG	Ericaceae		<i>Brachyloma daphnoides</i>	Daphne Heath	
SG	Ericaceae		<i>Lissanthe strigosa</i>	Peach Heath	
SG	Ericaceae		<i>Melichrus urceolatus</i>	Urn-heath	
SG	Ericaceae		<i>Styphelia triflora</i>	Pink Five-Corners	
SG	Euphorbiaceae		<i>Beyeria viscosa</i>	Pinkwood	
FG	Euphorbiaceae		<i>Euphorbia drummondii</i>	Caustic Weed	
FG	Euphorbiaceae		<i>Euphorbia</i> spp.		
SG	Euphorbiaceae		<i>Ricinocarpos bowmanii</i>	Western Wedding Bush	
SG	Fabaceae		<i>Acacia boormanii</i>	Snowy River Wattle	
TG	Fabaceae		<i>Acacia burrowii</i>	Burrow's Wattle	
TG	Fabaceae		<i>Acacia caroleae</i>	Carol's Wattle	
TG	Fabaceae		<i>Acacia cheelii</i>	Motherumbah	
TG	Fabaceae		<i>Acacia dealbata</i>	Silver Wattle	
SG	Fabaceae		<i>Acacia deanei</i>	Deans Wattle	
SG	Fabaceae		<i>Acacia deanei</i> subsp. <i>deanei</i>	Deane's Wattle	

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SG	Fabaceae		<i>Acacia decora</i>	Western Silver Wattle	
TG	Fabaceae		<i>Acacia decurrens</i>	Black Wattle	
SG	Fabaceae		<i>Acacia hakeoides</i>	Hakea Wattle	
TG	Fabaceae		<i>Acacia harpophylla</i>	Brigalow	
TG	Fabaceae		<i>Acacia homalophylla</i>	Yarran	
SG	Fabaceae		<i>Acacia lineata</i>	Streaked Wattle	
SG	Fabaceae		<i>Acacia mariae</i>	Golden-top Wattle	
SG	Fabaceae		<i>Acacia montana</i>	Mallee Wattle	
SG	Fabaceae		<i>Acacia murrayana</i>	Murray's Wattle	
SG	Fabaceae		<i>Acacia parvipinnula</i>	Silver-stemmed Wattle	
TG	Fabaceae		<i>Acacia pendula</i>	Weeping Myall	
SG	Fabaceae		<i>Acacia penninervis</i>	Mountain Hickory	
SG	Fabaceae		<i>Acacia rubida</i>	Red-stemmed Wattle	
SG	Fabaceae		<i>Acacia spectabilis</i>	Mudgee Wattle	
SG	Fabaceae		<i>Acacia spp.</i>		
SG	Fabaceae		<i>Acacia spp.</i>		
SG	Fabaceae		<i>Acacia stenophylla</i>		
SG	Fabaceae		<i>Acacia triptera</i>	Spurwing Wattle	
SG	Fabaceae		<i>Bossiaea spp.</i>		
SG	Fabaceae		<i>Daviesia ulicifolia</i>	Gorse Bitter Pea	
FG	Fabaceae		<i>Desmodium brachypodum</i>	Large Tick-trefoil	
OG	Fabaceae		<i>Desmodium spp.</i>		
OG	Fabaceae		<i>Desmodium varians</i>	Slender Tick-trefoil	
SG	Fabaceae		<i>Dillwynia sericea</i>	Showy Parrot-pea	
SG	Fabaceae		<i>Dillwynia sp.</i>		
OG	Fabaceae		<i>Glycine clandestina</i>	-	
OG	Fabaceae		<i>Glycine microphylla</i>	Small-leaf Glycine	
OG	Fabaceae		<i>Glycine tabacina</i>	-	
OG	Fabaceae		<i>Hardenbergia violacea</i>	Purple Coral Pea	
SG	Fabaceae		<i>Hovea apiculata</i>	-	
EX	Fabaceae	*	<i>Lotus spp.</i>		
EX	Fabaceae	*	<i>Medicago arabica</i>	Spotted Burr Medic	
EX	Fabaceae	*	<i>Medicago laciniata</i>	Cut-leaved Medic	
EX	Fabaceae	*	<i>Medicago minima</i>	Woolly Burr Medic	
EX	Fabaceae	*	<i>Medicago polymorpha</i>	Burr Medic	
EX	Fabaceae	*	<i>Medicago praecox</i>	Small-leaved Burr Medic	
EX	Fabaceae		<i>Medicago trunculata</i>	Barrel Medic	
FG	Fabaceae		<i>Neptunia gracilis</i>	Native Sensitive Plant	
SG	Fabaceae		<i>Pultenaea microphylla</i>	-	
SG	Fabaceae		<i>Pultenaea microphylla</i>	-	
SG	Fabaceae		<i>Pultenaea sp.</i>		
SG	Fabaceae		<i>Senna artemisioides</i>	Silver Cassia	
FG	Fabaceae		<i>Senna barclayana</i>	Smooth Senna	
SG	Fabaceae		<i>Senna sp.</i>		
FG	Fabaceae		<i>Swainsona galegifolia</i>	Smooth Darling-pea	
EX	Fabaceae	*	<i>Trifolium arvense</i>	Haresfoot Clover	
EX	Fabaceae	*	<i>Trifolium glomeratum</i>	Clustered Clover	
EX	Fabaceae	*	<i>Trifolium sp.</i>		
EX	Fabaceae	*	<i>Trifolium subterraneum</i>	Subterranean Clover	
EX	Fabaceae	*	<i>Vicia spp.</i>		
EX	Geraniaceae	*	<i>Erodium botrys</i>	Long Storksbill	
FG	Geraniaceae		<i>Erodium crinitum</i>	Blue Storksbill	
FG	Goodeniaceae		<i>Brunonia australis</i>		
FG	Goodeniaceae		<i>Goodenia cycloptera</i>	-	
FG	Goodeniaceae		<i>Goodenia fascicularis</i>	-	
FG	Goodeniaceae		<i>Goodenia glabra</i>		
FG	Goodeniaceae		<i>Goodenia hederacea</i>	Forest Goodenia	
FG	Goodeniaceae		<i>Goodenia rotundifolia</i>	-	
FG	Haloragaceae		<i>Gonocarpus elatus</i>		
GG	Juncaceae		<i>Juncus continuus</i>	-	
GG	Juncaceae		<i>Juncus spp.</i>		

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GG	Juncaceae		<i>Juncus subsecundus</i>	-	
FG	Lamiaceae		<i>Ajuga australis</i>	Austral Bugle	
EX	Lamiaceae	*	<i>Marrubium vulgare</i>	White Horehound	
FG	Lamiaceae		<i>Plectranthus parviflorus</i>	Cockspur Flower	
EX	Lamiaceae	*	<i>Salvia reflexa</i>	Mintweed	
EX	Lamiaceae	*	<i>Salvia verbenaca</i>	Vervain	
FG	Lamiaceae		<i>Teucrium betchei</i>	-	
SG	Lamiaceae		<i>Westringia cheelii</i>	-	
OG	Lauraaceae		<i>Cassytha pubescens</i>	-	
GG	Lomandraceae		<i>Lomandra filiformis</i>	Wattle Mat-Rush	
GG	Lomandraceae		<i>Lomandra glauca</i>	Pale Mat-rush	
GG	Lomandraceae		<i>Lomandra leucocephala</i>	Wooly Mat-rush	
GG	Lomandraceae		<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	
GG	Lomandraceae		<i>Lomandra multiflora</i>	Many-flowered Mat-rush	
GG	Lomandraceae		<i>Lomandra spp.</i>		
OG	Loranthaceae		<i>Amyema miquelii</i>	-	
OG	Loranthaceae		<i>Amyema quandang</i>	-	
OG	Loranthaceae		<i>Amyema spp.</i>		
SG	Malvaceae		<i>Abutilon oxycarpum</i>	Straggly Lantern-bush	
SG	Malvaceae		<i>Abutilon spp.</i>		
TG	Malvaceae		<i>Brachychiton populneus</i>	Kurrajong	
EX	Malvaceae	*	<i>Malva parviflora</i>	Small-flowered Mallow	
EX	Malvaceae	*	<i>Malva spp.</i>		
EX	Malvaceae	*	<i>Modiola caroliniana</i>	Red-flowered Mallow	
FG	Malvaceae		<i>Sida corrugata</i>	Corrugated Sida	
FG	Malvaceae		<i>Sida cunninghamii</i>	Ridged Sida	
FG	Malvaceae		<i>Sida hackettiana</i>	Golden Rod	
EX	Malvaceae	*	<i>Sida rhombifolia</i>	Paddy's Lucerne	
EX	Malvaceae	*	<i>Sida spinosa</i>	-	
EX	Malvaceae	*	<i>Sida spp.</i>		
EG	Marsileaceae		<i>Marsilea drummondii</i>	Common Nardoo	
TG	Meliaceae		<i>Melia azedarach</i>	White Cedar	
SG	Myrtaceae		<i>Acacia sp</i>		
TG	Myrtaceae		<i>Angophora floribunda</i>	Rough-barked Apple	
SG	Myrtaceae		<i>Callistemon linearis</i>	Narrow-leaved Bottlebrush	
SG	Myrtaceae		<i>Calytrix tetragona</i>	Common Fringe-myrtle	
TG	Myrtaceae		<i>Corymbia trachyphloia</i>	White Bloodwood	
SG	Myrtaceae		<i>Darwinia spp.</i>		
TG	Myrtaceae		<i>Eucalyptus albens</i>	White Box	
TG	Myrtaceae		<i>Eucalyptus blakelyi</i>	Blakely's Red Gum	
TG	Myrtaceae		<i>Eucalyptus camaldulensis</i>	River Red Gum	
TG	Myrtaceae		<i>Eucalyptus chloroclada</i>	Dirty Gum	
TG	Myrtaceae		<i>Eucalyptus clodacalyx</i>	-	
TG	Myrtaceae		<i>Eucalyptus conica</i>	Fuzzy Box	
TG	Myrtaceae		<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark	
TG	Myrtaceae		<i>Eucalyptus cumaldulensis</i>	-	
TG	Myrtaceae		<i>Eucalyptus dwyeri</i>	-	
TG	Myrtaceae		<i>Eucalyptus fibrosa</i>	Red-Ironbark	
TG	Myrtaceae		<i>Eucalyptus melanophloia</i>	Silver-leaved Ironbark	
TG	Myrtaceae		<i>Eucalyptus melliodora</i>	Yellow Box Gum	
TG	Myrtaceae		<i>Eucalyptus microcarpa</i>	Grey Box Gum	
TG	Myrtaceae		<i>Eucalyptus pilligaensis</i>	Narrow-leaved Grey Box	
TG	Myrtaceae		<i>Eucalyptus populnea</i>	Bimble Box	20
TG	Myrtaceae		<i>Eucalyptus populnea subsp. bimbil</i>	Bimble Box	
TG	Myrtaceae		<i>Eucalyptus sideroxylon</i>	Mugga Ironbark	
TG	Myrtaceae		<i>Eucalyptus spp.</i>		
TG	Myrtaceae		<i>Eucalyptus spp.</i>		
TG	Myrtaceae		<i>Eucalyptus viridis</i>	Green Mallee	
SG	Myrtaceae		<i>Harmogia densifolia</i>	-	
SG	Myrtaceae		<i>Homoranthus flavescens</i>	-	
SG	Myrtaceae		<i>Kunzea parviflora</i>	Violet Kunzea	

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SG	Myrtaceae		<i>Leptospermum polygalifolium</i>	Tantoon	
SG	Myrtaceae		<i>Leptospermum spp.</i>		
SG	Myrtaceae		<i>Melaleuca erubescens</i>	-	
SG	Myrtaceae		<i>Melaleuca uncinata</i>	Broombush	
SG	Myrtaceae		<i>Micromyrtus ciliata</i>	Fringed Heath-myrtle	
SG	Myrtaceae		<i>Micromyrtus sessilis</i>	-	
FG	Nyctaginaceae		<i>Boerhavia dominii</i>	Tarvine	
OG	Oleaceae		<i>Jasminum lineare</i>	Desert Jasmine	
OG	Oleaceae		<i>Jasminum spp.</i>		
TG	Oleaceae		<i>Notelaea microcarpa</i>		
TG	Oleaceae		<i>Notelaea spp.</i>		
EX	Onagraceae	*	<i>Oenothera mollissima</i>	-	
OG	Orchidaceae		<i>Cymbidium canaliculatum</i>	Tiger Orchid	
FG	Orchidaceae		<i>Orchidaceae sp.</i>		
FG	Oxalidaceae		<i>Oxalis chnoodes</i>		
EX	Oxalidaceae	*	<i>Oxalis corniculata</i>	-	
FG	Oxalidaceae		<i>Oxalis exilis</i>	-	
FG	Oxalidaceae		<i>Oxalis perennans</i>	-	
EX	Oxalidaceae	*	<i>Oxalis pes-caprae</i>	-	
FG	Oxalidaceae		<i>Oxalis spp.</i>		
EX	Papaveraceae	*	<i>Fumaria capreolata</i>	Climbing Fumitory	
FG	Phormiaceae		<i>Dianella caerulea</i>	Blue Flax-Lily	
FG	Phormiaceae		<i>Dianella longifolia</i>	Blueberry Lily	
FG	Phormiaceae		<i>Dianella revoluta</i>	Blue Flax-Lily	
FG	Phrymaceae		<i>Elacholoma prostrata</i>	Small Monkey-flower	
FG	Phrymaceae		<i>Mimulus gracilis</i>	Slender Monkey-flower	
FG	Phyllanthaceae		<i>Phyllanthus spp.</i>		
FG	Phyllanthaceae		<i>Phyllanthus virgatus</i>	-	
EX	Plantaginaceae		<i>Plantago sp.</i>		
FG	Plantaginaceae		<i>Plantago turrifera</i>	-	
EX	Poaceae	*	<i>Aira caryophyllea</i>	Silvery Hairgrass	
GG	Poaceae		<i>Anthosachne scabra</i>	Wheatgrass	
GG	Poaceae		<i>Aristida behriana</i>	Bunch Wiregrass	
GG	Poaceae		<i>Aristida jerichoensis</i>	Jericho Wiregrass	
GG	Poaceae		<i>Aristida longicollis</i>	-	
GG	Poaceae		<i>Aristida muricata</i>	-	
GG	Poaceae		<i>Aristida personata</i>	Purple Wire-grass	
GG	Poaceae		<i>Aristida ramosa</i>	Purple Wiregrass	2
GG	Poaceae		<i>Aristida spp.</i>		
GG	Poaceae		<i>Aristida vagans</i>	Threeawn Speargrass	
GG	Poaceae		<i>Astrebla lappacea</i>	Curly Mitchell Grass	
GG	Poaceae		<i>Austrostipa aristiglumis</i>	Plains Grass	
GG	Poaceae		<i>Austrostipa nodosa</i>		
GG	Poaceae		<i>Austrostipa ramosissima</i>	Stout Bamboo Grass	
GG	Poaceae		<i>Austrostipa scabra</i>	Speargrass	0.1
GG	Poaceae		<i>Austrostipa scabra subsp. falcata</i>	-	
GG	Poaceae		<i>Austrostipa scabra subsp. scabra</i>	-	
GG	Poaceae		<i>Austrostipa sp.</i>		
GG	Poaceae		<i>Austrostipa spp.</i>		
GG	Poaceae		<i>Austrostipa verticillata</i>	Slender Bamboo Grass	
EX	Poaceae	*	<i>Avena barbata</i>	Bearded Oats	
EX	Poaceae	*	<i>Avena fatua</i>	Wild Oats	
GG	Poaceae		<i>Bothriochloa decipiens</i>	Red Grass	
GG	Poaceae		<i>Bothriochloa macra</i>	Red Grass	
GG	Poaceae		<i>Bothriochloa spp.</i>		
EX	Poaceae	*	<i>Bromus catharticus</i>	Prairie Grass	
EX	Poaceae	*	<i>Bromus molliformis</i>	Soft Brome	
GG	Poaceae		<i>Bromus spp.</i>		
HT	Poaceae	*	<i>Cenchrus longispinus</i>	Innocent Weed	
GG	Poaceae		<i>Chloris divaricata</i>	Slender Chloris	
HT	Poaceae	*	<i>Chloris gayana</i>	Rhodes Grass	

GF	Family	Exotic	Scientific name	Common Name	T2-MP26
					%
GG	Poaceae		<i>Chloris spp.</i>		
GG	Poaceae		<i>Chloris truncata</i>	Windmill Grass	
GG	Poaceae		<i>Chloris ventricosa</i>	Plump Windmill Grass	
GG	Poaceae		<i>Cymbopogon ambiguus</i>	Scent Grass	
GG	Poaceae		<i>Cynodon dactylon</i>	Couch	
GG	Poaceae		<i>Dactyloctenium radulans</i>	Button Grass	
GG	Poaceae		<i>Dichanthium sericeum</i>	Queensland Bluegrass	
GG	Poaceae		<i>Dichanthium sp.</i>		
GG	Poaceae		<i>Digitaria brownii</i>	Cotton Panic Grass	
GG	Poaceae		<i>Digitaria coenicola</i>	Finger Panic Grass	
GG	Poaceae		<i>Digitaria divaricatissima</i>	Umbrella Grass	
GG	Poaceae		<i>Digitaria spp.</i>		
GG	Poaceae		<i>Echinochloa spp.</i>		
GG	Poaceae		<i>Echinopogon spp.</i>		
GG	Poaceae		<i>Enneapogon avenaceus</i>	Bottle Washers	
GG	Poaceae		<i>Enneapogon nigricans</i>	Nine-awn Grass	
GG	Poaceae		<i>Enneapogon spp.</i>		
GG	Poaceae		<i>Enteropogon acicularis</i>	-	
GG	Poaceae		<i>Eragrostis alveiformis</i>		
GG	Poaceae		<i>Eragrostis australasica</i>	-	
GG	Poaceae		<i>Eragrostis brownii</i>	Brown's Lovegrass	
GG	Poaceae	*	<i>Eragrostis ciliensis</i>	Stinkgrass	
GG	Poaceae		<i>Eragrostis dielsii</i>	Mallee Lovegrass	
GG	Poaceae		<i>Eragrostis elongata</i>	Clustered Lovegrass	
GG	Poaceae		<i>Eragrostis lacunaria</i>	Purple Lovegrass	
GG	Poaceae		<i>Eragrostis leptostachya</i>	Paddock Lovegrass	
EX	Poaceae	*	<i>Eragrostis mexicana</i>	Mexican Lovegrass	
GG	Poaceae		<i>Eragrostis parviflora</i>	Weeping Lovegrass	
GG	Poaceae		<i>Eragrostis setifolia</i>	Bristly Love-grass	
GG	Poaceae		<i>Eragrostis spp.</i>		
GG	Poaceae		<i>Eriachne spp.</i>		
GG	Poaceae		<i>Eriochloa australiensis</i>	-	
GG	Poaceae		<i>Eriochloa pseudoacrotricha</i>	Early Spring Grass	
EX	Poaceae	*	<i>Hordeum leporinum</i>	Barley Grass	
EX	Poaceae	*	<i>Hordeum spp.</i>		
GG	Poaceae		<i>Imperata cylindrica</i>	Blady Grass	
EX	Poaceae	*	<i>Lolium perenne</i>	Perennial Ryegrass	
EX	Poaceae	*	<i>Lolium rigidum</i>	Wimmera Ryegrass	
GG	Poaceae		<i>Panicum effusum</i>	Hairy Panic	0.1
GG	Poaceae		<i>Panicum spp.</i>		
GG	Poaceae		<i>Paspalidium caespitosum</i>	Brigalow Grass	
GG	Poaceae		<i>Paspalidium constrictum</i>	Knottybutt Grass	
GG	Poaceae		<i>Paspalidium jubiflorum</i>	Warrego Grass	
GG	Poaceae		<i>Paspalidium spp.</i>		
HT	Poaceae	*	<i>Paspalum dilatatum</i>	Paspalum	
GG	Poaceae		<i>Phragmites australis</i>	Common Reed	
GG	Poaceae		<i>Poa sieberiana</i>	-	
GG	Poaceae		<i>Poa spp.</i>		
GG	Poaceae		<i>Poaceae sp.</i>		
GG	Poaceae		<i>Rytidosperma bipartitum</i>	Wallaby Grass	
GG	Poaceae		<i>Rytidosperma caespitosum</i>	Ringed Wallaby Grass	
GG	Poaceae		<i>Rytidosperma carphoides</i>	Short Wallaby Grass	
GG	Poaceae		<i>Rytidosperma duttonianum</i>	-	
GG	Poaceae		<i>Rytidosperma fulvum</i>	Wallaby Grass	
GG	Poaceae		<i>Rytidosperma racemosum</i>	-	
GG	Poaceae		<i>Rytidosperma setaceum</i>	Smallflower Wallaby Grass	
GG	Poaceae		<i>Rytidosperma spp.</i>		
GG	Poaceae		<i>Rytidosperma spp.</i>		
EX	Poaceae	*	<i>Setaria parviflora</i>	-	
GG	Poaceae		<i>Setaria spp.</i>	A Setaria species	
HT	Poaceae	*	<i>Sorghum halepense</i>	Johnson Grass	

