

## **APPENDICES**

## **APPENDIX A - IMAGES**



Photo: View of Waterfall Way at Marx Hill looking west towards Bellingham (Image: SDW)



Photo: View of Waterfall Way looking east towards Pacific Highway (Image: SDW)



**Photo: View of excavation and fill area of the proposed realignment (Image: SDW)**



**Photo: Looking north-east towards Marx Hill signage. Taken at Mount Lookout opposite Cyril Siddons rest area (Image: SDW)**



Photo: Mount Lookout visitor facilities (Image: SDW)



Photo: Marx Hill Commemorative Plaque at Mount Lookout (Image: SDW)



Photo: Cyril Siddons rest area opposite Mount Lookout on Waterfall Way (Image: SDW)



Photo: Interpretive Signage at Cyril Siddons Rest Area (Image: SDW)

## **APPENDIX B – CONCEPT DESIGN**

## **APPENDIX C – NOISE AND VIBRATION ASSESSMENT**



**APPENDIX D – THREATENED FLORA LIKELIHOOD OF  
OCCURENCE**

**Summary of initial assessment to determine the likelihood of occurrence of threatened fauna species, populations and ecological communities in the Proposal site.**

An assessment of likelihood of occurrence was made for threatened flora identified from various database searches. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat, features of the Proposal site, results of the field survey and professional judgement. The terms for likelihood of occurrence are defined below:

- 'yes' = the species was or has been observed on the site
- 'likely' = a medium to high probability that a species uses the site
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- 'unlikely' = a very low to low probability that a species uses the site
- 'no' = habitat on site and in the vicinity is unsuitable for the species.

Species	TSC	EPBC	Habitat	Previous Records Within 10km	Recorded During Field Survey	Likelihood of Occurrence (7PT/EPBC?)
<i>Acacia chrysotricha</i>	EI	-	Restricted to an area south of Bellingen on the NSW north coast. An understorey species on rainforest edges and in wet or dry eucalypt forest in steep narrow gullies on quartzite soils. Newry Golden Wattle is relatively short-lived. The seeds which remain in the soil require heat from fire to induce germination. Too-frequent fire may lead to a decline in the population, as gradual exhaustion of the soil-borne seed bank will result, with no replacement of adult plants over time.	43	No	No
<i>Amorphaespermum whitei</i> Rusty Plum	V	-	Rusty Plum occurs in the coast and adjacent ranges of northern NSW from the Macleay River into southern Queensland. Its distributional stronghold is on the mid north coast around Coffs Harbour. Rainforest and the adjacent understorey of moist eucalypt forest.	71	No	Unlikely
<i>Arthraxon hispidus</i> Hairy-joint Grass	V	V	Occurs over a wide area in south-east Queensland, and on the northern tablelands and north coast of NSW, but is never common. Also found from Japan to central Eurasia. Moisture and shade-loving grass, found in or on the edges of rainforest and in wet eucalypt forest, often near creeks or swamps.	0	No	No

Species	TSC	EPBC	Habitat	Previous Records Within 10km	Recorded During Field Survey	Likelihood of Occurrence (7PT/EPBC?)
<i>Cynanchum elegans</i> White-flowered Wax Plant	E	E	Restricted to eastern NSW where it is distributed from Brunswick Heads on the north coast to Gerroa in the Illawarra region. The species has been recorded as far west as Merriwa in the upper Hunter River valley. The White-flowered Wax Plant usually occurs on the edge of dry rainforest vegetation. Other associated vegetation types include littoral rainforest; Coastal Tea-tree <i>Leptospermum laevigatum</i> – Coastal Banksia <i>Banksia integrifolia</i> subsp. <i>integrifolia</i> coastal scrub; Forest Red Gum <i>Eucalyptus tereticornis</i> aligned open forest and woodland; Spotted Gum <i>Eucalyptus maculata</i> aligned open forest and woodland; and Bracelet Honeymyrtle <i>Melaleuca armillaris</i> scrub to open scrub. Flowering occurs between August and May, with a peak in November. Flower abundance on individual plants varies from sparse to prolific. The fruit can take up to six months to mature. Seed production is variable and unreliable. Seeds are wind dispersed. It is considered to be unlikely that a soil seed bank for this species exists. Plants are capable of suckering from rootstock in response to occasional slashing or grazing. The fire response of the species is unknown.	0	No	No
<i>Dendrobium melaleucaphilum</i>	E	-	Occurs in coastal districts and nearby ranges, extending from Queensland to its southern distributional limit in the lower Blue Mountains. In NSW, it is currently known from seven recent collections. There has been no subsequent confirmation from the locations of three earlier (pre-1922) collections and it is possible that these are now extinct. Grows frequently on <i>Melaleuca styphelioides</i> , less commonly on rainforest trees or on rocks in coastal districts. Flowers July–October.	1	No	No
<i>Grevillea hilliiana</i> White Silky Oak/Yiel Yiel	E	-	North from Brunswick Heads on the north coast of NSW and in Queensland. The only populations currently known in NSW are near Brunswick Heads and on the slopes of Mt Chincogan in Byron Shire and, in Tweed Shire in remnant patches of habitat, particularly around Terranora. White Yiel Yiel grows in subtropical rainforest, often on basalt-derived soils.	2	No	No
<i>Hicksbeachia pinnatifolia</i> Red Bopple Nut	V	V	Coastal areas of north-east NSW from the Nambucca Valley north to south-east Queensland. Subtropical rainforest, moist eucalypt forest and Brush Box forest.	3	No	No
<i>Marsdenia longiloba</i>	E	V	Scattered sites on the north coast of NSW north from Barrington Tops. Also occurs in south-east Queensland. Subtropical and warm temperate rainforest, lowland moist eucalypt forest adjoining rainforest and, sometimes, in areas with rock outcrops.	2	No	Unlikely
<i>Melichrus hirsutus</i>	E	-	Restricted to a few locations near Grafton in north-east NSW. Dry eucalypt forest with a shrubby understorey on sandy infertile soils with rock outcrops.	1	No	No