GF	Family	Exotic	Scientific name	Common Name	T2-MP26
					%
GG	Poaceae		<i>Sporobolus caroli</i>	Fairy Grass	
GG	Poaceae		<i>Sporobolus creber</i>	Western Rat-tail Grass	
GG	Poaceae		<i>Sporobolus spp.</i>		
GG	Poaceae		<i>Themeda triandra</i>	Kangaroo Grass	
GG	Poaceae		<i>Thyridolepis mitchelliana</i>	Mulga Mitchell Grass	
GG	Poaceae		<i>Tragus australianus</i>	Small Burrgrass	
EX	Poaceae	*	<i>Urochloa panicoides</i>	Urochloa Grass	
EX	Poaceae	*	<i>Vulpia bromoides</i>	Squirrel Tail Fescue	
EX	Poaceae	*	<i>Vulpia myuros</i>	Rat's Tail fescue	
GG	Poaceae		<i>Walwhalleya subxerophila</i>	Gilgai Grass	
SG	Polygonaceae		<i>Duma florulenta</i>	Lignum	
EX	Polygonaceae	*	<i>Emex spinosa</i>	-	
EX	Polygonaceae	*	<i>Emex spp.</i>		
FG	Polygonaceae		<i>Persicaria decipiens</i>	Slender Knotweed	
EX	Polygonaceae	*	<i>Polygonum aviculare</i>	Wireweed	
FG	Polygonaceae		<i>Rumex brownii</i>	Swamp Dock	
FG	Polygonaceae		<i>Rumex crystallinus</i>	Shiny Dock	
FG	Portulacaceae		<i>Calandrinia eremaea</i>	-	
FG	Portulacaceae		<i>Portulaca oleracea</i>	Pigweed	
EX	Portulacaceae	*	<i>Portulaca pilosa</i>	Akulikuli	
FG	Portulacaceae		<i>Portulaca spp.</i>		
FG	Portulacaceae		<i>Portulaca spp.</i>		
SG	Proteaceae		<i>Grevillea floribunda</i>	Seven Dwarfs Grevillea	
SG	Proteaceae		<i>Hakea leucoptera</i>	Needlewood	
SG	Proteaceae		<i>Persoonia sericea</i>	-	
EG	Pteridaceae		<i>Cheilanthes distans</i>	Bristly Cloak Fern	
EG	Pteridaceae		<i>Cheilanthes sieberi</i>	-	0.1
OG	Ranunculaceae		<i>Clematis microphylla</i>	Small-leaved Clematis	
SG	Rhamnaceae		<i>Cryptandra amara</i>	Bitter Cryptandra	
SG	Rhamnaceae		<i>Cryptandra spp.</i>		
FG	Rubiaceae		<i>Asperula gemella</i>	Twin-leaved Bedstraw	
EX	Rubiaceae	*	<i>Galium aparine</i>	Goosegrass	
FG	Rubiaceae		<i>Galium gaudichaudii</i>	Rough Bedstraw	
SG	Rubiaceae		<i>Psyrax odorata</i>	Shiny-leaved Canthium	
SG	Rutaceae		<i>Boronia occidentalis</i>	-	
SG	Rutaceae		<i>Geijera parviflora</i>	Wilga	1
SG	Rutaceae		<i>Philotheca brevifolia</i>	-	
SG	Rutaceae		<i>Philotheca ciliata</i>	-	
SG	Santalaceae		<i>Exocarpos spp.</i>		
TG	Sapindaceae		<i>Alectryon oleifolius</i>	Western Rosewood	
TG	Sapindaceae		<i>Atalaya hemiglauca</i>	Whitewood	
SG	Sapindaceae		<i>Dodonaea boronifolia</i>		
SG	Sapindaceae		<i>Dodonaea hetromorpha</i>		
SG	Sapindaceae		<i>Dodonaea spp.</i>		
SG	Sapindaceae		<i>Dodonaea viscosa</i>	Hopbush	
SG	Sapindaceae		<i>Dodonaea viscosa subsp. angustissima</i>	Narrow-leaved Hopbush	
SG	Sapindaceae		<i>Dodonaea viscosa subsp. cuneata</i>	Wedge-leaf hop-bush	
SG	Sapindaceae		<i>Dodonaea viscosa subsp. mucronata</i>	-	
SG	Sapindaceae		<i>Dodonaea viscosa subsp. spatulata</i>	-	
SG	Scrophulariaceae		<i>Eremophila debilis</i>	Winter Apple	
SG	Scrophulariaceae		<i>Eremophila glabra</i>	Tarbush	
SG	Scrophulariaceae		<i>Eremophila longifolia</i>	Berrigan	
SG	Scrophulariaceae		<i>Eremophila mitchellii</i>	Budda	
SG	Scrophulariaceae		<i>Eremophila spp.</i>		
SG	Scrophulariaceae		<i>Myoporum montanum</i>	Western Boobialla	
HT	Solanaceae	*	<i>Cestrum parqui</i>	Green Cestrum	
HT	Solanaceae	*	<i>Lycium ferocissimum</i>	African Boxthorn	
SG	Solanaceae		<i>Lycium spp.</i>		
SG	Solanaceae		<i>Solanum cinereum</i>	Narrawa Burr	
SG	Solanaceae		<i>Solanum erianthum</i>	Potato Tree	
FG	Solanaceae		<i>Solanum esuriale</i>	Quena	

GF	Family	Exotic	Scientific name	Common Name	T2-MP26
					%
SG	Solanaceae		<i>Solanum ferocissimum</i>	Spiny Potato Bush	
EX	Solanaceae	*	<i>Solanum nigrum</i>	Black-berry Nightshade	
SG	Thymelaeaceae		<i>Pimelea linifolia</i>	Slender Rice Flower	
SG	Thymelaeaceae		<i>Pimelea microcephala</i>	Shrubby Rice-flower	
SG	Thymelaeaceae		<i>Pimelea neo-anglica</i>	Poison Pimelea	
SG	Thymelaeaceae		<i>Pimelea spp.</i>		
EX	Urticaceae	*	<i>Urtica urens</i>	Small Nettle	
EX	Verbenaceae	*	<i>Glandularia aristigera</i>	Mayne's Pest	
HT	Verbenaceae	*	<i>Phyla canescens</i>	-	
HT	Verbenaceae	*	<i>Phyla nodiflora</i>	Lippia	
EX	Verbenaceae	*	<i>Verbena bonariensis</i>	Purpletop	
EX	Verbenaceae	*	<i>Verbena officinalis</i>	Common Verbena	
OG	Xanthorrhoeaceae		<i>Xanthorrhoea acaulis</i>	-	
OG	Zamiaceae		<i>Macrozamia glaucophylla</i>	-	
FG	Zygophyllaceae		<i>Tribulus micrococcus</i>	Yellow Vine	
EX	Zygophyllaceae	*	<i>Tribulus terrestris</i>	Caltrop	

Table E1 Weed species recorded in survey plots

Common name <i>Scientific Name</i>	WoNS (CoA 2017)	Priority weed	Biosecurity Duty (NSW WeedWise)	High Threat Exotic	Location (plot number)
Khaki Weed <i>Alternanthera pungens</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	Yes	T1-P1, T1-P2, T1-P8, T2-P1
Greater Beggars Ticks <i>Bidens subalternans</i>	No	No	N/A	Yes	T2-P18
Mediterranean Turnip <i>Brassica tournefortii</i>	No	No	N/A	Yes	T2-P14
Mother-of-Millions <i>Bryophyllum delagoense</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Regional Recommended Measure* Land managers should mitigate the risk of new weeds being introduced to their land. Land managers should mitigate spread from their land. The plant should not be bought, sold, grown, carried or released into the environment.	Yes	T1-P5, T2-P4, T2-P5
Saffron Thistle <i>Carthamus lanatus</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	Yes	T1-P22, T1-P23, T2-P3, T2-P10, T2-P16, T2-P20, T2-P22, T2-P26, T2-P28, T2-P29, T1-MP38, T2-MP24

Common name <i>Scientific Name</i>	WoNS (CoA 2017)	Priority weed	Biosecurity Duty (NSW WeedWise)	High Threat Exotic	Location (plot number)
Innocent Weed <i>Cenchrus longispinus</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Regional Recommended Measure* Land managers should mitigate the risk of new weeds being introduced to their land. Land managers should mitigate spread from their land. The plant should not be bought, sold, grown, carried or released into the environment.	Yes	T1-P4, T1-P6, T2-P10
Green Cestrum <i>Cestrum parqui</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Regional Recommended Measure* Whole of region: The plant should not be bought, sold, grown, carried or released into the environment. Exclusion zone: Land managers should mitigate the risk of new weeds being introduced to their land; land managers should mitigate spread from their land; the plant should be eradicated from the land and the land kept free of the plant. Core infestation: Land managers reduce impacts from the plant on priority assets.	Yes	T1-P25
Rhodes Grass <i>Chloris gayana</i>	No	No	N/A	Yes	T1-P9
Fleabane species <i>Conyza bonariensis</i> <i>Conyza sumatrensis</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	No	T2-P15, T2-P16
Umbrella Sedge <i>Cyperus eragrostis</i>	No	No	N/A	Yes	T1-P4

Common name <i>Scientific Name</i>	WoNS (CoA 2017)	Priority weed	Biosecurity Duty (NSW WeedWise)	High Threat Exotic	Location (plot number)
Patersons Curse <i>Echium plantagineum</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	No	T1-P10, T1-P18, T1-P24, T1-P25, T2-P15, T2-P16, T2-P18, T2-P20, T2-P28
Blue Heliotrope <i>Heliotropium amplexicaule</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable Regional Recommended Measure* Whole region: The plant should not be bought, sold, grown, carried or released into the environment. Exclusion zone: The plant should be eradicated from the land and the land kept free of the plant. Land managers should mitigate the risk of the plant being introduced to their land. Core infestation area: Land managers should reduce impacts from the plant on priority assets. Land managers should mitigate the risk of the plant being introduced to their land.	Yes	T1-P10, T1-P22, T1-P23
African Boxthorn <i>Lycium ferocissimum</i>	Yes	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Prohibition on dealings Must not be imported into the State or sold Regional Recommended Measure* Land managers mitigate the risk of the plant spreading from their land. Land managers reduce impact of plant on priority assets (riparian areas and floodplains).	Yes	T1-P2, T1-P7, T1-P8, T1-P12, T1-P18, T1-P19, T1-P21, T2-P1, T2-P21, T2-P24, T2-P2, T2-P27, T2-P35, T2-P36, T2-MP23, T2-MP2

Common name <i>Scientific Name</i>	WoNS (CoA 2017)	Priority weed	Biosecurity Duty (NSW WeedWise)	High Threat Exotic	Location (plot number)
White Horehound <i>Marrubium vulgare</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	No	T1-P9, T1-P13, T1-P24, T1-P25, T2-P35, T2-P36
Tiger Pear <i>Opuntia aurantiaca</i>	Yes	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Prohibition on dealings Must not be imported into the State or sold Regional Recommended Measure* Whole region: Land managers should mitigate the risk of new weeds being introduced to their land. Core infestations: Land managers should mitigate spread from their land.	Yes	T1-P10, T1-P12, T1-P15, T2-P5, T2-P7, T2-P8, T2-P14, T2-P15, T2-P16, T1-MP29, T1-MP30, T1-MP32, T2-MP11, T2-MP12, T2-MP13, T2-MP14, T2-MP16, T2-MP17, T2-MP18, T2-MP2
Common Prickly Pear <i>Opuntia stricta</i>	Yes	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Prohibition on dealings Must not be imported into the State or sold Regional Recommended Measure* Whole region: Land managers should mitigate the risk of new weeds being introduced to their land. Core infestations: Land managers should mitigate spread from their land.	Yes	T1-P3, T1-P4, T1-P5, T1-P8, T1-P15, T2-P4, T2-P14, T2-P15, T2-P33, T1-MP24
Paspalum <i>Paspalum dilatatum</i>	No	No		Yes	T1-P25, T2-P35, T2-P36

Common name <i>Scientific Name</i>	WoNS (CoA 2017)	Priority weed	Biosecurity Duty (NSW WeedWise)	High Threat Exotic	Location (plot number)
Lippia <i>Phyla canescens</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable	Yes	T2-P1
Lippia <i>Phyla nodiflora</i>	No	No	N/A	Yes	T1-P2
Mintweed <i>Salvia reflexa</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable	No	T2-P2, T2-MP2
Johnson Grass <i>Sorghum halepense</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable. Regional Recommended Measure* Land managers should mitigate the risk of new weeds being introduced to their land. Land managers should mitigate spread from their land. The plant should not be bought, sold, grown, carried or released into the environment.	Yes	T2-P4
Bathurst Burr <i>Xanthium spinosum</i>	No	Yes	General Biosecurity Duty All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	Yes	T1-P2, T2-P1

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TECHNICAL REPORT

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Biodiversity development assessment report

Appendix F Fauna survey results

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



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Table F1 Fauna survey results

KEY: F traces (feathers etc), K dead, O observed, P scats, Q camera, T trapped, W heard

D Definite (Anabat), PR probable (Anabat)

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
FROGS								
<i>Litoria latopalmata</i>	Broad-palmed Frog				O	O	W	O
<i>Litoria rubella</i>	Desert Tree Frog				O		W	O
<i>Crinia parinsignifera</i>	Eastern Sign-bearing Froglet				OW	W	W	
<i>Litoria peronii</i>	Emerald-spotted Tree Frog				O		W	O
<i>Limnodynastes interioris</i>	Giant Banjo Frog				O			
<i>Litoria caerulea</i>	Green Tree Frog				W			
<i>Limnodynastes fletcheri</i>	Long-thumbbed Frog							O
<i>Platyplectrum ornatum</i>	Ornate Burrowing Frog				T		T	O
<i>Limnodynastes tasmaniensis</i>	Spotted Grass Frog				O	W	W	O
<i>Neobatrachus sudelli</i>	Sudell's Frog				O			
BIRDS								
<i>Barnardius zonarius barnardi</i>	Australian Mallee Ringneck				O	O	O	
<i>Struthidea cinerea</i>	Apostlebird				OQ	O	O	O
<i>Anhinga novaehollandiae</i>	Australasian Darter				O			O
<i>Cracticus tibicen</i>	Australian Magpie				O	O	O	O
<i>Aegotheles cristatus</i>	Australian owl-nightjar				W		O	W
<i>Pelecanus conspicillatus</i>	Australian Pelican				O			
<i>Corvus coronoides</i>	Australian Raven				O	O	O	O
<i>Acrocephalus australis</i>	Australian Reed-Warbler							W
<i>Barnardius zonarius</i>	Australian Ringneck				O		O	O
<i>Chenonetta jubata</i>	Australian Wood Duck				O			O
<i>Falco subniger</i>	Black Falcon		V					O
<i>Milvus migrans</i>	Black Kite				O			O
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)		V		O		O	

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike				O	O		O
<i>Elseya melanops</i>	Black-fronted Dotterel							O
<i>Elanus axillaris</i>	Black-shouldered Kite					O		O
<i>Northiella haematogaster</i>	Blue Bonnet				O	O		O
<i>Entomyzon cyanotis</i>	Blue-faced Honeyeater				O	O		
<i>Falco berigora</i>	Brown Falcon				O	O		O
<i>Lichmera indistincta</i>	Brown Honeyeater					O		
<i>Coturnix ypsilophora</i>	Brown Quail							O
<i>Cincloramphus cruralis</i>	Brown songlark							O
<i>Acanthiza pusilla</i>	Brown Thornbill						O	
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)		V				OQ	
<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater						O	O
<i>Acanthiza reguloides</i>	Buff-rumped Thornbill				O		O	O
<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo					W		
<i>Acanthiza uropygialis</i>	Chestnut-rumped Thornbill				O		O	
<i>Nymphicus hollandicus</i>	Cockatiel				O	O	O	O
<i>Phaps chalcoptera</i>	Common Bronzewing				O	O	O	
<i>Sturnus tristis</i>	Common Myna	*						O
<i>Sturnus vulgaris</i>	Common Starling	*			O			O
<i>Ocyphaps lophotes</i>	Crested Pigeon				O	O	O	O
<i>Eurystomus orientalis</i>	Dollarbird					O		O
<i>Taeniopygia bichenovii</i>	Double-barred Finch				O		W	O
<i>Tyto javanica</i>	Eastern Barn Owl				O		O	O
<i>Platycercus eximius</i>	Eastern Rosella				O	O	O	O
<i>Falcunculus frontatus frontatus</i>	Eastern Shrike-tit						O	
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill							W
<i>Eopsaltria australis</i>	Eastern Yellow Robin				O		OQ	O
<i>Dromaius novaehollandiae</i>	Emu					O	OQ	O
<i>Petrochelidon ariel</i>	Fairy Martin				Nest			O

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo				W			
<i>Petroica phoenicea</i>	Flame Robin		V					
<i>Todiramphus macleayii</i>	Forest Kingfisher				O		O	O
<i>Apus pacificus</i>	Fork-tailed Swift			C,J,K	O			
<i>Eolophus roseicapillus</i>	Galah				O	O	O	O
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo		V				O	O
<i>Cracticus torquatus</i>	Grey Butcherbird				O	O	O	O
<i>Rhipidura albiscapa</i>	Grey Fantail				O	O	O	O
<i>Colluricincla harmonica</i>	Grey Shrike-thrush				O	O	O	O
<i>Anas gracilis</i>	Grey Teal							O
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)		V		O	O	O	O
<i>Coracina maxima</i>	Ground Cuckoo-shrike				X			
<i>Chalcites basalis</i>	Horsfield's Bronze-Cuckoo						W	
<i>Passer domesticus</i>	House Sparrow	*				O		
<i>Acanthiza apicalis</i>	Inland Thornbill				O	O	W	O
<i>Microeca fascinans</i>	Jacky Winter				O	O	O	
<i>Dacelo novaeguineae</i>	Laughing Kookaburra				O	O	O	
<i>Myiagra rubecula</i>	Leaden Flycatcher						O	O
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant				O	O		O
<i>Cacatua sanguinea</i>	Little Corella				O			O
<i>Philemon citreogularis</i>	Little Friarbird				O		O	O
<i>Microcarbo melanoleucos</i>	Little Pied Cormorant				O			
<i>Corvus mellori</i>	Little Raven				O			
<i>Grallina cyanoleuca</i>	Magpie-lark				O	O	O	O
<i>Artamus personatus</i>	Masked Woodswallow				O			
<i>Dicaeum hirundinaceum</i>	Mistletoebird						O	O
<i>Falco cenchroides</i>	Nankeen Kestrel				O	O		O
<i>Nycticorax caledonicus</i>	Nankeen Night Heron							O

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Philemon corniculatus</i>	Noisy Friarbird				O		O	O
<i>Manorina melanocephala</i>	Noisy Miner				O	O	O	O
<i>Oriolus sagittatus</i>	Olive-backed Oriole							O
<i>Anas superciliosa</i>	Pacific Black Duck				O		X	O
<i>Platycercus adscitus</i>	Pale-headed Rosella							O
<i>Geopelia striata</i>	Peaceful Dove				O	O	O	O
<i>Cracticus nigrogularis</i>	Pied Butcherbird				O	O	OQ	O
<i>Strepera graculina</i>	Pied Currawong				O	O	O	O
<i>Merops ornatus</i>	Rainbow Bee-eater			Ma				O
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet							x
<i>Todiramphus pyrrhopygius</i>	Red-backed Kingfisher							O
<i>Neochmia temporalis</i>	Red-Browed Finch							O
<i>Petroica goodenovii</i>	Red-capped Robin				O	O	O	
<i>Psephotus haematonotus</i>	Red-rumped Parrot				O	O	O	O
<i>Aprosmictus erythropterus</i>	Red-winged Parrot					O	X	
<i>Myiagra inquieta</i>	Restless Flycatcher						O	
<i>Columba livia</i>	Rock Dove	*						O
<i>Cincloramphus mathewsi</i>	Rufous Songlark					O	O	
<i>Pachycephala rufiventris</i>	Rufous Whistler				O	O	O	O
<i>Todiramphus sanctus</i>	Sacred Kingfisher				O			
<i>Myiagra cyanoleuca</i>	Satin Flycatcher					O		
<i>Chalcites lucidus</i>	Shining Bronze-Cuckoo							W
<i>Zosterops lateralis</i>	Silvereye							O
<i>Gavicalis virescens</i>	Singing Honeyeater					O		
<i>Ninox novaeseelandiae</i>	Southern Boobook				OW		W	O
<i>Chthonicola sagittata</i>	Speckled Warbler		V					O
<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater				O		O	
<i>Ptilonorhynchus maculatus</i>	Spotted Bowerbird						O	
<i>Circus assimilis</i>	Spotted Harrier		V		O			

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Pardalotus punctatus</i>	Spotted Pardalote					W	W	
<i>Threskiornis spinicollis</i>	Straw-necked Ibis							O
<i>Pardalotus striatus</i>	Striated Pardalote				O	O	W	O
<i>Acanthiza lineata</i>	Striated Thornbill						O	O
<i>Plectorhyncha lanceolata</i>	Striped Honeyeater				O		O	
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo				O	O	O	O
<i>Malurus cyaneus</i>	Superb Fairy-wren				O	O	O	O
<i>Polytelis swainsonii</i>	Superb Parrot		V	V		O		
<i>Podargus strigoides</i>	Tawny Frogmouth				O	O	O	O
<i>Megalurus timoriensis</i>	Tawny Grassbird							O
<i>Petrochelidon nigricans</i>	Tree Martin				O			O
<i>Accipiter sp.</i>	Unidentified goshawk						Feathers	
<i>Climacteris sp.</i>	unidentified treecreeper							O
<i>Daphoenositta chrysoptera</i>	Varied sittella		V		O		O	
<i>Malurus lamberti</i>	Variegated Fairy-wren					O	O	O
<i>Aquila audax</i>	Wedge-tailed Eagle				O	O	X	
<i>Smicromnis brevirostris</i>	Weebill				W	O	W	O
<i>Hirundo neoxena</i>	Welcome Swallow				O	O		O
<i>Gerygone fusca</i>	Western Gerygone				O	W	W	O
<i>Haliastur sphenurus</i>	Whistling Kite						O	O
<i>Coracina papuensis</i>	White-bellied Cuckoo-shrike							O
<i>Artamus leucorhynchus</i>	White-breasted Woodswallow				O			O
<i>Artamus superciliosus</i>	White-browed Woodswallow				O	O	O	
<i>Nesoptilotis leucotis</i>	White-eared Honeyeater				O		O	O
<i>Egretta novaehollandiae</i>	White-faced Heron				OQ	O		
<i>Ardea pacifica</i>	White-necked Heron				O			O
<i>Ptilotula penicillatus</i>	White-plumed Honeyeater				O	O	O	O
<i>Gerygone olivacea</i>	White-throated Gerygone				O			W
<i>Melithreptus albugularis</i>	White-throated Honeyeater							

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Cormobates leucophaea</i>	White-throated Treecreeper				O		O	O
<i>Corcorax melanorhamphos</i>	White-winged Chough				O	O	O	O
<i>Lalage sueurii</i>	White-winged Triller				O	O	O	
<i>Rhipidura leucophrys</i>	Willie Wagtail				O	O	O	O
<i>Acanthiza nana</i>	Yellow Thornbill				O	O	O	O
<i>Platalea flavipes</i>	Yellow-billed Spoonbill				O			
<i>Caligavis chrysops</i>	Yellow-faced honeyeater							
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill				O	O		O
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black-cockatoo							
<i>Manorina flavigula</i>	Yellow-throated Miner							
<i>Lichenostomus melanops</i>	Yellow-tufted Honeyeater				O			
<i>Taeniopygia guttata</i>	Zebra Finch				O			O
MAMMALS								
<i>Lepus capensis</i>	Brown Hare	*			O	O		O
<i>Felis catus</i>	Cat	*					O	
<i>Chalinolobus morio</i>	Chocolate Wattled Bat						D	D
<i>Trichosurus vulpecula</i>	Common Brushtail Possum				OP	OP	OP	OP
<i>Sminthopsis murina</i>	Common Dunnart							
<i>Macropus robustus</i>	Common Wallaroo					O		
<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat		V	V			T	
<i>Canis lupus familiaris</i>	Dog	*						F
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing Bat		V		PR	PR		
<i>Scotorepens orion</i>	Eastern Broad-nosed Bat						T, PR	
<i>Falsistrellus tasmaniensis</i>	eastern Falsistrelle		V				PR	
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat		V					PR
<i>Macropus giganteus</i>	Eastern Grey Kangaroo				O	O	O	O
<i>Vulpes vulpes</i>	Fox	*				O	Q	OP
<i>Petaurus sp.</i>	glider						F	
<i>Capra hircus</i>	Goat	*			O		O	

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat				DT	D	D	D
<i>Mus musculus</i>	House Mouse	*			T			K
<i>Scotorepens balstoni</i>	Inland Broad-nosed Bat				PR	D	TD	PR
<i>Vespadelus baverstocki</i>	Inland Forest Bat		V				PR	
<i>Phascolarctos cinereus</i>	Koala		V	V			P	P
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat		V	V			PR	
<i>Nyctophilus geoffroyi</i>	Lesser Long-eared Bat				T		T	
<i>Scotorepens greyii</i>	Little Broad-nosed Bat				D	D	D	D
<i>Vespadelus vulturnus</i>	Little Forest Bat				T	D	T, D	D
<i>Chalinolobus picatus</i>	Little Pied Bat		V		PR	PR	D	Pr
<i>Pteropus scapulatus</i>	Little Red Flying-fox							KO
<i>Nyctophilus sp.</i>	long-eared bat							D
<i>Mormopterus lumsdenae</i>	Northern Freetail-bat		V				D	
<i>Sus scrofa</i>	Pig	*				K	F	OF
<i>Oryctolagus cuniculus</i>	Rabbit	*			O	O		O
<i>Macropus rufus</i>	Red Kangaroo				O	OP	P	
<i>Macropus rufogriseus</i>	Red-necked Wallaby						OQ	
<i>Mormopterus ozimops ridei</i>	Ride's Freetail-bat				D			D
<i>Ovis aries</i>	Sheep (feral)	*					O	
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna				O	O	O	OF
<i>Vespadelus regulus</i>	Southern Forest Bat				PRT	PR	T	
<i>Petaurus norfolcensis</i>	Squirrel Glider		V				O	
<i>Petaurus breviceps</i>	Sugar Glider							O
<i>Wallabia bicolor</i>	Swamp Wallaby				O			
<i>Isoodon/Perameles sp.</i>	Unidentified Bandicoot						F	F
<i>Austronomus australis</i>	White-striped Freetail-Bat				D	D	D	D
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheathtail-Bat		V		D		D	D
<i>Antechinus flavipes</i>	Yellow-footed Antechinus				P	T	T	

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
REPTILES								
<i>Carlia sp.</i>	Skink				O			OO
<i>Cryptoblepharus sp.</i>	Skink							O
<i>Eulamprus tenuis</i>	Barred-sided Skink							O
<i>Pogona barbata</i>	Bearded Dragon				O	O	T	O
<i>Ctenotus allotropis</i>	Brown-blazed Wedgesnout Ctenotus						O	
<i>Lialis burtonis</i>	Burton's Snake-lizard						O	
<i>Heteronotia binoei</i>	Bynoe's Gecko				O	O	T	O
<i>Menetia greyii</i>	Common Dwarf Skink				O	O		
<i>Morelia spilota spilota</i>	Diamond Python				K			
<i>Gehyra dubia</i>	Dubious Dtella							
<i>Tiliqua scincoides</i>	Eastern Blue-tongue				O			
<i>Lerista punctatovittata</i>	Eastern Robust Slider							O
<i>Chelodina longicollis</i>	Eastern Snake-necked turtle				O			O
<i>Strophurus williamsi</i>	Eastern Spiny-tailed Gecko						O	
<i>Varanus gouldii</i>	Gould's Goanna				F		OFQ	x
<i>Hemidactylus frenatus</i>	House Gecko	*						O
<i>Amphibolurus muricatus</i>	Jacky Lizard							
<i>Varanus varius</i>	Lace Monitor				O	O	Q	O
<i>Diporiphora nobbi</i>	Nobbi Dragon						T	T
<i>Oedura monilis</i>	Ocellated Velvet Gecko						O	O
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake		V				O	
<i>Cryptoblepharus pannosus</i>	Ragged Snake-eyed Skink				OO			OOO
<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake				O			
<i>Tiliqua rugosa</i>	Shingle-back				O			
<i>Morethia boulengeri</i>	South-eastern Morethia Skink						O	O
<i>Carlia tetradactyla</i>	Southern Rainbow-skink					?	T	
<i>Strophurus intermedius</i>	Southern Spiny-tailed Gecko					O		O
<i>Lerista timida</i>	Timid Slider						T	

Scientific Name	Common Name	Exotic	NSW Status	EPBC Status	Narromine-Curban	Curban - Pilliga	Pilliga	Pilliga-Narrabri
<i>Diporiphora australis</i>	Tommy Roundhead						T	
<i>Gehyra variegata</i>	Tree Dtella						TO	O
<i>Egernia striolata</i>	Tree Skink				T		T	O
<i>Diplodactylus vittatus</i>	Wood Gecko						O	
<i>Demansia psammophis</i>	Yellow-faced Whip Snake				O			

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TECHNICAL REPORT

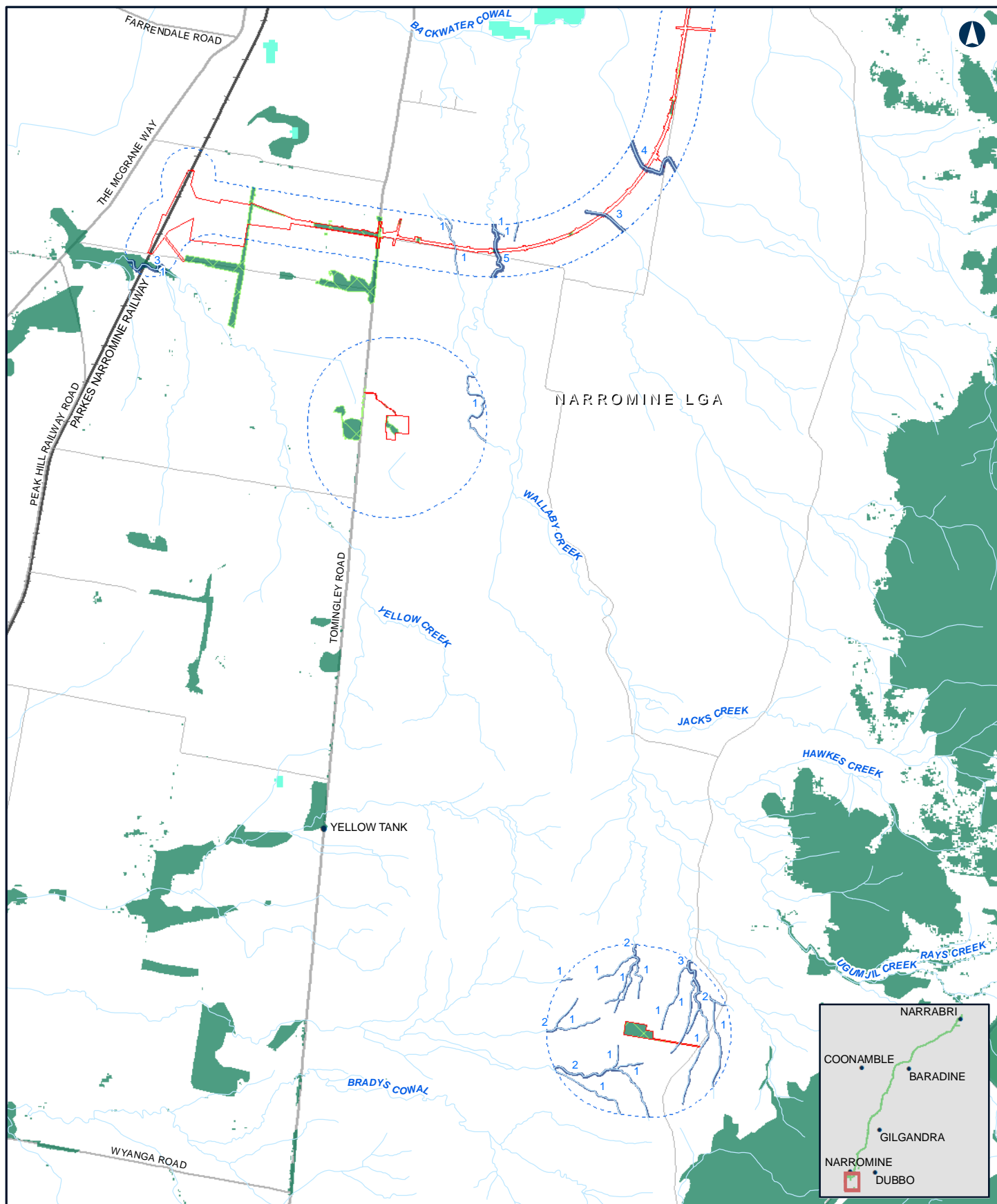
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Biodiversity development assessment report

Appendix G Landscape features and vegetation zone maps by segment

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT





NARROMINE TO NARRABRI

Landscape Features

Map 1 of 15

0 1 2
Km

Coordinate System: GDA 1994 MGA Zone 55

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Paper: A4

Author: JacobsGHD

Scale: 1:100,000

Data Sources: Wetlands, vegetation: OEH;

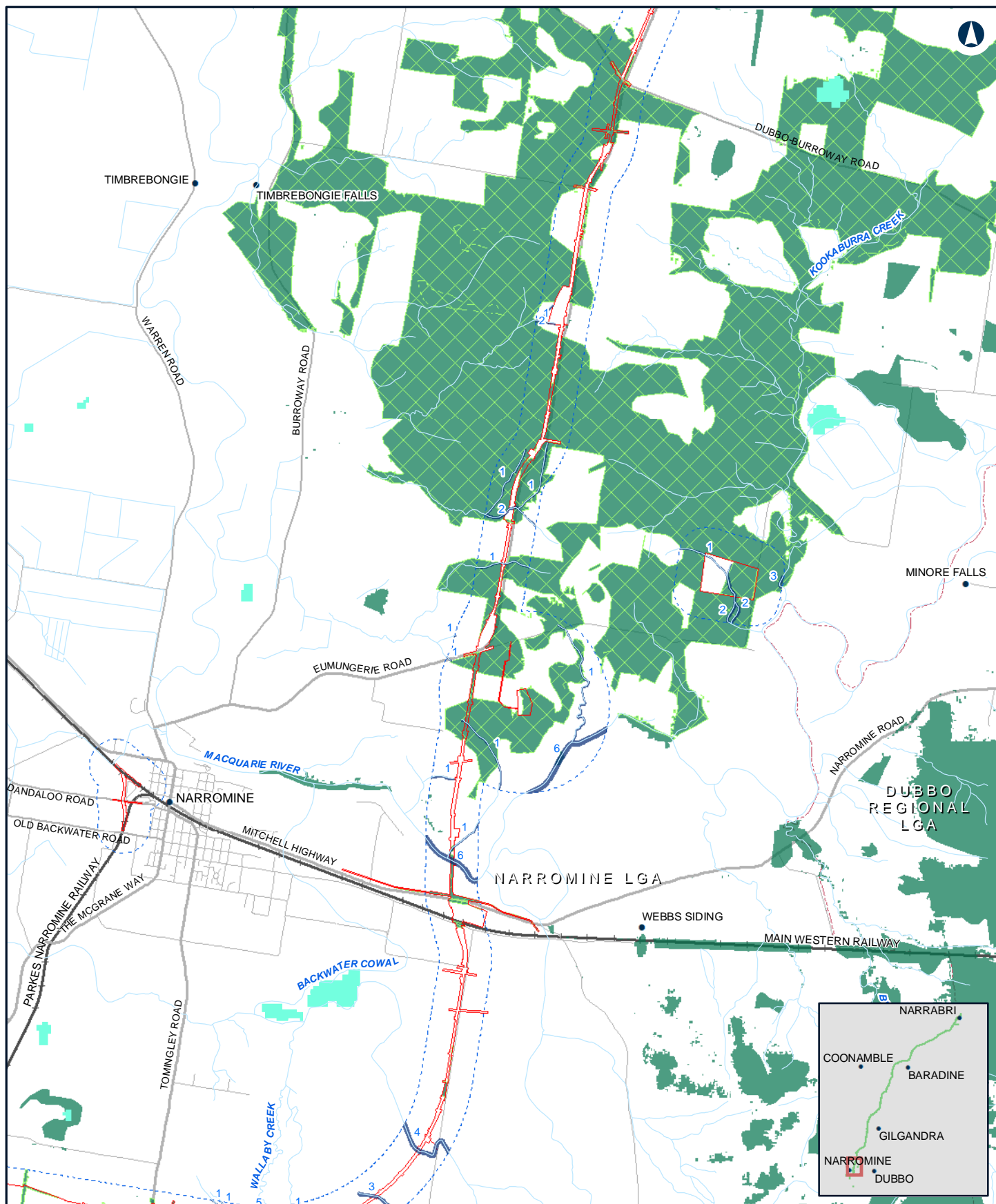
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Wetlands NSW
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 2 of 15

0 1 2
Km

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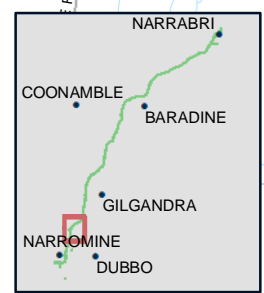
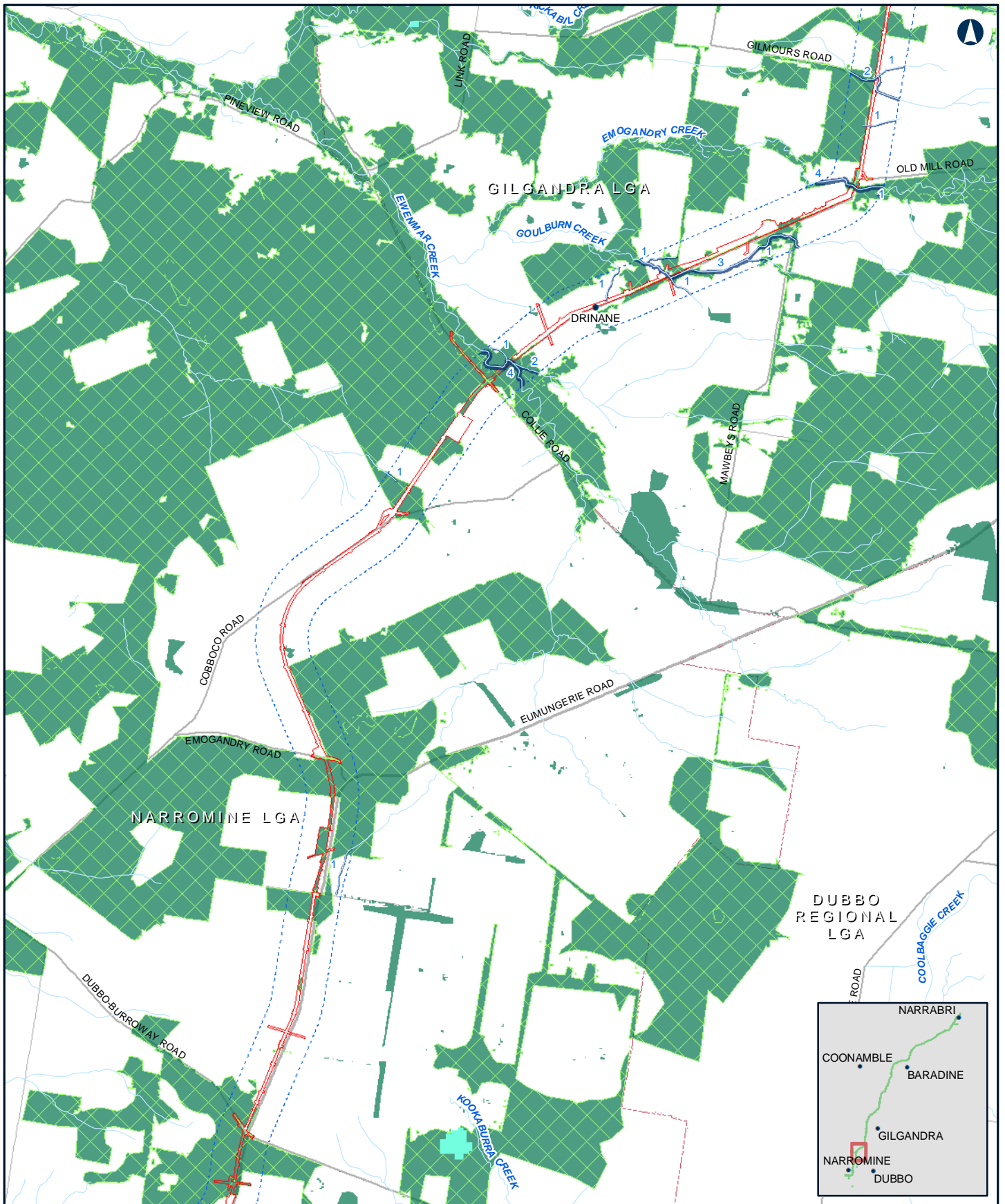
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Wetlands NSW
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 3 of 15



Coordinate System: GDA 1994 MGA Zone 55

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 Author: JacobsGHD
 Data Sources: Wetlands, vegetation: OEH;
 Basemap layers: NSWSS;

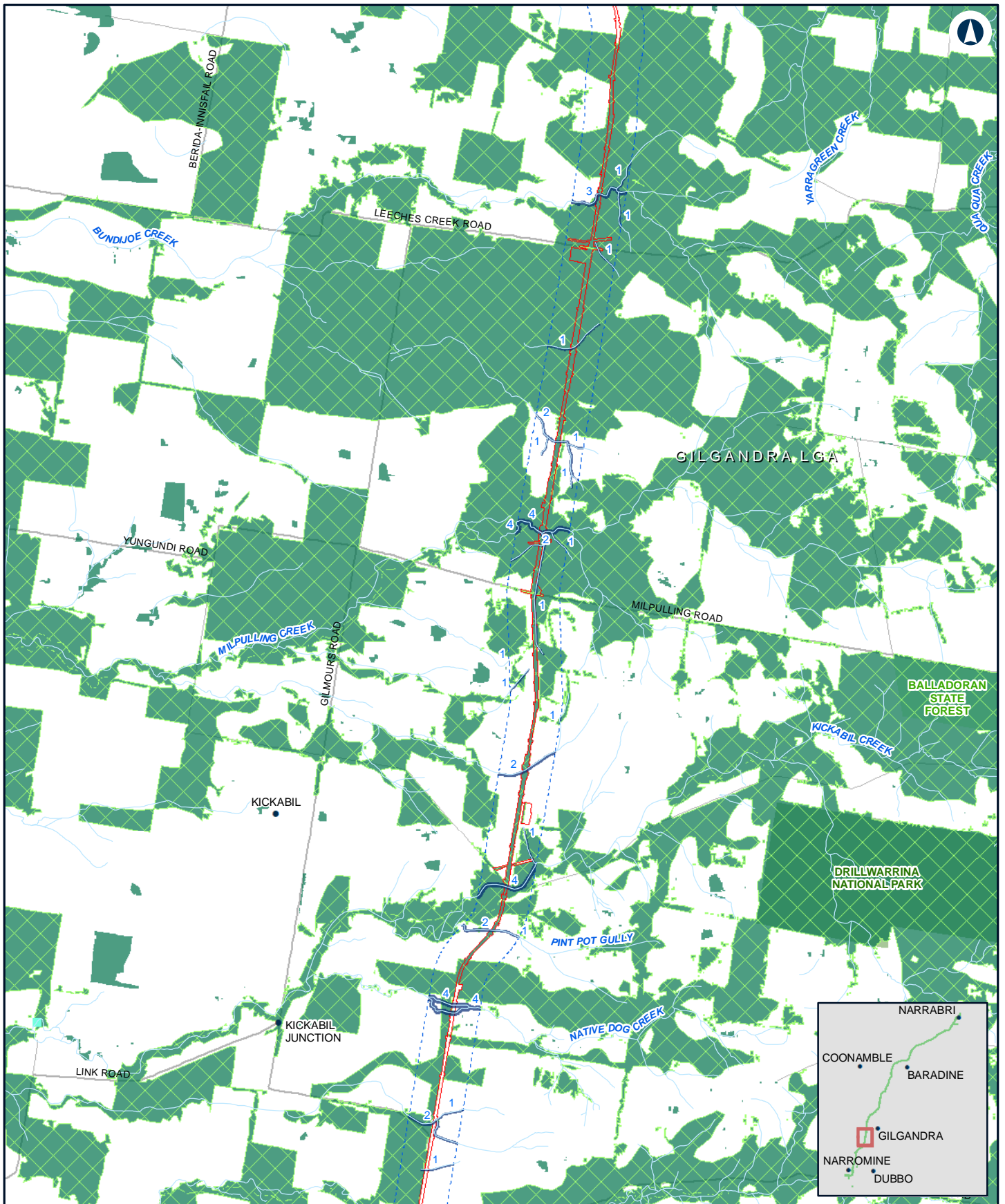
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LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Wetlands NSW
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 4 of 15

0 1 2
Km

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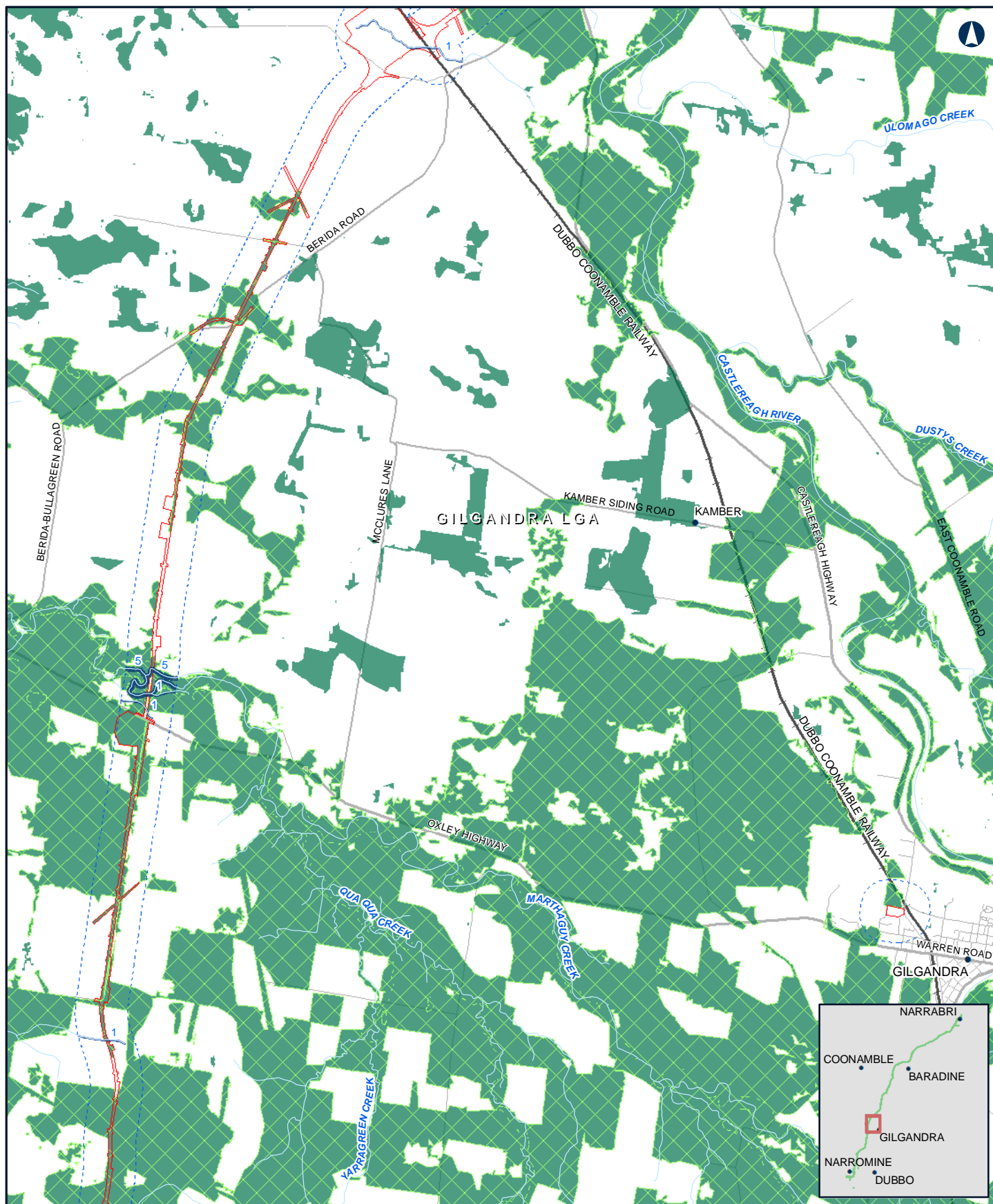
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Wetlands NSW
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 5 of 15