Species	TSC	EPBC	Habitat	Previous Records Within 10km	Recorded During Field Survey	Likelihood of Occurrence (7PT/EPBC?)
<i>Parsonia dorrigoensis</i> Milky Silkpod	V	E	Milky Silkpod is found only within NSW, with scattered populations in the north coast region between Kendall and Woolgoolga. Found in subtropical and warm-temperature rainforest, on rainforest margins, and in moist eucalypt forest up to 800 m, on brown clay soils. Flowers in summer. Little is known of the species' reproductive biology. Appears to be able to withstand, and maybe even favour, light to moderate physical disturbance. Has a well developed root stock, suggesting it may re-sprout after fire.	35	No	Potential (7PT and EPBC required)
<i>Peristeranthus hillii</i>	V	V	Found in north-eastern NSW, north from Port Macquarie, extending to north-eastern Queensland as far as the Bloomfield River. Restricted to coastal and near-coastal environments, particularly Littoral Rainforest and the threatened ecological community Lowland Rainforest on Floodplain. The species is an epiphyte, growing in clumps on tree trunks and thick vines. Flowers appear during September and October. Tiny scented flowers produce nectar and are pollinated by small beetles.	1	No	Unlikely
<i>Sarcochilus fitzgeraldii</i>	V	V	North-east NSW, north of the Macleay River, to Maleny in south-east Queensland. The Ravine Orchid grows mainly on rocks, amongst organic matter, in cool, moist, shady ravines, gorges and on cliff faces in dense subtropical rainforest at altitudes between 500 and 700 m. Occasional clumps are found on the bases of fibrous-barked trees.	1	No	No
<i>Taeniopyllum muelleri</i> Minute Orchid, Ribbon-root Orchid	-	V	Grows on outer branches and branchlets of rainforest trees on the coast and ranges, from sea level to 250 m alt. North from the Manning River.	0 (Nearest record from Dorrigo NP)	No	Unlikely
<i>Thesium australe</i> Austral Toadflax	V	V	Austral Toad-flax is found in very small populations scattered across eastern NSW, along the coast, and from the Northern to Southern Tablelands. It is also found in Tasmania and Queensland and in eastern Asia. Occurs in grassland or grassy woodland. Often found in damp sites in association with Kangaroo Grass ( <i>Themeda australis</i> ), on which it is a root parasite that takes water and nutrients.	0	No	No
<i>Tylophora woollsii</i> Cryptic forest Twiner	E	E	The Cryptic Forest Twiner is found from the NSW north coast and New England Tablelands to southern Queensland, but is very rare within that range. Known on the Tablelands from the Bald Rock and Boonoo Boonoo areas north of Tenterfield. This species grows in moist eucalypt forest, moist sites in dry eucalypt forest and rainforest margins. Flowering occurs in summer and autumn, usually between January and March but sometimes as late as November. Thought to be wind-dispersed. Plants appear to persist as a network of stems under leaf litter when aerial stems are absent.	0	No	No



**APPENDIX E – THREATENED FAUNA LIKELIHOOD OF  
OCCURENCE**

**Summary of initial assessment to determine the likelihood of occurrence of threatened fauna species, populations and ecological communities in the Proposal site.**

An assessment of likelihood of occurrence was made for threatened and migratory species identified from the database search. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat, features of the Proposal site, results of the field survey and professional judgement. The terms for likelihood of occurrence are defined below:

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- ‘no’ = habitat on site and in the vicinity is unsuitable for the species.