0 1 2
Km

Coordinate System: GDA 1994 MGA Zone 55

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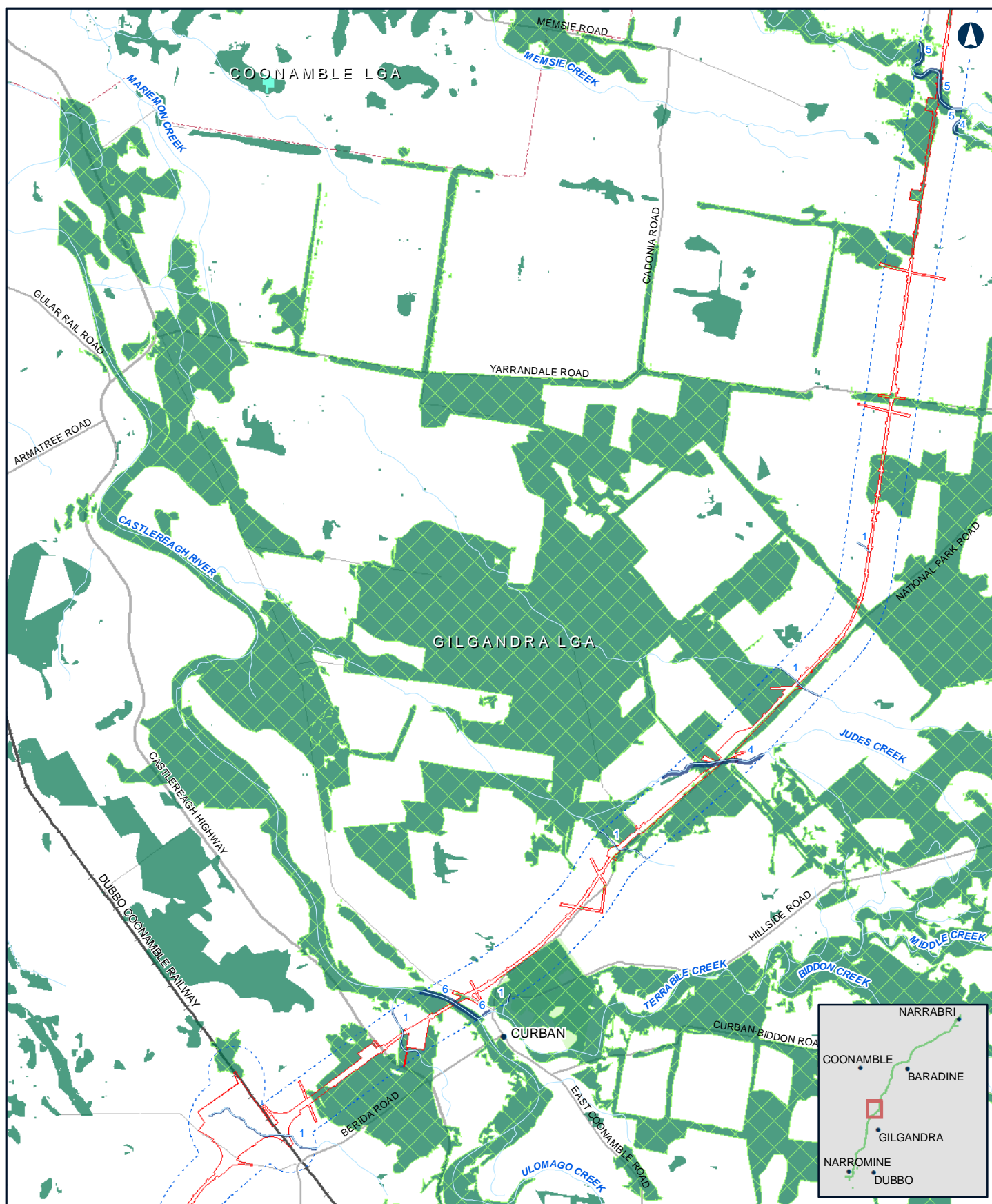
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 6 of 15

0 1 2
Km

Coordinate System: GDA 1994 MGA Zone 55

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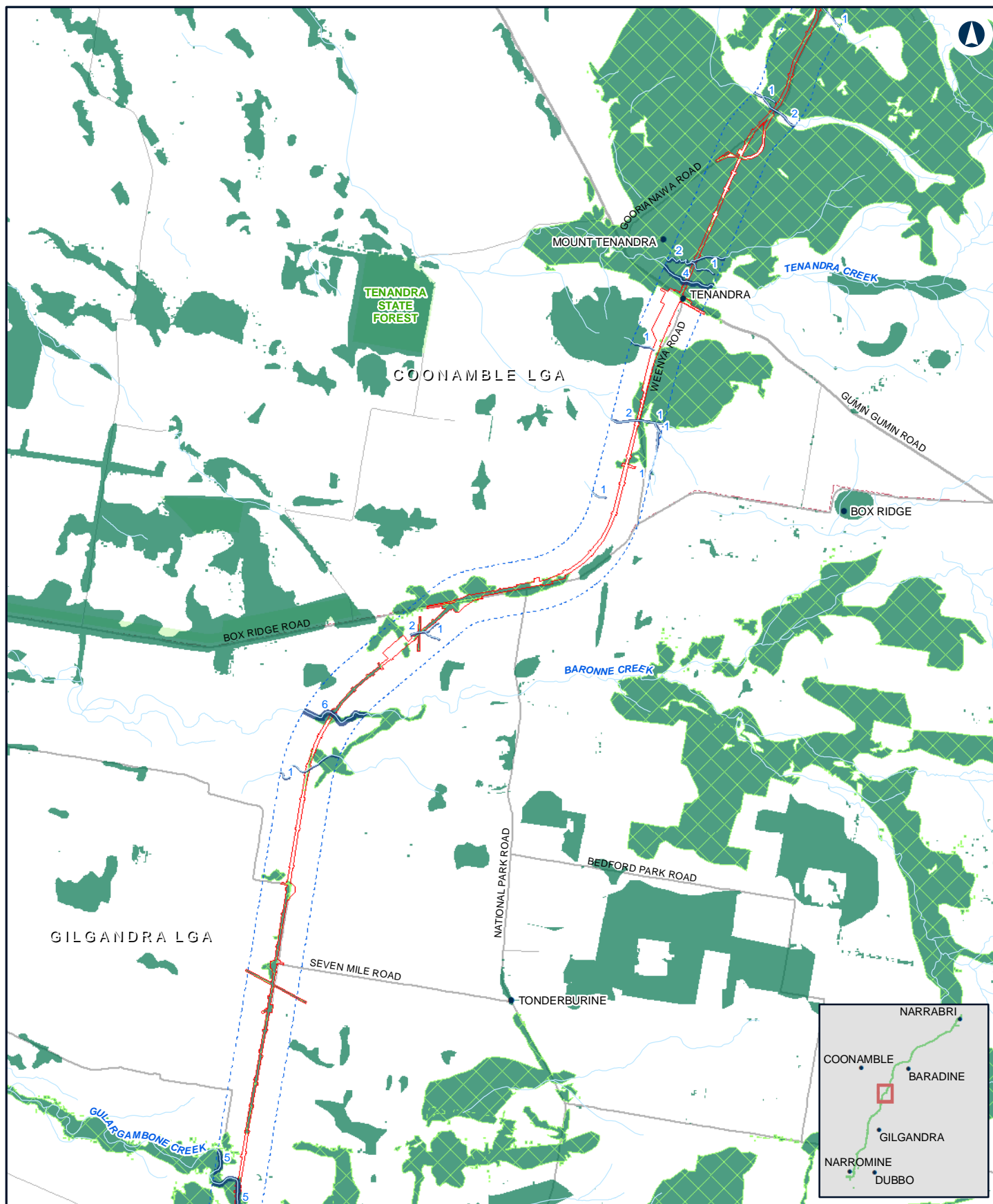
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- - - Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Wetlands NSW
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 7 of 15

0 1 2
Km

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Date: 31/07/2020

Paper: A4

Author: JacobsGHD

Scale: 1:100,000

Data Sources: Wetlands, vegetation: OEH;

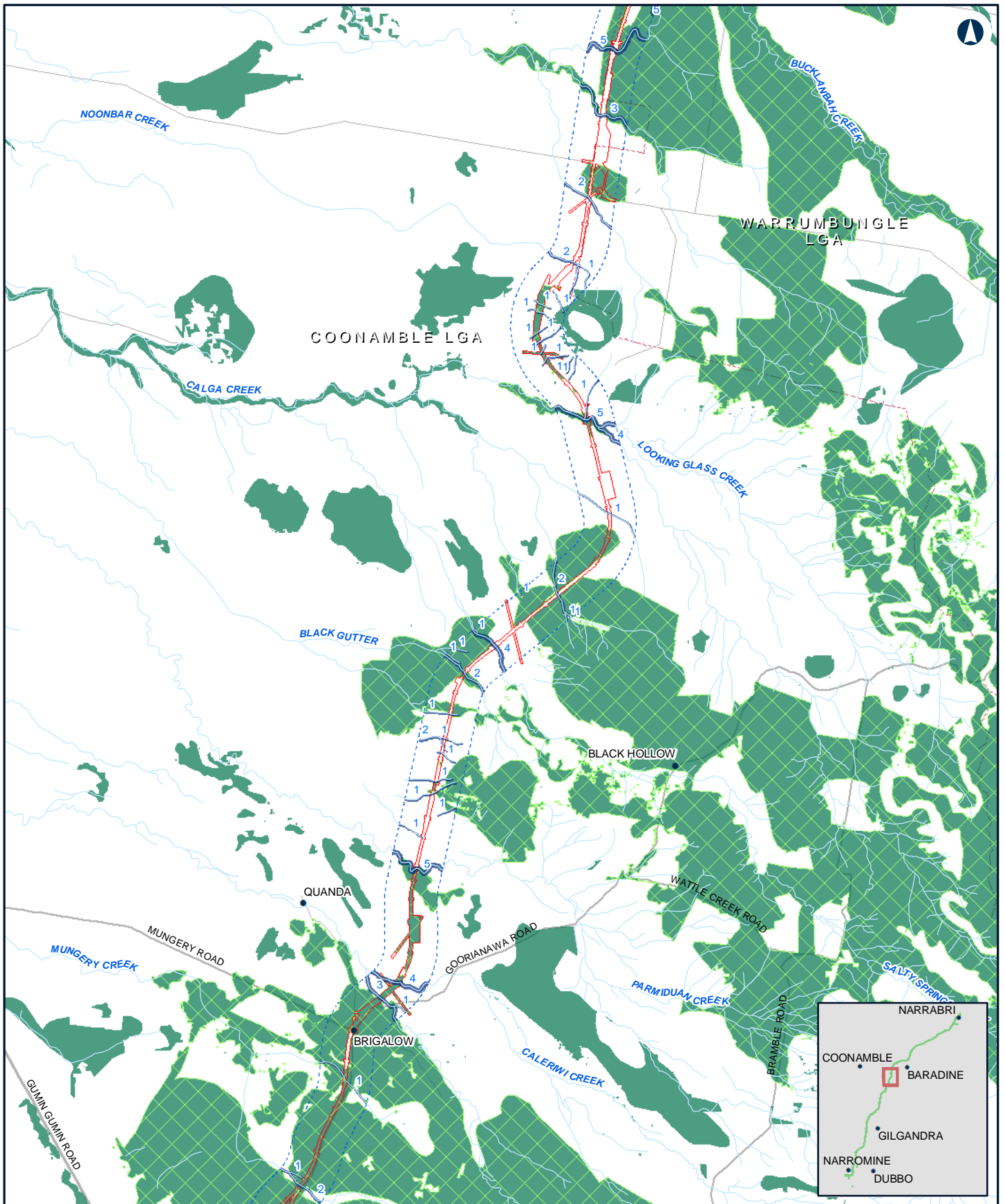
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 8 of 15

0 1 2
Km

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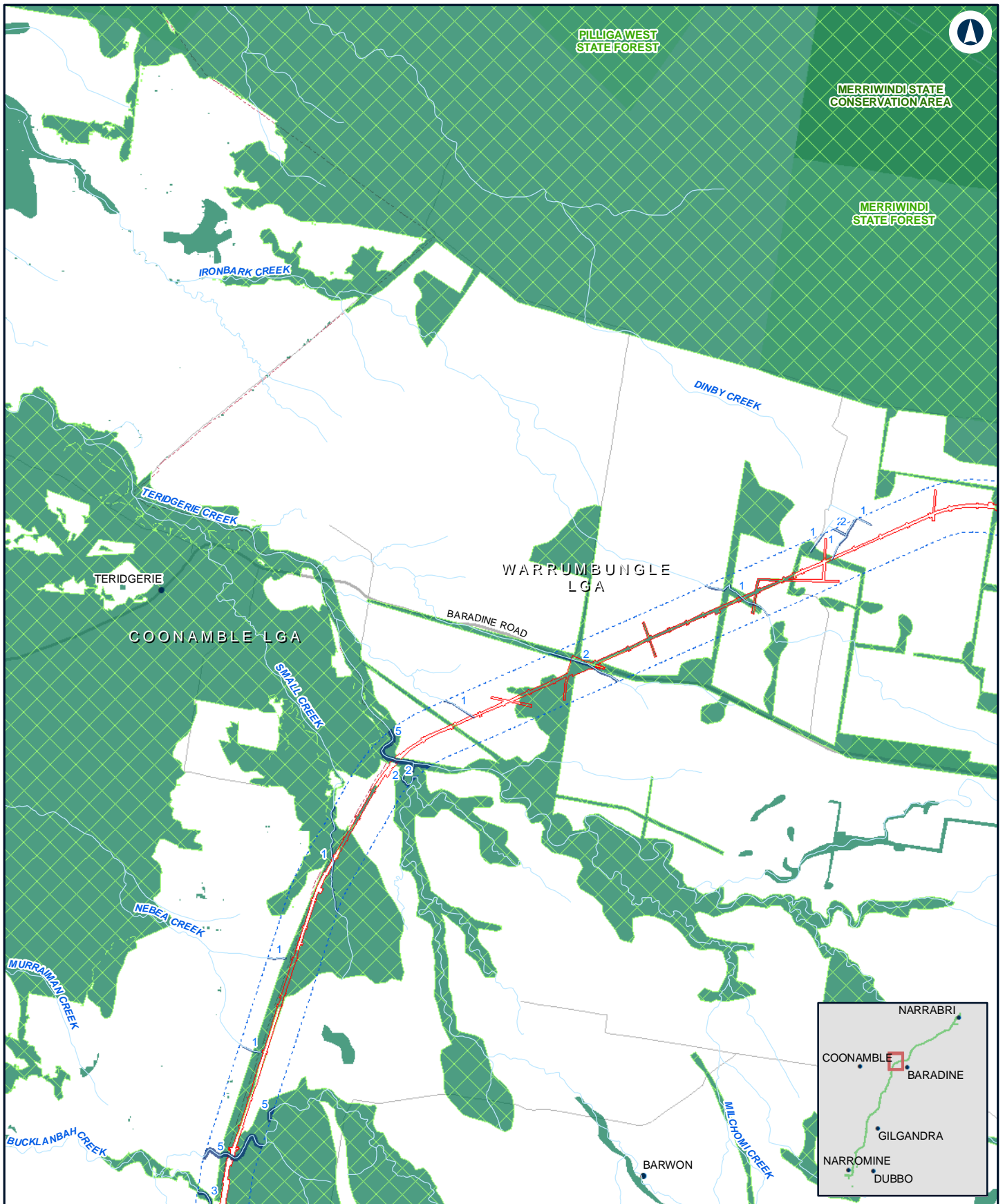
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 9 of 15

0 1 2
Km

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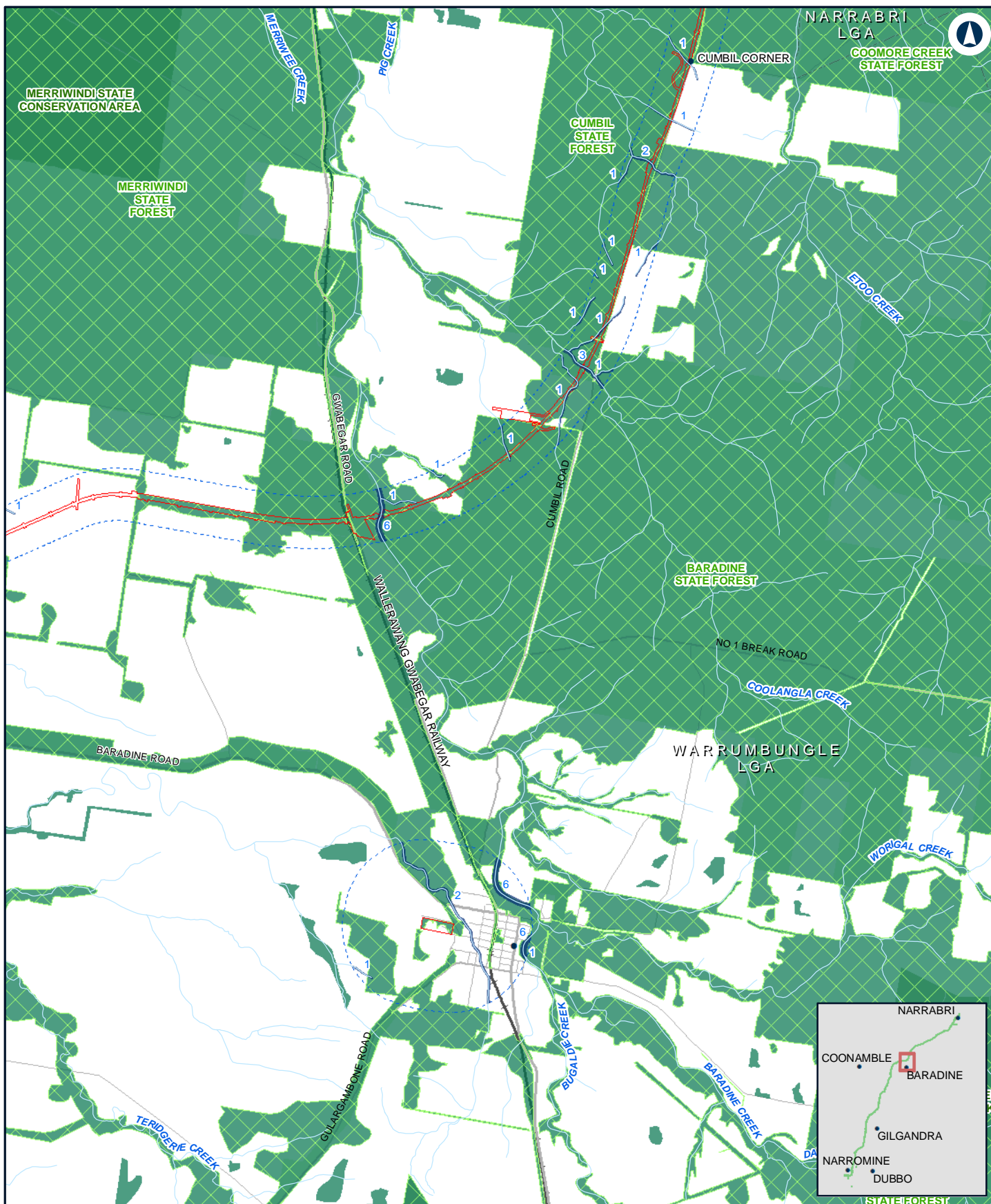
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 10 of 15

0 1 2
Km

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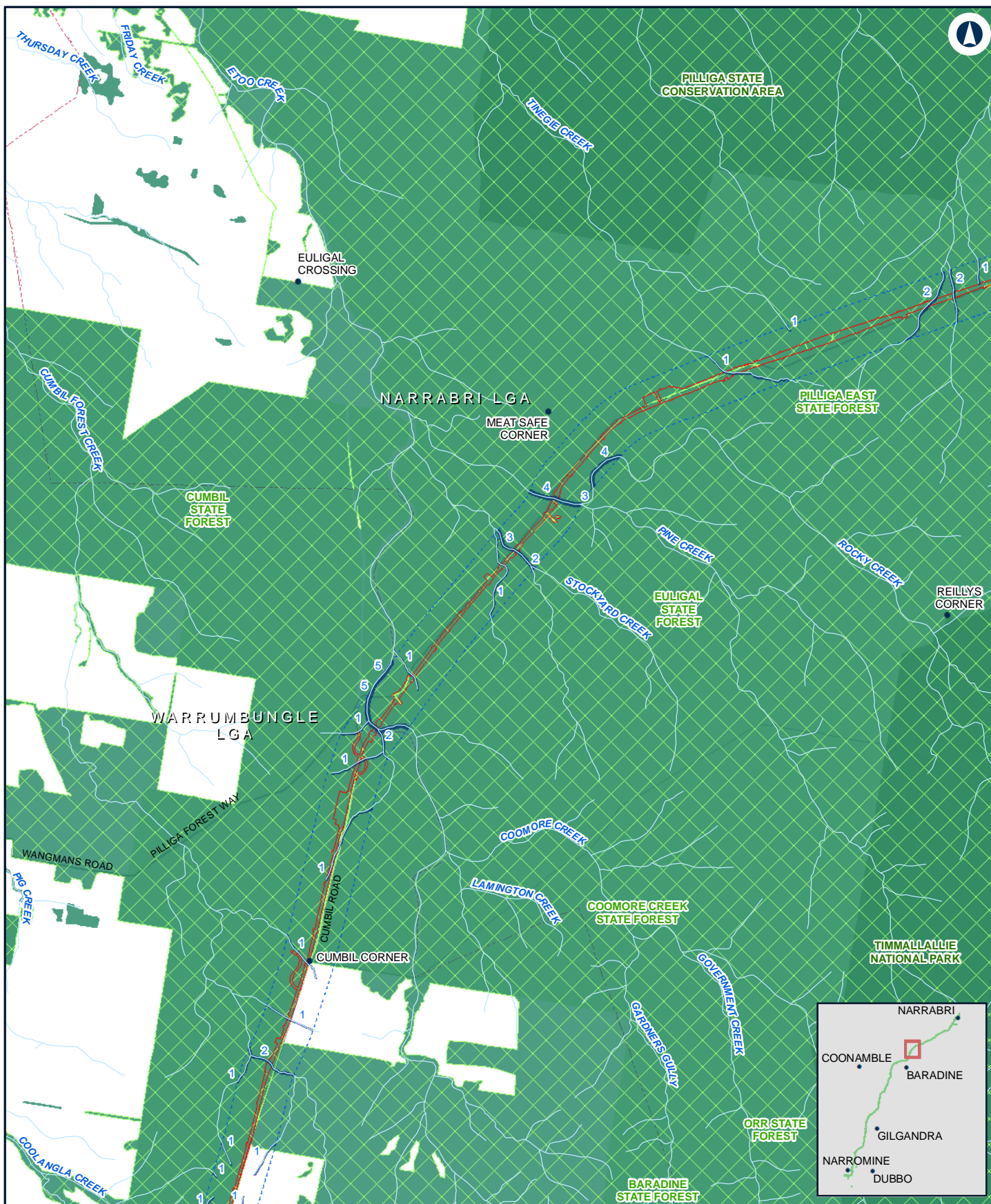
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARRABRI TO NARRABRI

Landscape Features

Map 11 of 15

0 1 2
Km

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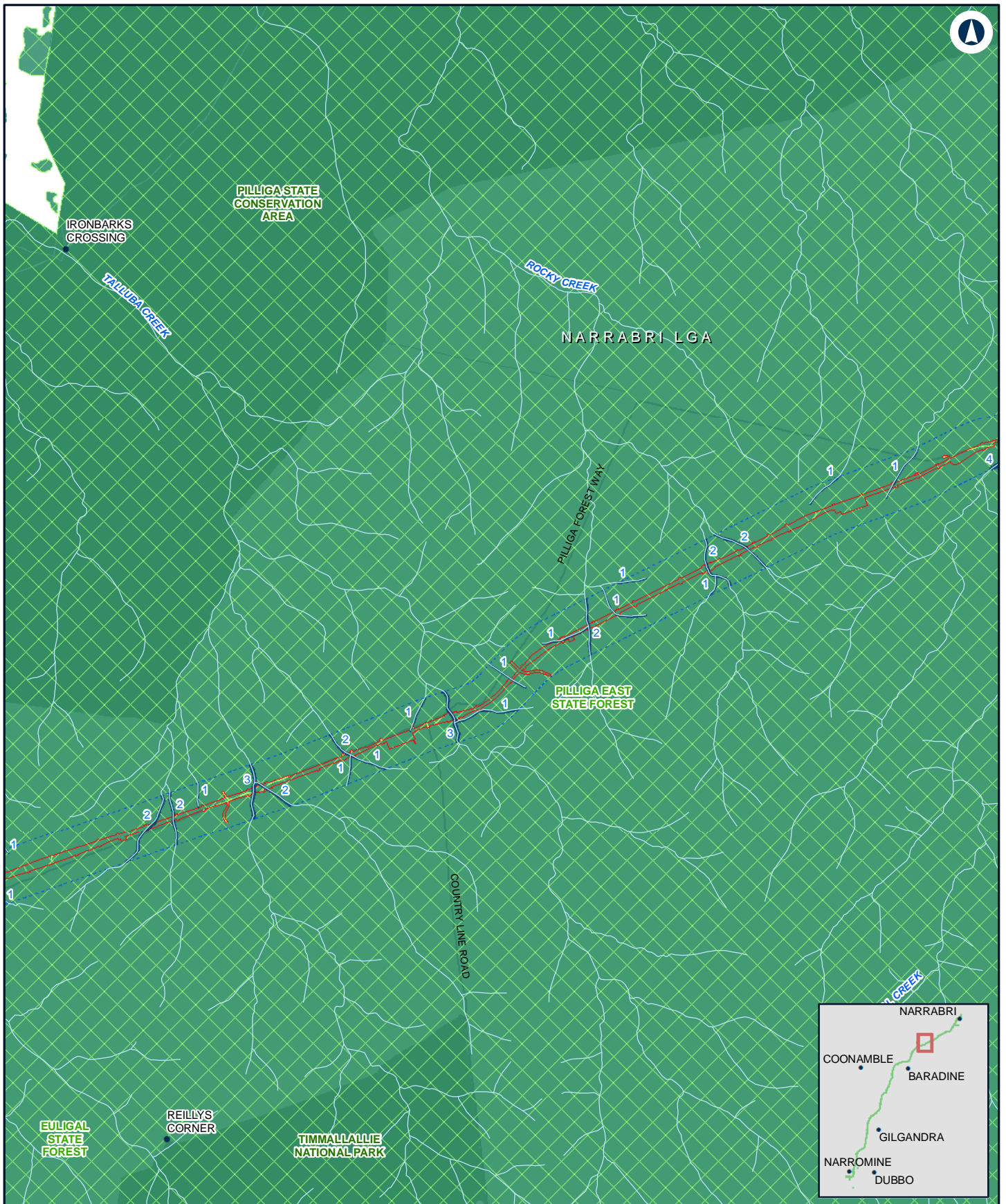
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 12 of 15

0 1 2
Km

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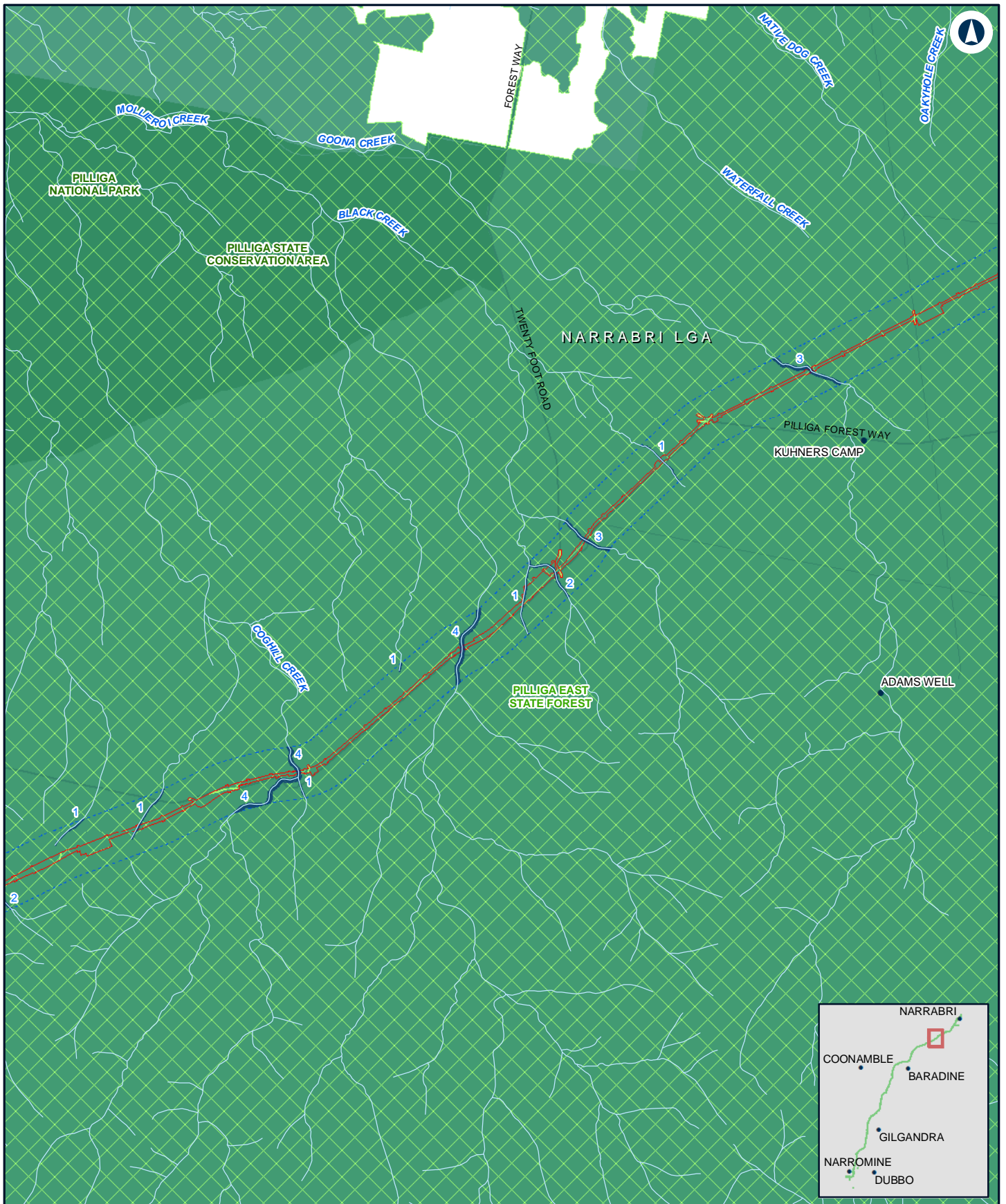
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 13 of 15

0 1 2
Km

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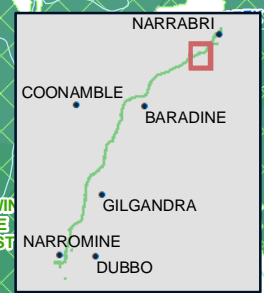
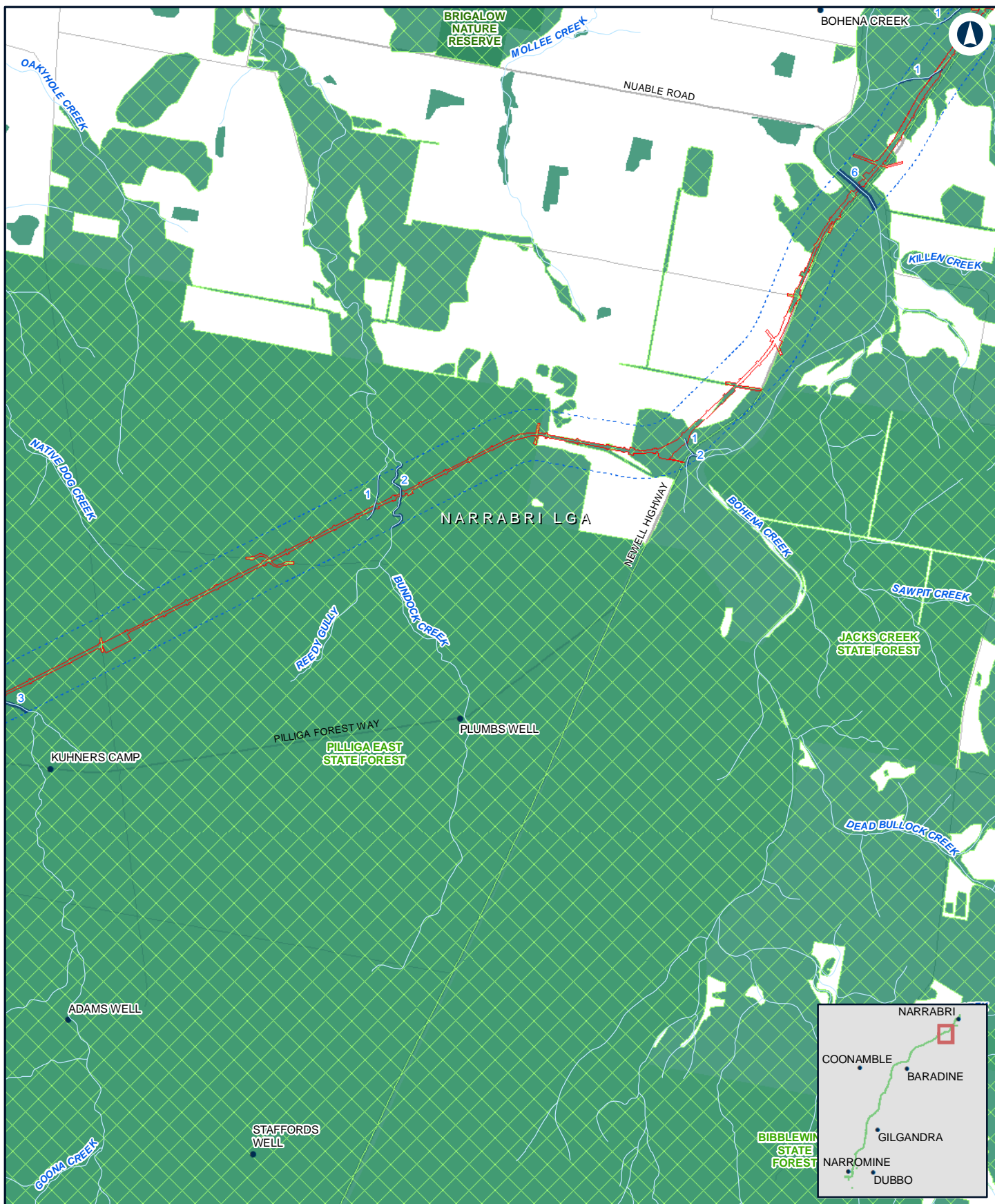
Date: 31/07/2020 Paper: A4
Author: JacobsGHD Scale: 1:100,000
Data Sources: Wetlands, vegetation: OEH;
Basemap layers: NSWSS;

LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Landscape Features

Map 14 of 15



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Date: 31/07/2020
 Author: JacobsGHD
 Data Sources: Wetlands, vegetation: OEH;
 Basemap layers: NSWSS;

Paper: A4
 Scale: 1:100,000

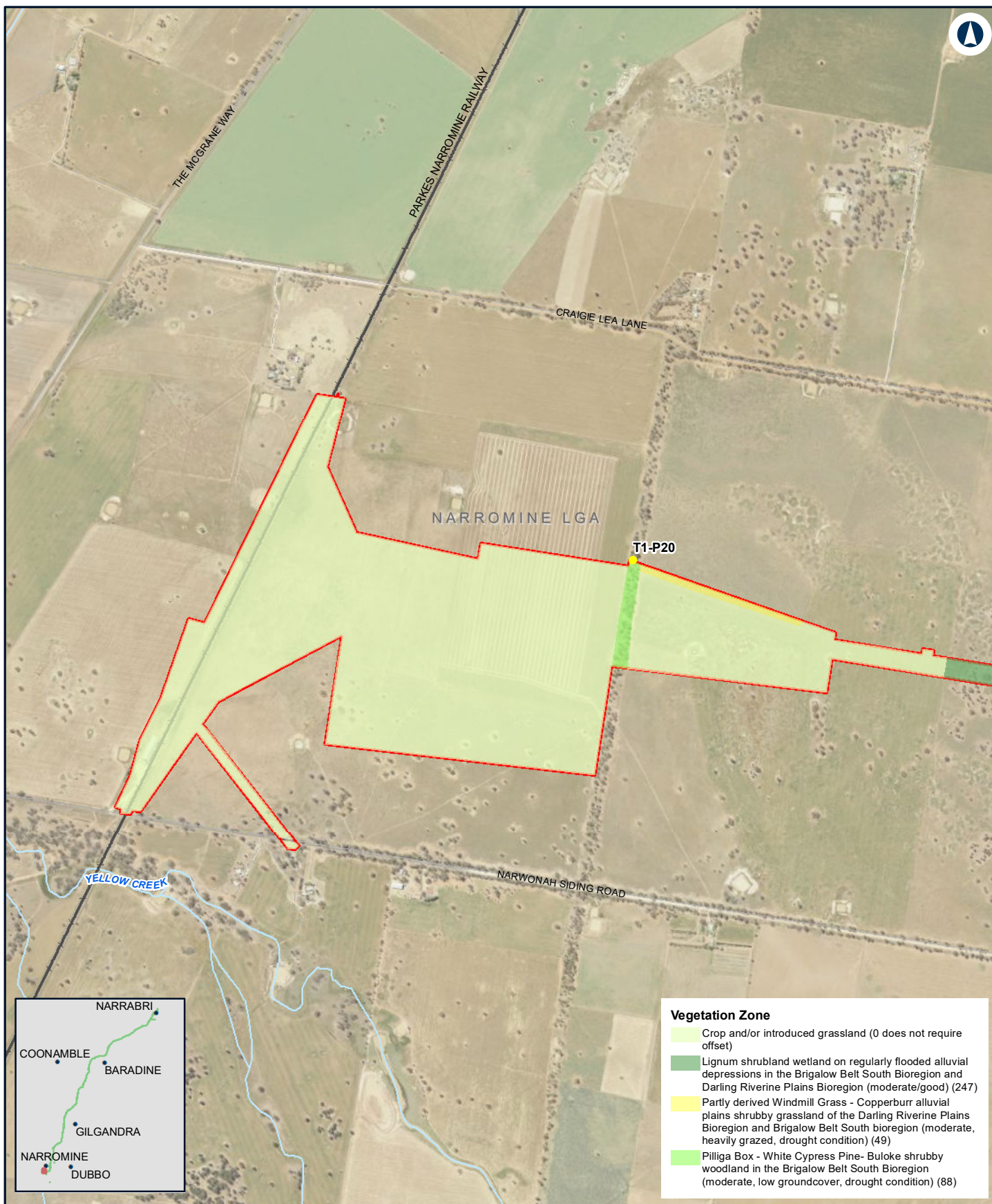
LEGEND

- The proposal
- Buffer area
- Native vegetation
- Native vegetation patch size (>1000ha)
- Riparian buffer
- Watercourse

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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 1 Narromine South multi-function compound

MAP 1 OF 20

0 0.25 0.5
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

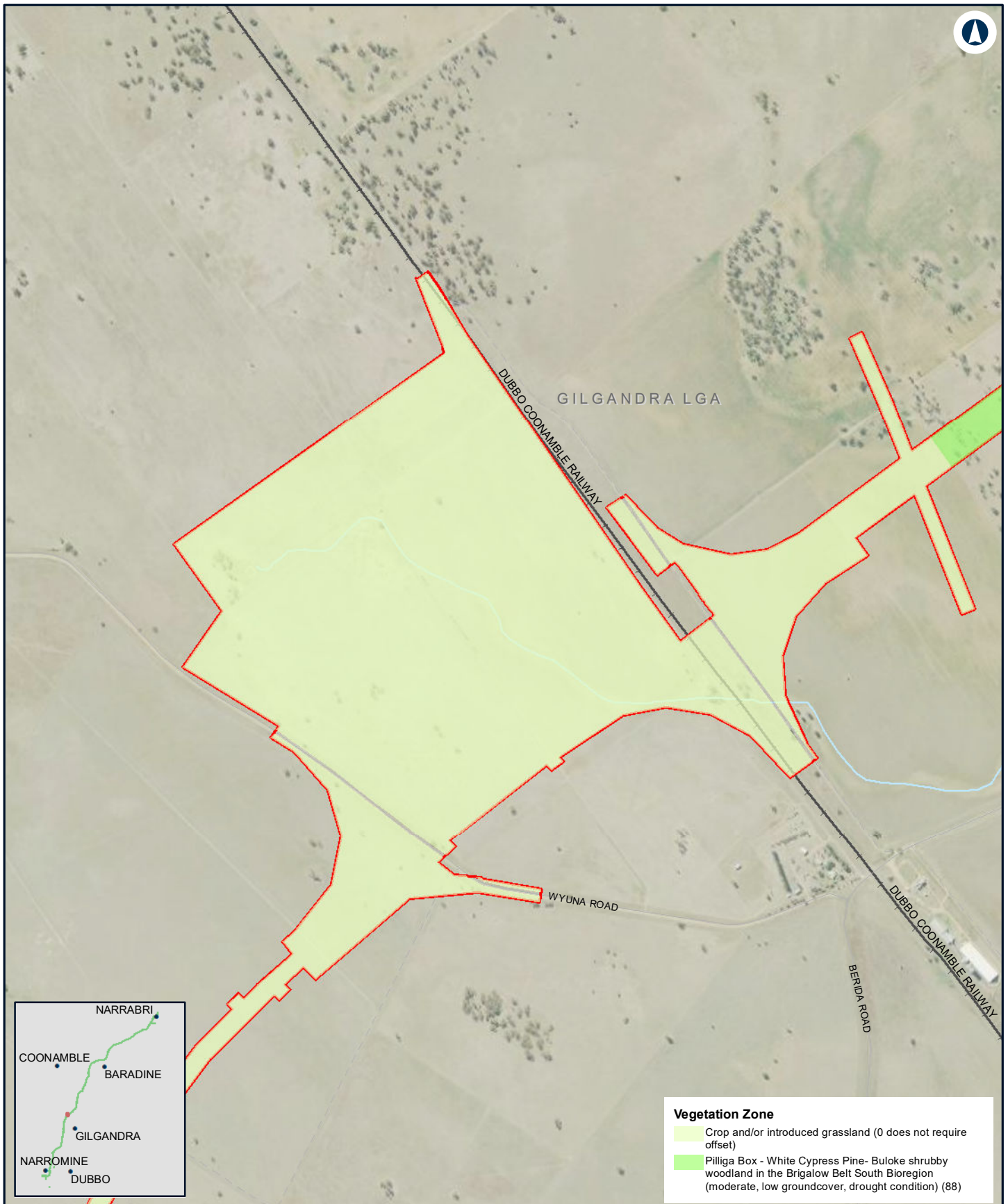
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Date: 27/10/2020 Paper: A4
Author: JacobsGHD Scale: 1:20,000
Data Sources: Basemap layers: NSWSS;

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Vegetation Zone

- Crop and/or introduced grassland (0 does not require offset)
- Pilliga Box - White Cypress Pine- Buloke shrubby woodland in the Brigalow Belt South Bioregion (moderate, low groundcover, drought condition) (88)

NARRABRI TO NARRABRI

Vegetation Zone Map Segment 2 Curban multi-function compound

MAP 2 OF 20

0 0.2 0.4
Km

LEGEND

The proposal

Coordinate System: GDA 1994 MGA Zone 55

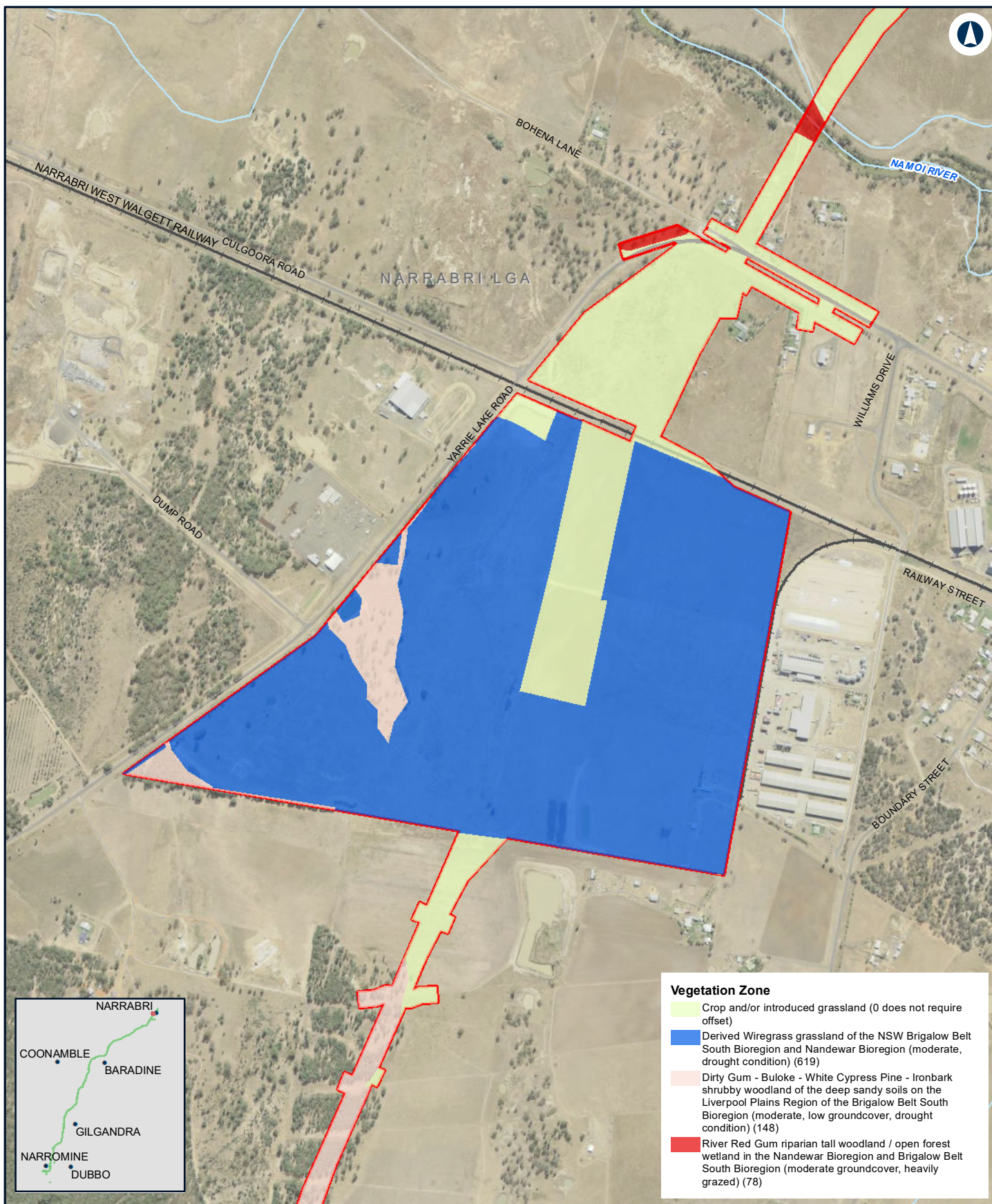
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Author: JacobsGHD Scale: 1:15,000
Data Sources: Basemap layers: NSWSS;

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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 3 Narrabri West multi-function compound

MAP 3 OF 20

0 0.15 0.3
Km

LEGEND

The proposal

Coordinate System: GDA 1994 MGA Zone 55

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Author: JacobsGHD Scale: 1:12,500
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NARROMINE LGA

T2-BP3-2



Vegetation Zone

- Derived Wiregrass grassland of the NSW Brigalow Belt South Bioregion and Nandewar Bioregion (moderate, drought condition) (619)
- Dwyer's Red Gum - White Cypress Pine - Currawang shrubby woodland (moderate) (185)

NARROMINE TO NARRABRI

Vegetation Zone Map Segment 4 Borrow Pit A

MAP 4 OF 20

0 0.04 0.08
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

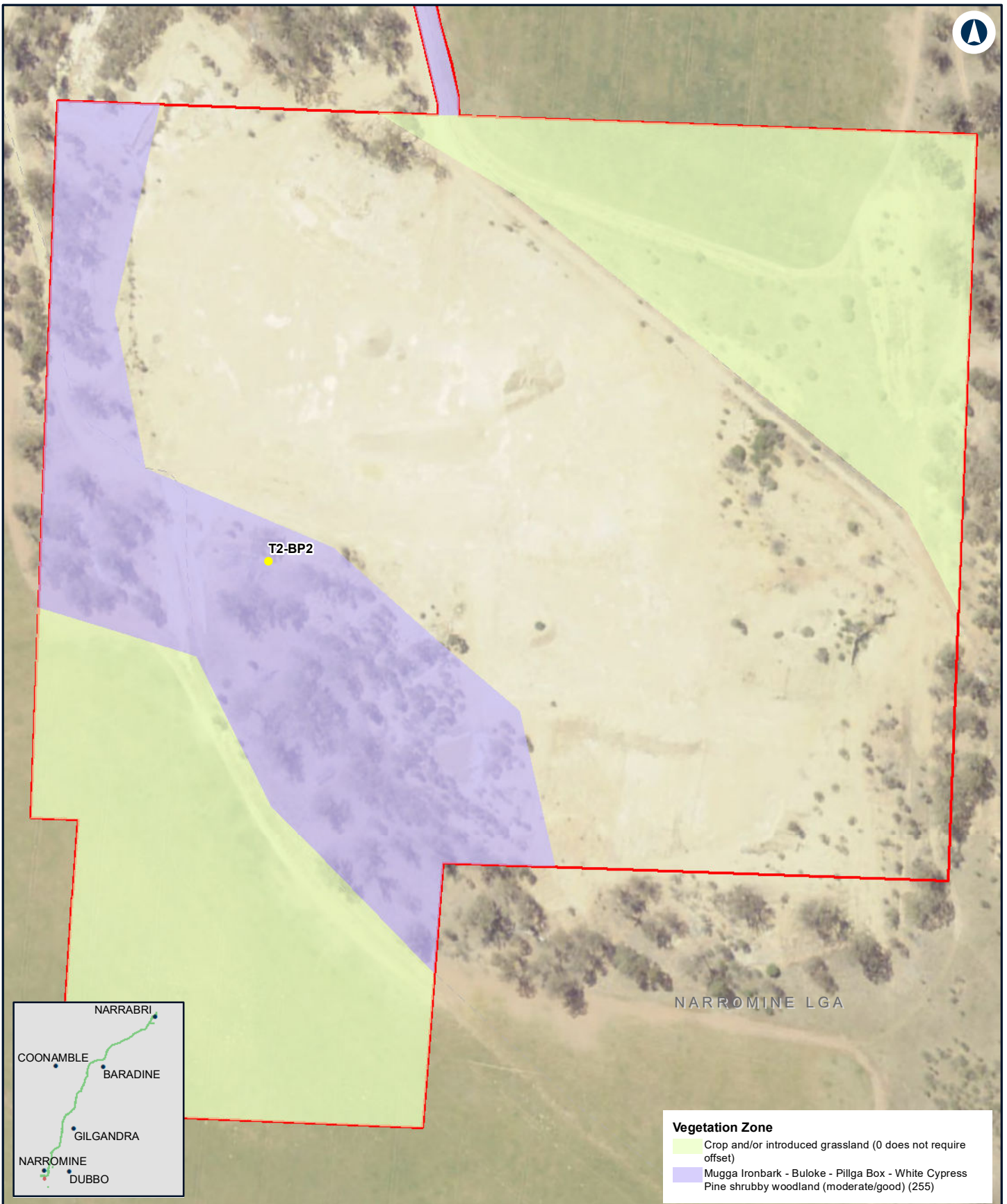
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Author: JacobsGHD Scale: 1:3,000
Data Sources: Basemap layers: NSWSS;

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Vegetation Zone

- Crop and/or introduced grassland (0 does not require offset)
- Mugga Ironbark - Buloke - Pillga Box - White Cypress Pine shrubby woodland (moderate/good) (255)

NARROMINE TO NARRABRI

Vegetation Zone Map Segment 5 Borrow Pit B

MAP 5 OF 20

0 0.035 0.07
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

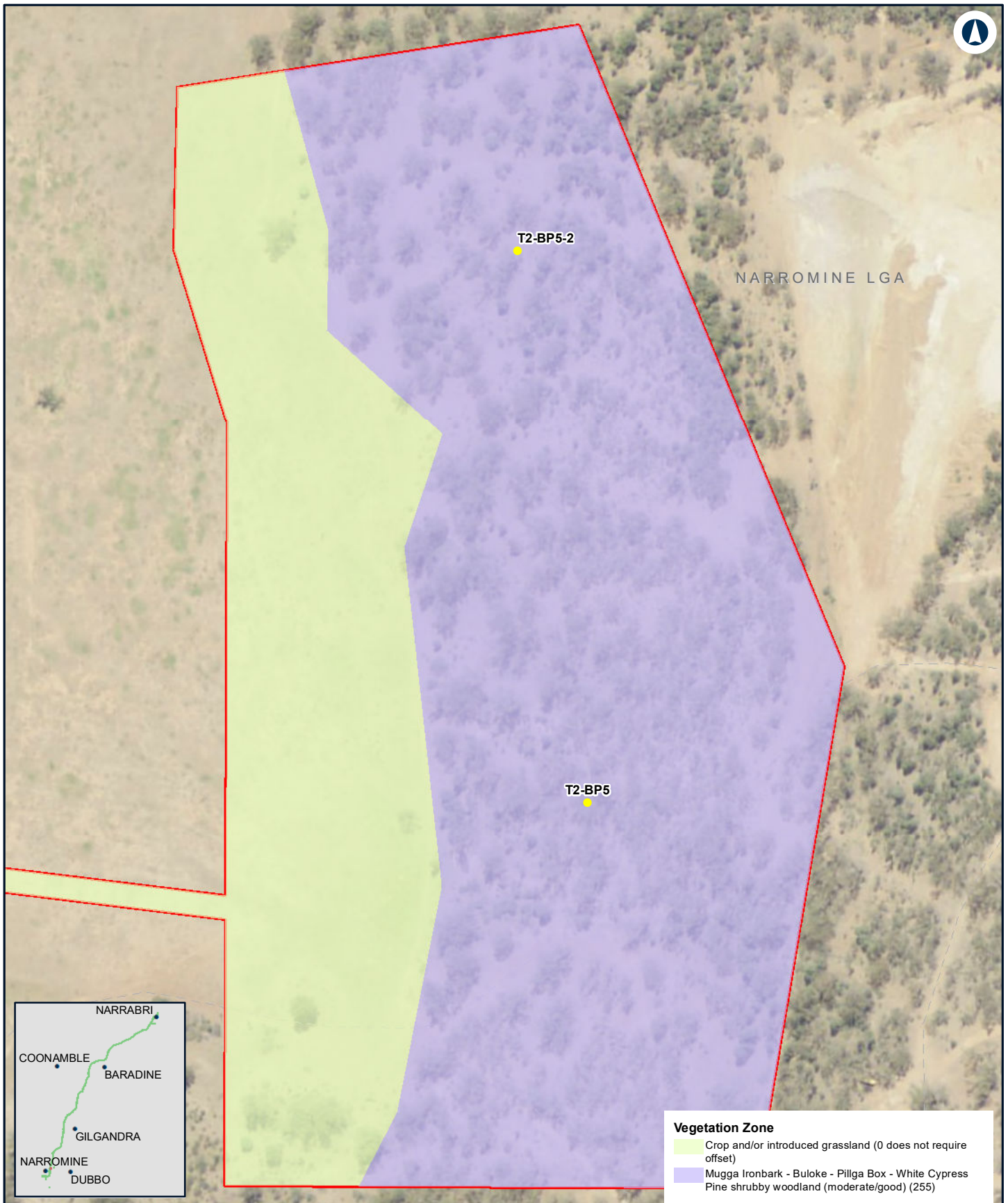
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Author: JacobsGHD Scale: 1:2,500
Data Sources: Basemap layers: NSWSS;

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Vegetation Zone

- Crop and/or introduced grassland (0 does not require offset)
- Mugga Ironbark - Buloke - Pillga Box - White Cypress Pine shrubby woodland (moderate/good) (255)

NARROMINE TO NARRABRI

Vegetation Zone Map Segment 6 Borrow Pit C

MAP 6 OF 20

0 0.03 0.06
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

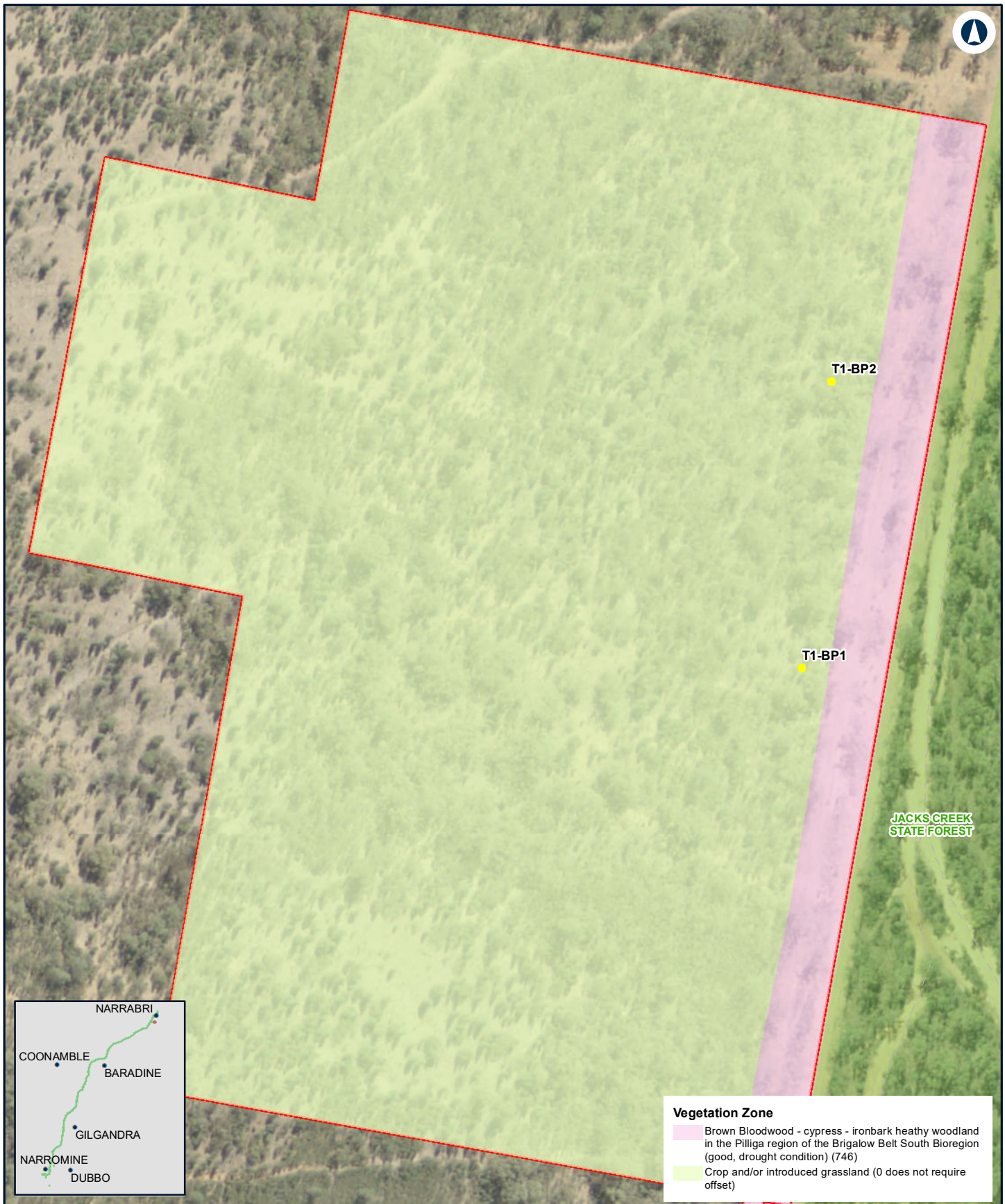
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Date: 27/10/2020 Paper: A4
Author: JacobsGHD Scale: 1:2,255
Data Sources: Basemap layers: NSWSS;

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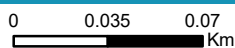
Vegetation Zone

- Brown Bloodwood - cypress - ironbark heathy woodland in the Pilliga region of the Brigalow Belt South Bioregion (good, drought condition) (746)
- Crop and/or introduced grassland (0 does not require offset)

NARROMINE TO NARRABRI

Vegetation Zone Map Segment 7 Borrow Pit D

MAP 7 OF 20



LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

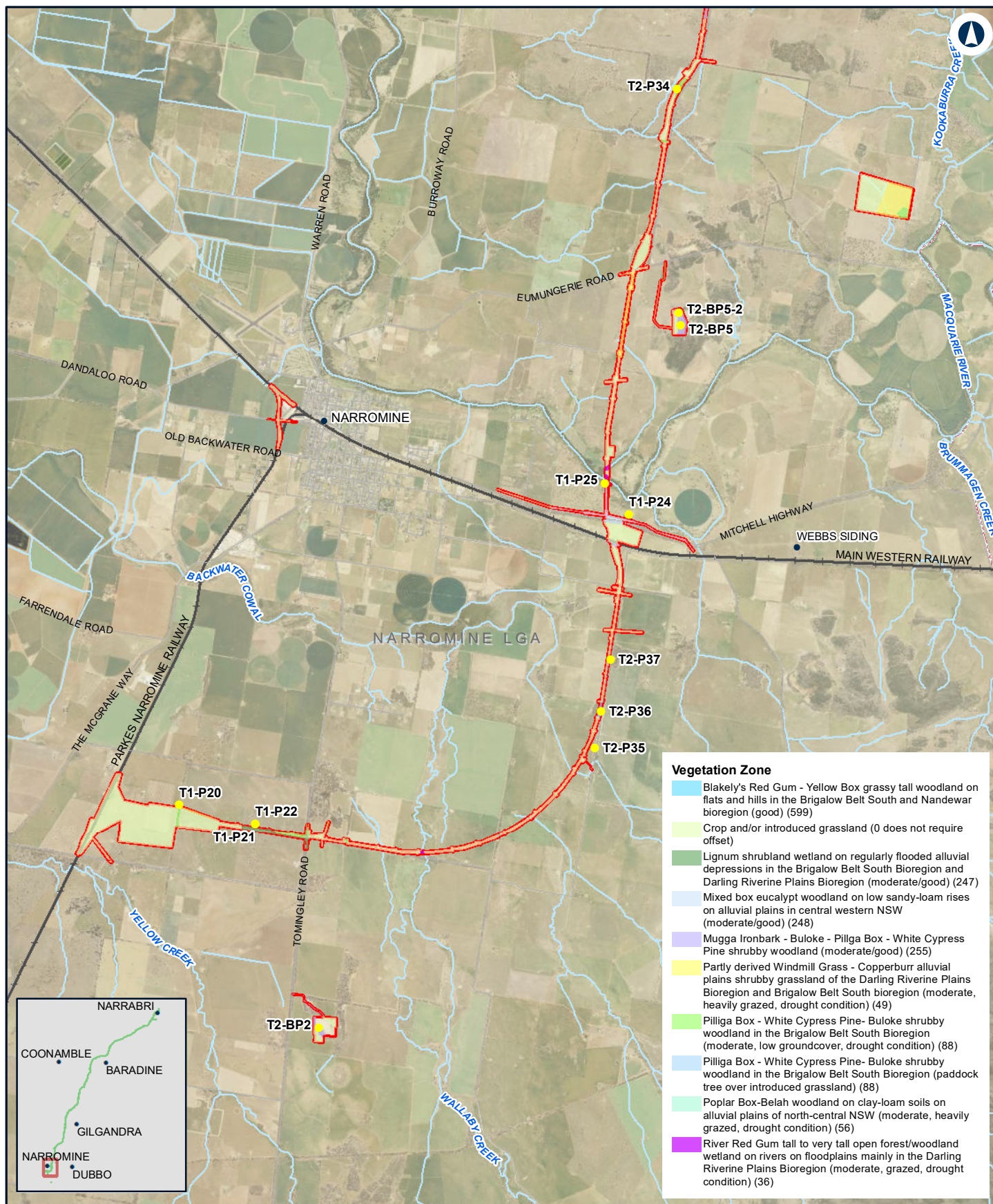
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 8 Narromine to Curban A

MAP 8 OF 20

0 1 2
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

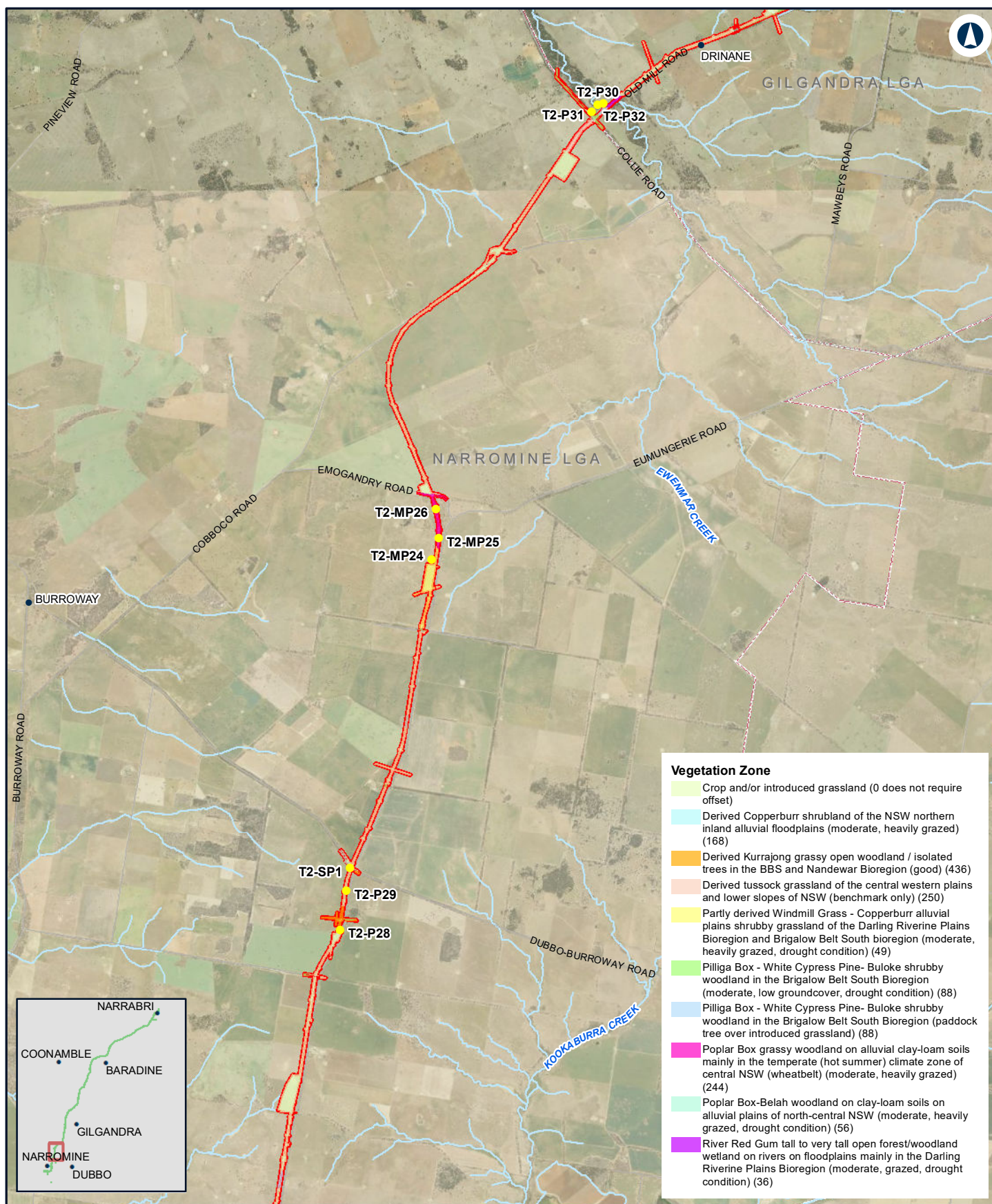
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Vegetation Zone

- Crop and/or introduced grassland (0 does not require offset)
- Derived Copperburr shrubland of the NSW northern inland alluvial floodplains (moderate, heavily grazed) (168)
- Derived Kurrajong grassy open woodland / isolated trees in the BBS and Nandewar Bioregion (good) (436)
- Derived tussock grassland of the central western plains and lower slopes of NSW (benchmark only) (250)
- Partly derived Windmill Grass - Copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South bioregion (moderate, heavily grazed, drought condition) (49)
- Pilliga Box - White Cypress Pine- Buloke shrubby woodland in the Brigalow Belt South Bioregion (moderate, low groundcover, drought condition) (88)
- Pilliga Box - White Cypress Pine- Buloke shrubby woodland in the Brigalow Belt South Bioregion (paddock tree over introduced grassland) (88)
- Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt) (moderate, heavily grazed) (244)
- Poplar Box-Belah woodland on clay-loam soils on alluvial plains of north-central NSW (moderate, heavily grazed, drought condition) (56)
- River Red Gum tall to very tall open forest/woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion (moderate, grazed, drought condition) (36)

NARROMINE TO NARRABRI

Vegetation Zone Map Segment 8 Narromine to Curban B

MAP 9 OF 20

0 1 2
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

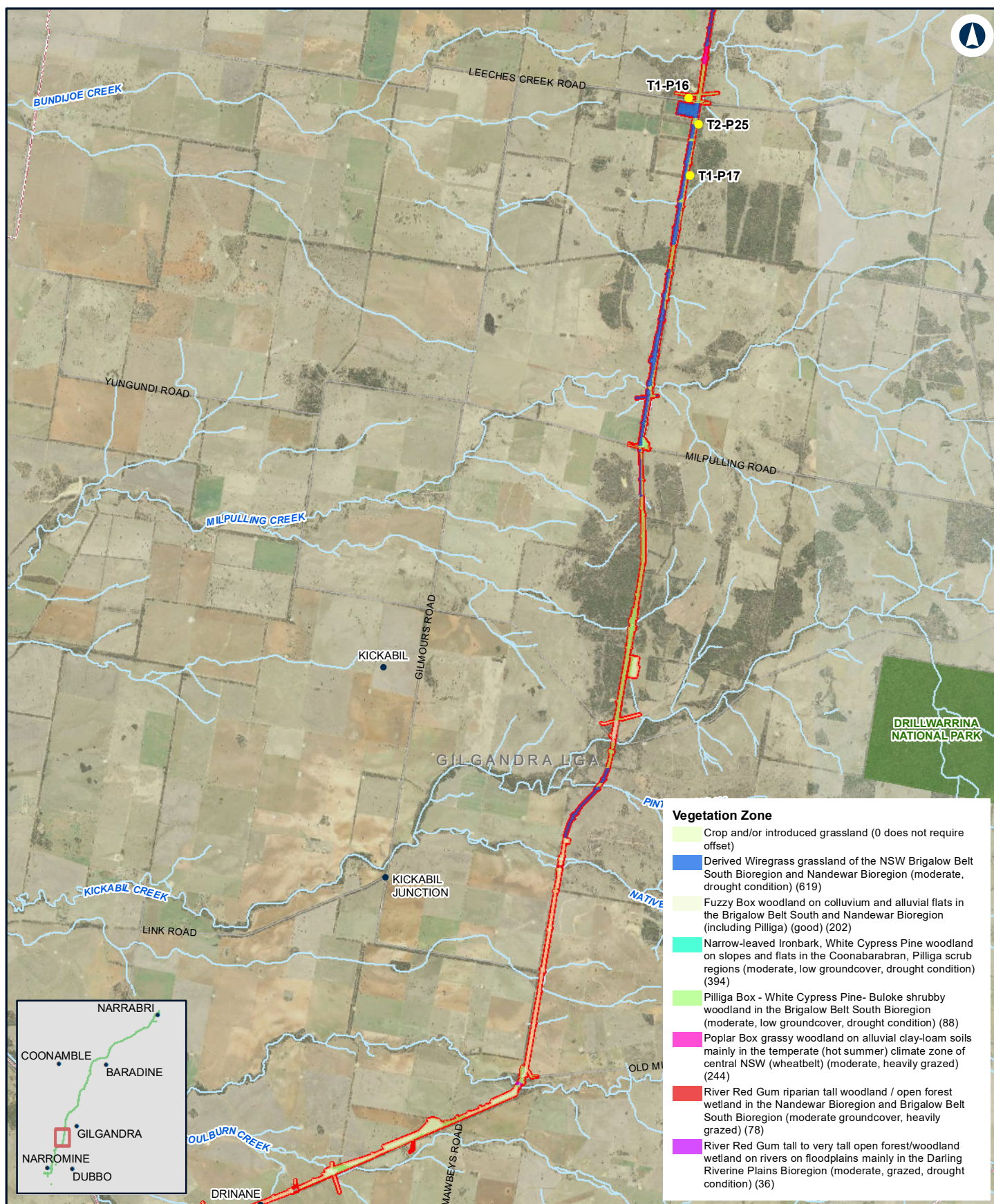
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 8 Narromine to Curban C

MAP 10 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

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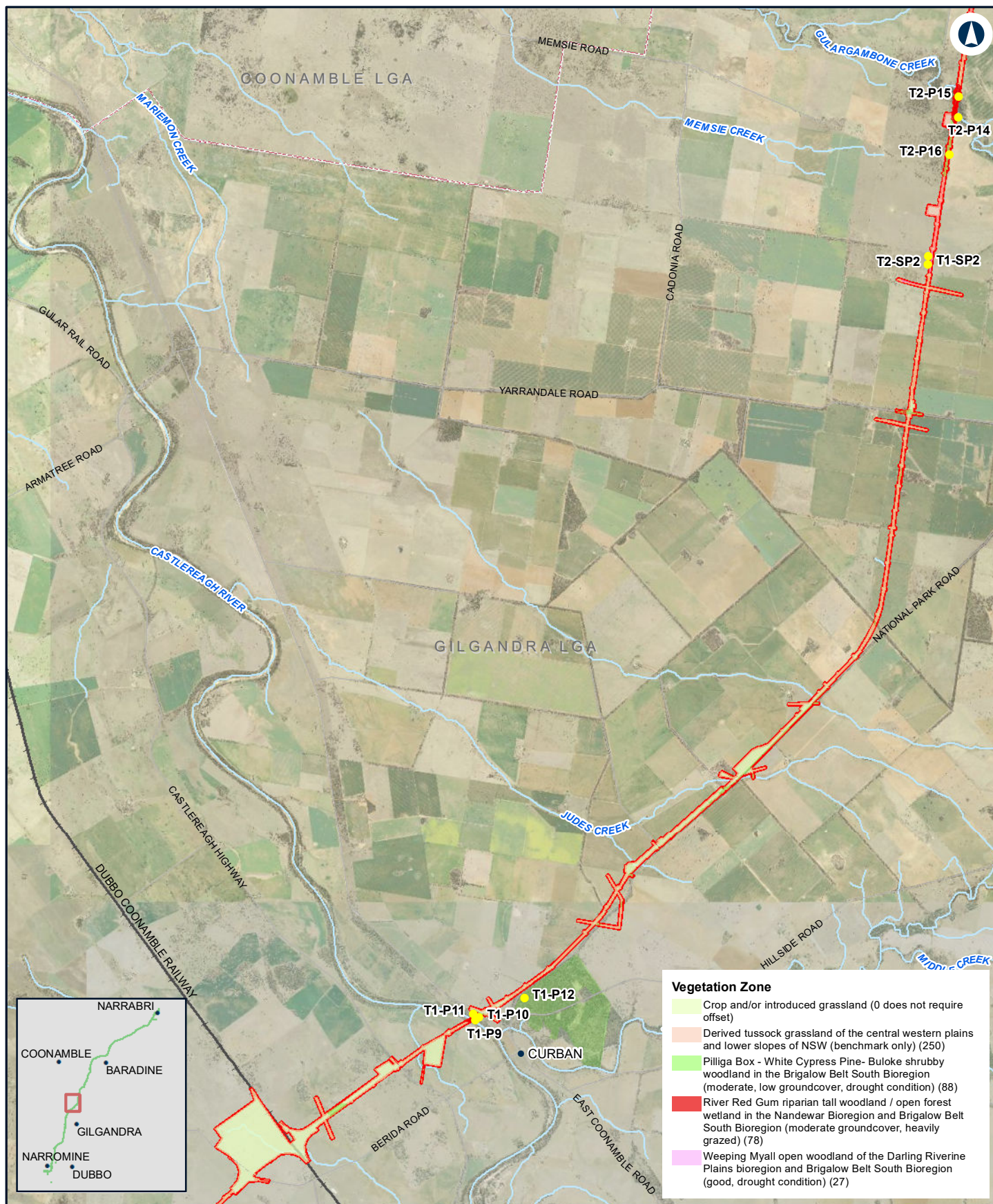
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Data Sources: Basemap layers: NSWSS;

Paper: A4
Scale: 1:100,000

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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 9 Curban to Pilliga A

MAP 12 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

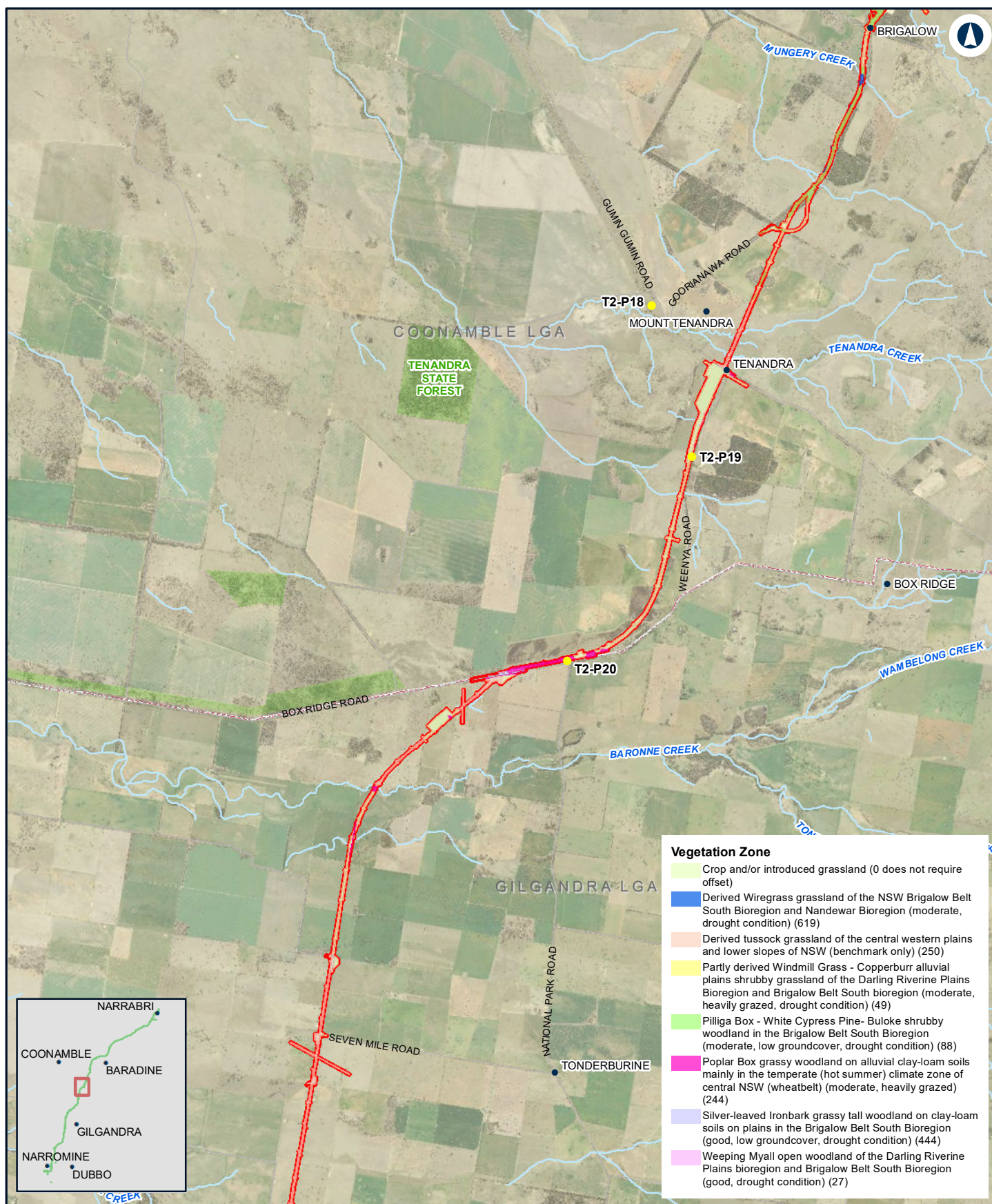
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Data Sources: Basemap layers: NSWSS;

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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 9 Curban to Pilliga B

MAP 13 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

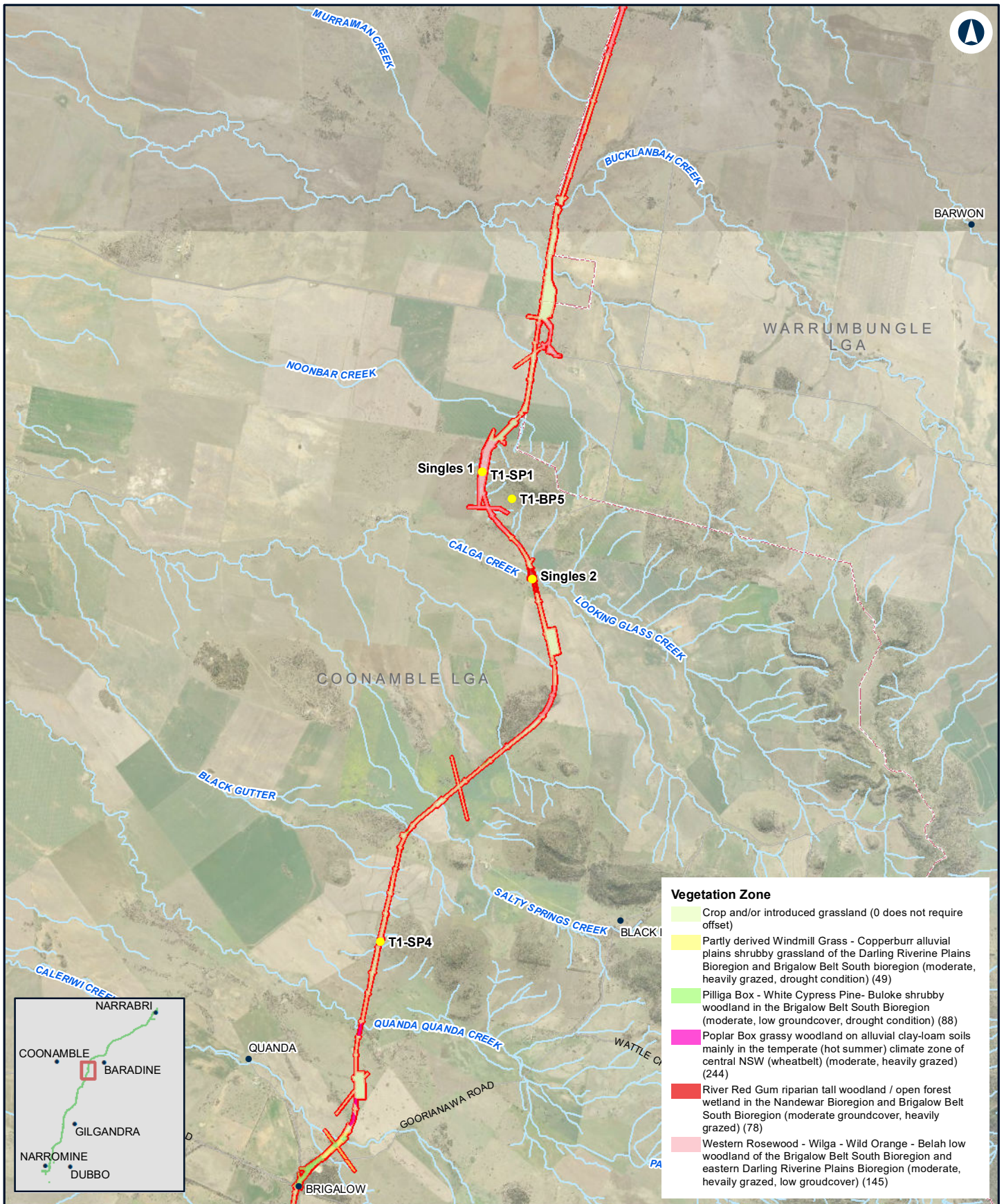
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Data Sources: Basemap layers: NSWSS;

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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 9 Curban to Pilliga C

MAP 14 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

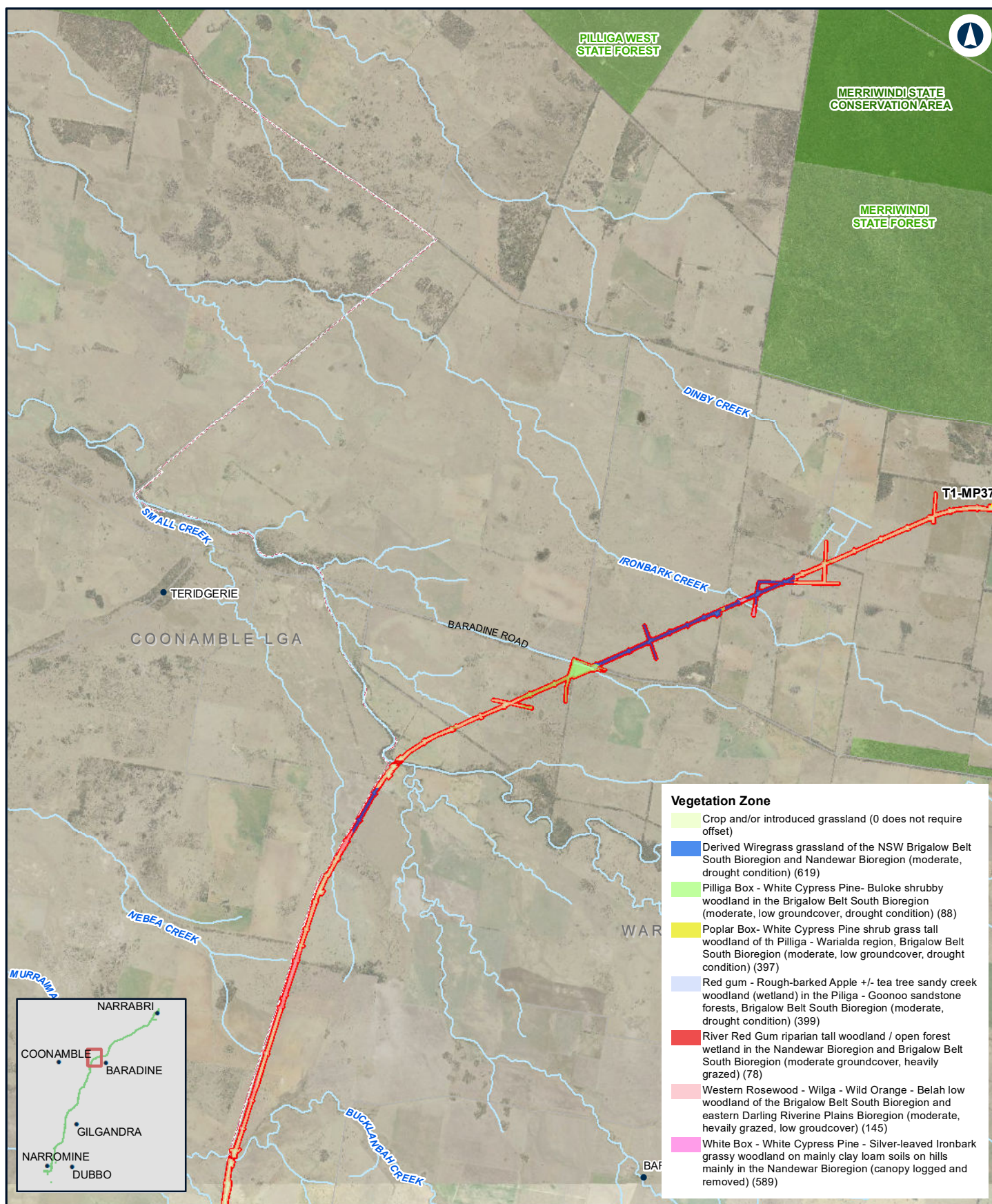
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 9 Curban to Pilliga D

MAP 15 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

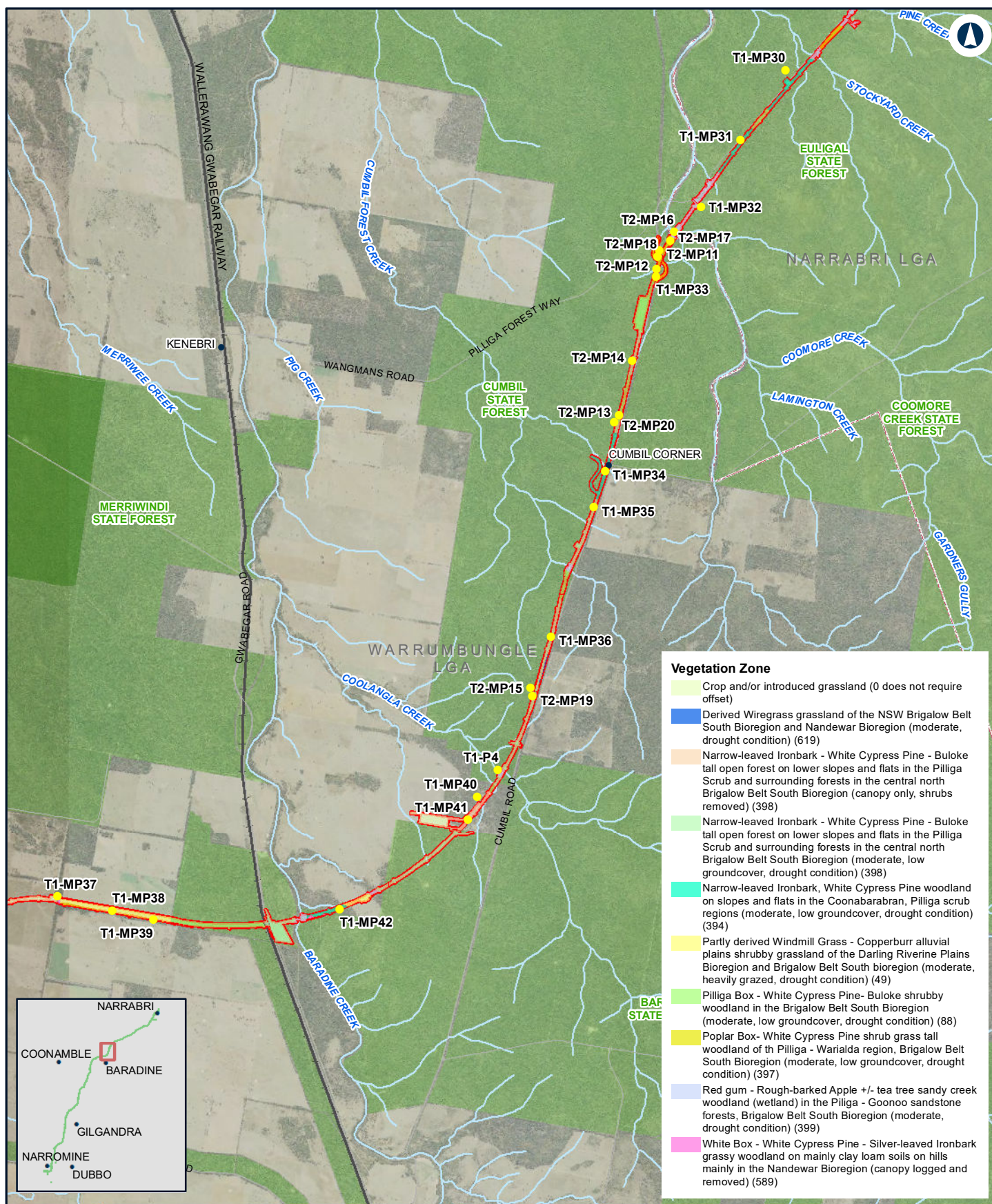
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 10 Pilliga A

MAP 16 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

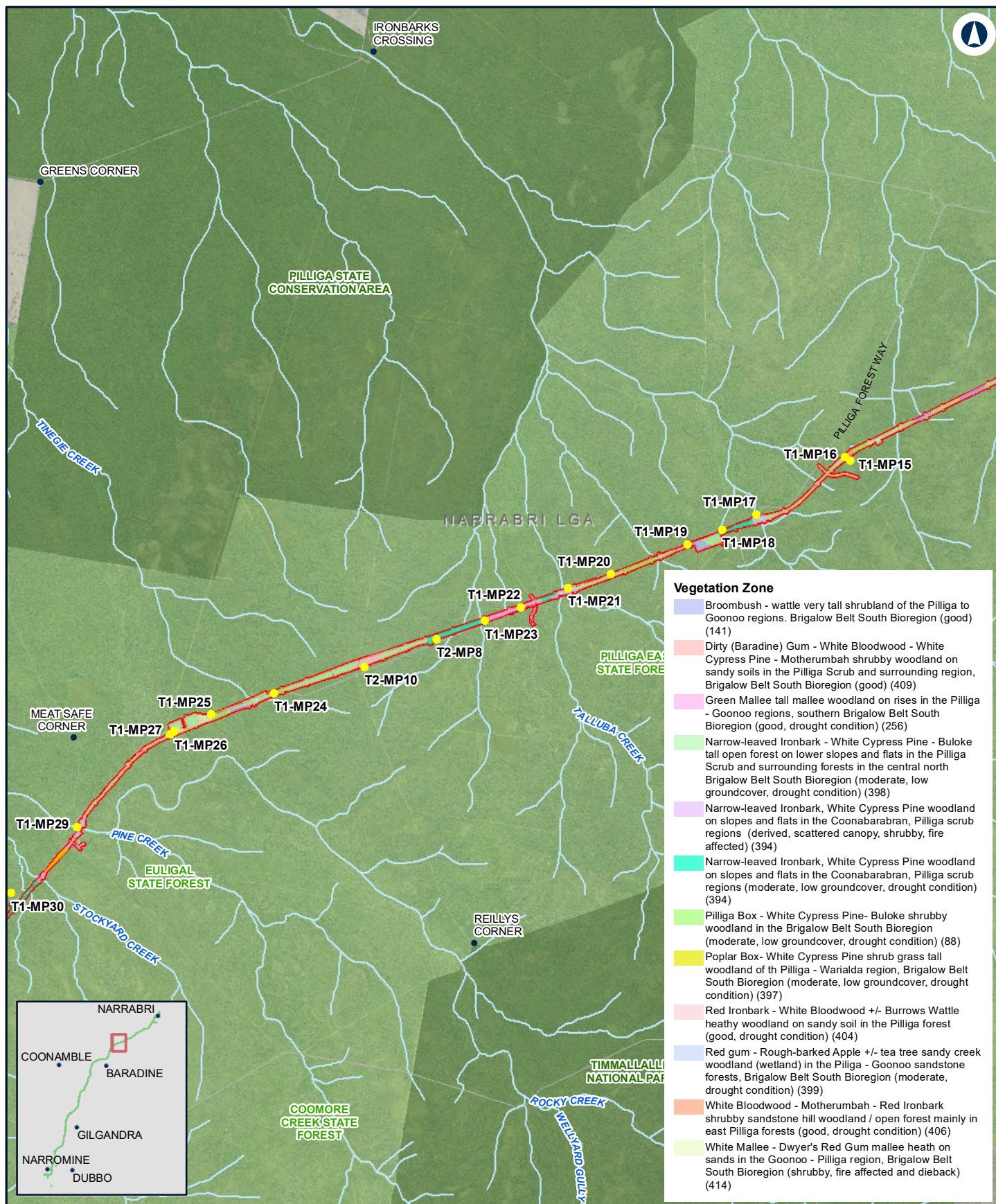
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 10 Pilliga B

MAP 17 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

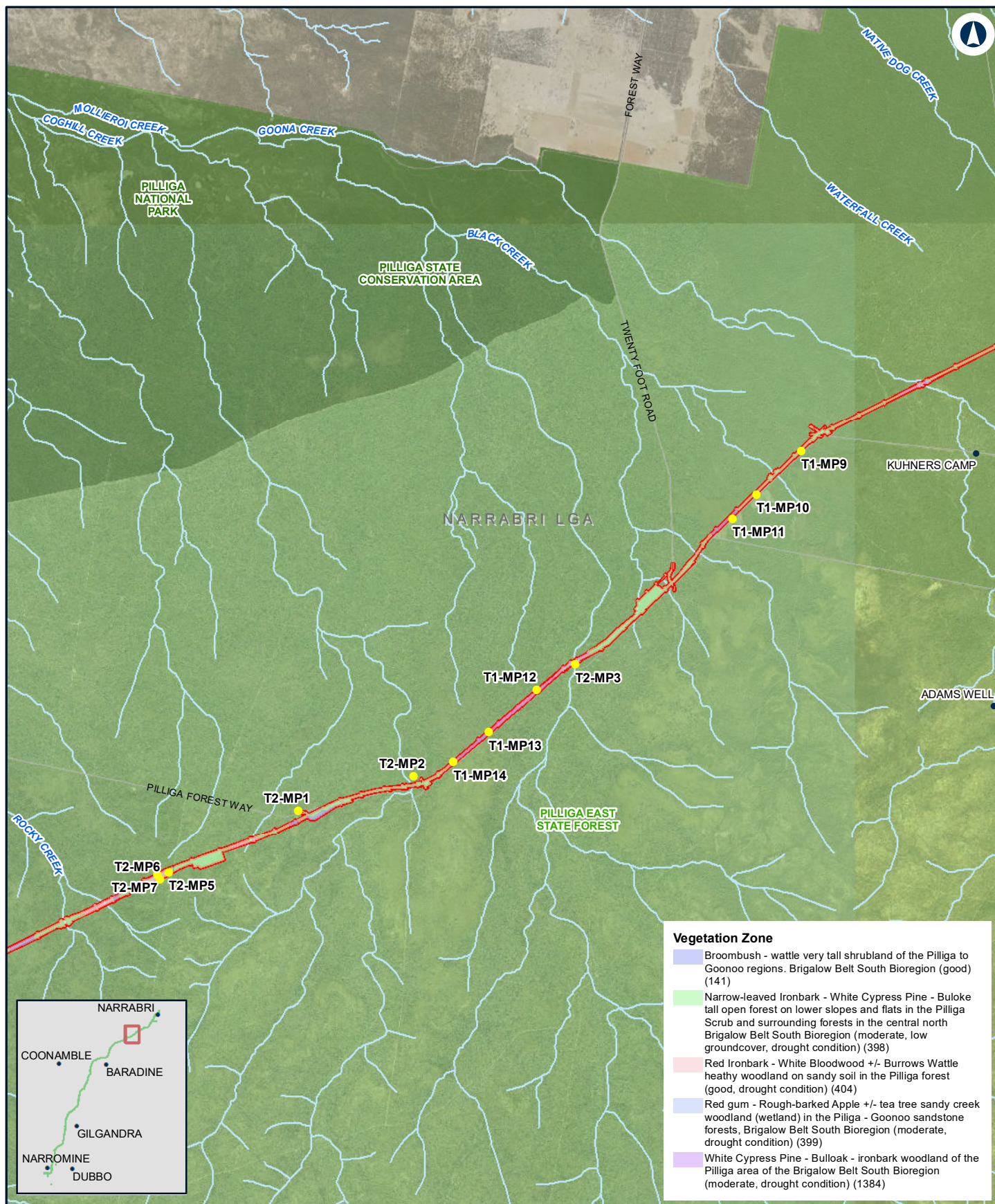
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 10 Pilliga C

MAP 18 OF 20

0 1 2
Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

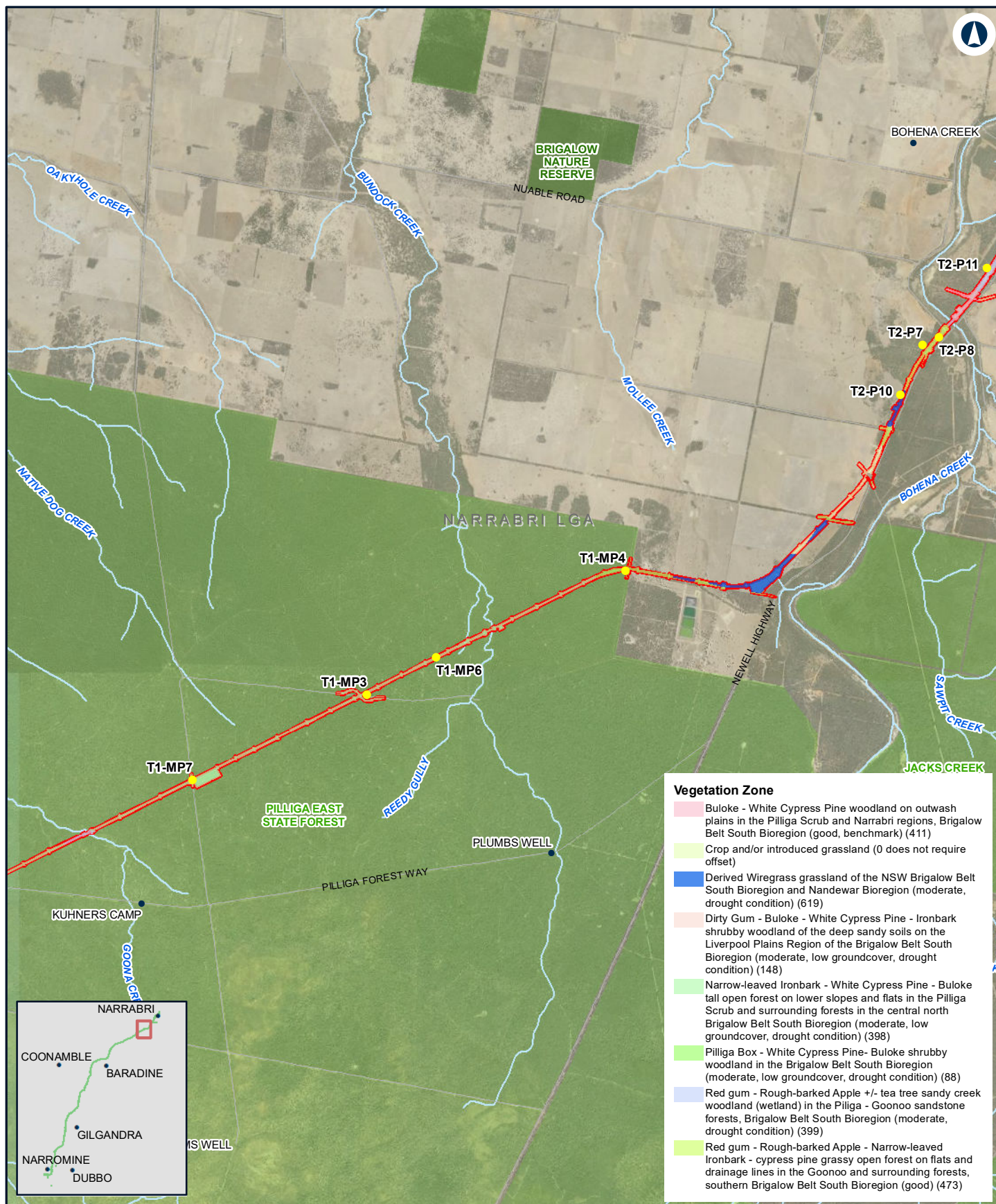
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 10 Pilliga D

MAP 19 OF 20

0 1 2 Km

LEGEND

- The proposal
- Vegetation plot

Coordinate System: GDA 1994 MGA Zone 55

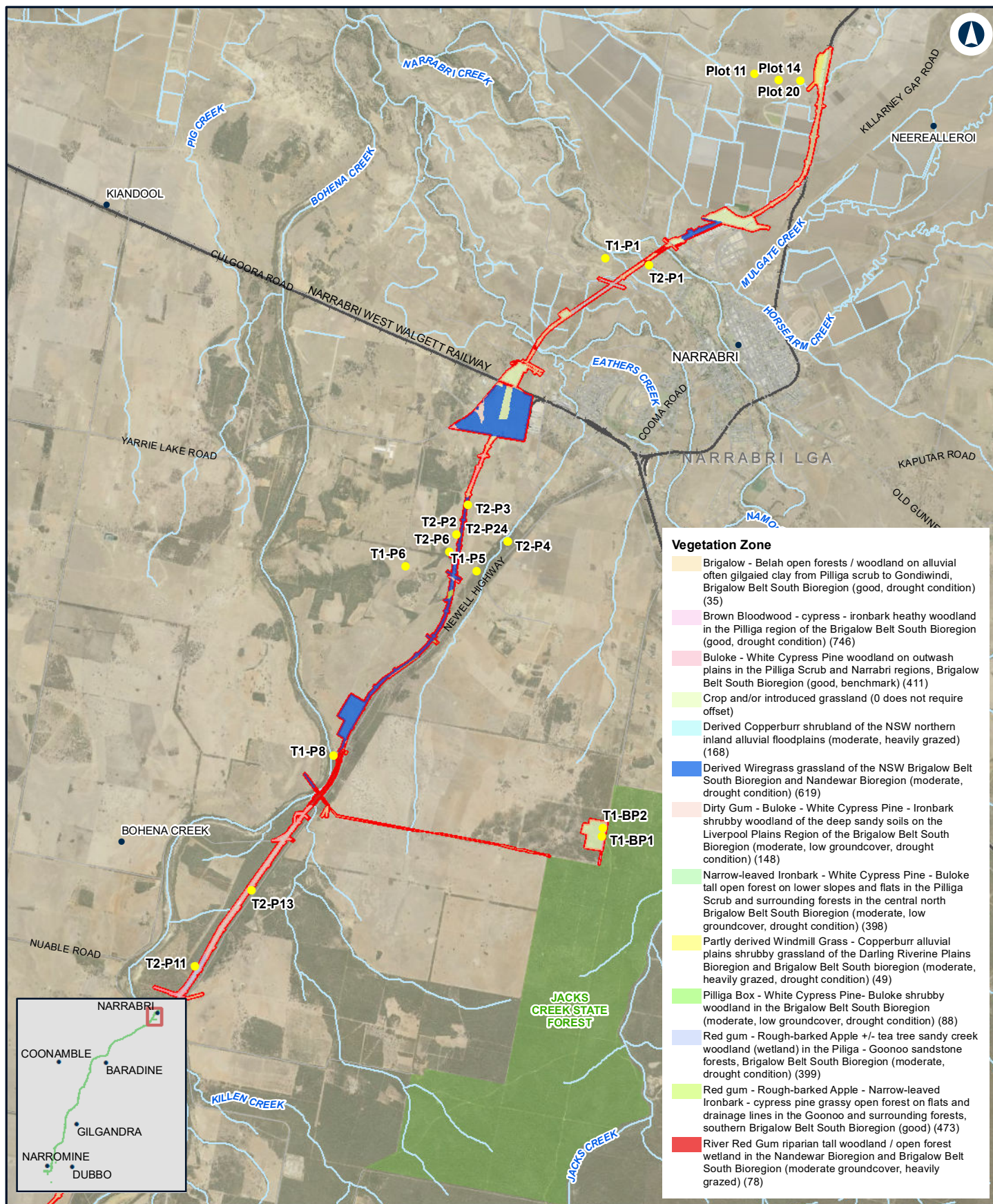
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NARROMINE TO NARRABRI

Vegetation Zone Map Segment 11 Pilliga to Narrabri

MAP 20 OF 20

0 1 2 Km

Coordinate System: GDA 1994 MGA Zone 55

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LEGEND

- The proposal
- Vegetation plot

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TECHNICAL REPORT

1

Biodiversity development assessment report

Appendix H PCT extent of impacts in investigation corridor

NARROMINE TO NARRABRI ENVIRONMENTAL IMPACT STATEMENT



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Table H1 PCT extent of impacts in investigation corridor

Plant Community Type	Impact area (ha)	Impact area as % of PCT in investigation corridor
PCT 27- Weeping Myall open woodland of the Darling Riverine Plains bioregion and Brigalow Belt South Bioregion	3.05	28.06
PCT 35 Brigalow- Belah open forest/woodland on alluvial plains often gilgaied clay from Pilliga Scrub to Goondiwindi, Brigalow Belt South Bioregion	0.61	1.40
PCT 36 River Red Gum tall to very tall open forest / woodland wetland on rivers on floodplains mainly in the Darling Riverine Plains Bioregion	5.08	11.41
PCT 49 Partly derived Windmill Grass - copperburr alluvial plains shrubby grassland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	176.10	51.34
PCT 55 Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions	0.21	0.87
PCT 56 Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW	19.5	15.6
PCT 78 River Red Gum riparian tall woodland / open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion	26.23	13.78
PCT 88 Pilliga Box - White Cypress Pine - Buloke shrubby woodland in the Brigalow Belt South Bioregion	276.1	19.8
PCT 141 Broombush - wattle very tall shrubland of the Pilliga to Goonoo regions, Brigalow Belt South Bioregion	29.47	27.06
PCT 145 Western Rosewood - Wilga - Wild Orange - Belah low woodland of the Brigalow Belt South Bioregion and eastern Darling Riverine Plains bioregion	53.99	30.5
PCT 148 Dirty Gum - Buloke - White Cypress Pine - ironbark shrubby woodland on deep sandy soils in the Liverpool Plains region of the Brigalow Belt South Bioregion	45.04	25.08
PCT 168 Derived Copperburr shrubland of the NSW northern inland alluvial floodplains	8.56	12.48
PCT 185 - Dwyer's Red Gum - White Cypress Pine - Currawang shrubby woodland mainly in the NSW South Western Slopes Bioregion	1.37	15.71
PCT 202 Fuzzy Box woodland on colluvium and alluvial flats in the Brigalow Belt South Bioregion (including Pilliga) and Nandewar Bioregion	3.59	43.60
PCT 206 Dirty Gum – White Cypress Pine – Buloke shrubby woodland in the Brigalow Belt South Bioregion	12.66	32.46
PCT 244 Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt).	31.84	17.3
PCT 247 Lignum shrubland wetland on regularly flooded alluvial depressions in the Brigalow Belt South Bioregion and Darling Riverine Plains Bioregion	6.91	11.05
PCT 248 Mixed box eucalypt woodland on low sandy-loam rises on alluvial plains in central western NSW	14.71	43.42
PCT 250 Derived tussock grassland of the central western plains and lower slopes of NSW	82.84	25.41
PCT 255 - Mugga Ironbark - Buloke - Pilliga Box - White Cypress Pine shrubby woodland on sandstone in the Dubbo region, south-western Brigalow Belt South Bioregion	11.77	5.59

Plant Community Type	Impact area (ha)	Impact area as % of PCT in investigation corridor
PCT 256 - Green Mallee tall mallee woodland on rises in the Pilliga - Goonoo regions, southern Brigalow Belt South Bioregion	0.27	28.39
PCT 394 Narrow-leaved Ironbark - White Cypress pine woodland on slopes and flats in the Coonabarabran - Pilliga Scrub regions	69.66	23.48
PCT 397 Poplar Box - White Cypress Pine shrub grass tall woodland of the Pilliga-Warialda region, Brigalow Belt South Bioregion	15.78	25.93
PCT 398 Narrow-leaved Ironbark - White Cypress Pine - Buloke tall open forest on lower slopes and flats in the Pilliga Scrub and surrounding forests in the central north Brigalow Belt South Bioregion	369.78	22.27
PCT 399 Red gum - Rough-barked Apple +/- tea tree sandy creek woodland (wetland) in the Pilliga - Goonoo sandstone forests, Brigalow Belt South Bioregion	53.71	26.92
PCT 404 Red Ironbark - White Bloodwood +/- Burrows Wattle heathy woodland on sandy soil in the Pilliga forests	23.05	36.36
PCT 406 White Bloodwood - Motherumbah - Red Ironbark shrubby sandstone hill woodland / open forest mainly in east Pilliga forests	2.3	33.62
PCT 409 Dirty (Baradine) Gum - White Bloodwood - White Cypress Pine - Motherumbah shrubby woodland on sandy soils in the Pilliga Scrub and surrounding region, Brigalow Belt South Bioregion	0.82	20.58
PCT 411 - Buloke - White Cypress Pine woodland on outwash plains in the Pilliga Scrub and Narrabri regions, Brigalow Belt South Bioregion	8.76	52.14
PCT 414 White Mallee - Dwyer's Red Gum mallee heath on sands in the Goonoo - Pilliga region, Brigalow Belt South Bioregion	7.32	41.93
PCT 435 White Box White Cypress Pine shrub grass hills woodland in the Brigalow Belt South and Nandewar bioregion	6.11	unknown
PCT 436 Derived Kurrajong grassy open woodland / isolated trees in the Brigalow Belt South Bioregion and Nandewar Bioregion	5.98	8.6
PCT 444 Silver-leaved Ironbark grassy tall woodland on clay-loam soils on plains in the Brigalow Belt South Bioregion	1.11	9.87
PCT 473 - Red gum - Rough-barked Apple - Narrow-leaved Ironbark - cypress pine grassy open forest on flats and drainage lines in the Goonoo and surrounding forests, southern Brigalow Belt South Bioregion	15.26	40.57
PCT 589 White Box - White Cypress Pine - Silver-leaved Ironbark grassy woodland on mainly clay loam soils on hills mainly in the Nandewar Bioregion	1.23	14.29
PCT 599 Blakely's Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South Bioregion and Nandewar Bioregion	2.21	14.92
PCT 619 Derived Wire Grass grassland of the NSW Brigalow Belt South Bioregion and Nandewar Bioregion	326.26	26.5
PCT 746 Brown Bloodwood - cypress - ironbark heathy woodland in the Pilliga region of the Brigalow Belt South Bioregion	2.12	2.59
PCT 1384 White Cypress Pine - Bulloak - ironbark woodland of the Pilliga area of the Brigalow Belt South Bioregion	8.77	18.94