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
A moth <i>Phyllodes imperalis</i> (Southern subspecies)	E	E	Lower montane rainforests from QLD to NSW, where larvae appear to be dependent on the vine <i>Carronia multisepelea</i> (NSW Scientific Committee 2004). Breeding habitat is considered to be restricted to undisturbed old growth subtropical rainforest below 600m altitude (NSW Scientific Committee 2004)	No	0	No
Australasian Bittern <i>Botaurus poiciloptilus</i>	V	—	Terrestrial wetlands with tall dense vegetation, occasionally estuarine habitats (Marchant & Higgins 1993). Reedbeds, swamps, streams, estuaries (Simpson & Day 1999).	No	4	No
Barred Cuckoo-shrike <i>Coracina lineata</i>	V	—	It is associated with subtropical, dry and littorial rainforests and is restricted to below 500m elevation (DECC 2007).	No	3	Unlikely
Beach Stone-curlew <i>Esacus neglectus</i>	E	—	Beaches, mudflats, reefs and especially islands (Blakers et al. 1984). Open undisturbed beaches, islands, reefs, intertidal sand and mudflats, preferably with estuaries or mangroves nearby (DECC 2007).	No	1	No
Bellinger River Emydura <i>Emydura signata</i>	V	V	The Bellinger River Emydura is restricted to the upper Bellinger River above Thora. It prefers long, deep pools in broad reaches of	No	0	No

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
<i>Emydura macquarii</i>			the upper Bellinger River.			
Black Bittern <i>Ixobrychus flavicollis</i>	V	—	Occurs in both terrestrial and estuarine wetlands generally in areas of permanent water and dense vegetation (DECC 2007). In areas with permanent water it may occur in flooded grassland, forest, woodland, rainforest and mangroves (DECC 2007)	No	12	No
Black Flying-Fox <i>Pteropus alecto</i>	V	—	Mangroves, paperbark forests and occasionally patches of rainforest are most commonly utilised for camp sites (Strahan 1998; Churchill 1998). They have been found to occupy a range of habitats of tropical and sub-tropical forests and woodlands (Churchill 1998). Preferred food includes blossoms (such as eucalypts, paperbarks and turpentines), also introduced fruits and blossoms (Strahan 1998).	No	1	Unlikely
Black-faced Monarch <i>Monarcha melanopsis</i>	—	M	Rainforest and eucalypt forests, feeding in tangled understorey (Blakers et al. 1984).	No	0	Unlikely
Black-necked Stork <i>Ephippiorhynchus asiaticus</i>	E	—	Associated with tropical and warm temperate terrestrial wetlands, estuarine and littoral habitats, and occasionally woodlands and grasslands floodplains (Marchant & Higgins 1993). Forages in fresh or saline waters up to 0.5m deep, mainly in open fresh waters, extensive sheets of shallow water over grasslands or sedgeland, mangroves, mudflats, shallow swamps with short emergent vegetation and permanent billabongs and pools on floodplains (Marchant & Higgins 1993; DECC 2007).	No	47	No
Booroolong Frog <i>Litoria booroolongensis</i>	E	—	Typically inhabits rocky western-flowing creeks and their headwaters, although a small number of animals have also been recorded in eastern-flowing streams (NSW Scientific Committee 1998).	No	0	No
Brown Treecreeper <i>Climacteris picumnus</i>	V	—	Distributed through central NSW on the western side of the Great Dividing Range and sparsely scattered to the east of the Divide in drier areas such as the Cumberland Plain of Western Sydney, and in parts of the Hunter, Clarence, Richmond and Snowy River valleys. The Brown Treecreeper occupies eucalypt woodlands, particularly open woodland lacking a dense understorey. It is sedentary and nests in tree hollows within permanent territories. (NSW Scientific Committee 2001).	No	1	Unlikely
Brown Treecreeper (eastern subspecies) <i>Climacteris picumnus victoriae</i>	V	—				



Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
Brush-tailed Phascogale <i>Phascogale tapoatafa</i>	V	—	Preferred habitat is Dry Open forest with a sparse open understorey, however, has been located in heath, swamps and rainforest and wet sclerophyll forest (DECC 2007).	No	18	Unlikely
Bush Stone-curlew <i>Burhinus grallarius</i>	E	—	Associated with dry open woodland with grassy areas, dune scrubs, in savanna areas, the fringes of mangroves, golf courses and open forest / farmland (Pittwater Council 2000; Marchant & Higgins 1993). Forages in areas with fallen timber, leaf litter, little undergrowth and where the grass is short and patchy (Environment Australia 2000; Marchant & Higgins 1993). Is thought to require large tracts of habitat to support breeding, in which there is a preference for relatively undisturbed in lightly disturbed.	No	2	Unlikely
Cattle Egret <i>Ardea ibis</i>	—	M	Cattle Egrets forage on pasture, marsh, grassy road verges, rain puddles and croplands, but not usually in the open water of streams or lakes and they avoid marine environments (McKilligan, 2005). Some individuals stay close to the natal heronry from one nesting season to the next, but the majority leave the district in autumn and return the next spring. Cattle Egrets are likely to spend the winter dispersed along the coastal plain and only a small number have been recovered west of the Great Dividing Range (McKilligan, 2005).	No	0	No
Comb-crested Jacana <i>Irediparra gallinacea</i>	V	—	Freshwater wetlands, such as lagoons, billabongs, swamps, lakes and reservoirs, generally with abundant floating aquatic vegetation (Marchant and Higgins 1999).	No	1	Unlikely
Common Planigale <i>Planigale maculata</i>	V	—	Subtropical to dry rainforest, dry sclerophyll forest, heathland and grassland up to 400m elevation (DECC 2007; Strahan 1998). Habitat selection is dependant on surface cover (DECC 2007).	No	2	Unlikely
Diamond Firetail <i>Stagonopleura guttata</i>	V	—	Typically found in grassy eucalypt woodlands, but also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities (DECC 2007). It is often found in riparian areas and sometimes in lightly wooded farmland (DECC 2007). Appears to be sedentary, though some populations move locally, especially those in the south (DECC 2007).	No	1	Unlikely
East Coast Freetail Bat <i>Mormopterus norfolkensis</i>	V	—	Most records of this species are from dry eucalypt forest and woodland east of the Great Dividing Range (Churchill 1998). Individuals have, however, been recorded flying low over a rocky river in rainforest and wet sclerophyll forest and foraging in	No	4	Unlikely

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			clearings at forest edges (Environment Australia 2000; Allison & Hoyer 1998). Primarily roosts in hollows or behind loose bark in mature eucalypts, but have been observed roosting in the roof of a hut (Environment Australia 2000; Allison & Hoyer 1998).			
Eastern Bent-wing Bat <i>Miniopterus schreibersii oceanensis</i>	V	—	Associated with a range of habitats such as rainforest, wet and dry sclerophyll forest, monsoon forest, open woodland, paperbark forests and open grassland (Churchill 1998). It forages above and below the tree canopy on small insects (AMBS 1995, Dwyer 1995, Dwyer 1981). Will utilise caves, old mines, and stormwater channels, under bridges and occasionally buildings for shelter (Environment Australia 2000, Dwyer 1995).	No	7	Unlikely
Eastern Long-eared Bat <i>Nyctophilus bifax</i>	V	—	This species prefers wetter habitats, ranging from rainforest and monsoon forest to riverine forests of paperbark, but may be found in open woodland, tall open forest and dry sclerophyll woodland (Churchill 1998). These forest bats have been recorded roosting under peeling bark, among epiphytes, in tree hollows and in foliage (Churchill 1998). Individuals are likely to change roost sites nightly (DECC 2007).	No	2	Unlikely
Giant Barred Frog <i>Mixophyes iteratus</i>	E	E	Found on forested slopes of the escarpment and adjacent ranges in riparian vegetation, subtropical and dry rainforest, wet sclerophyll forests and swamp sclerophyll forest (DECC 2007; Ehmann 1997). This species is associated with flowing streams with high water quality, though habitats may contain weed species (Ehmann 1997). This species is not known from riparian vegetation disturbed by humans (NSW Scientific Committee 1999). During breeding eggs are kicked up onto an overhanging bank or the streams edge (DECC 2007).	No	43	No
Glossy Black-Cockatoo <i>Calyptorhynchus lathami</i>	V	—	Associated with a variety of forest types containing <i>Allocasuarina</i> species, usually reflecting the poor nutrient status of underlying soils (Environment Australia 2000; NPWS 1997; DECC 2007). Intact drier forest types with less rugged landscapes are preferred (DECC 2007). Nests in large trees with large hollows (Environment Australia 2000).	No	115	No <i>Allocasuarina</i> spp. not prominent within the study area. Impact on <i>Casuarina cunninghamiana</i> negligible
Golden-tipped Bat	V	—	The most favoured habitat for this species is moist closed forests	No	13	Unlikely

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
<i>Kerivoula papuensis</i>			often with a rainforest influence, however, some captures have been made in dry forests some distance from any rainforest (Lunney et. al. 1986; Parnaby and Mills, 1994). It has been suggested that the amount of vines and complex tree layers allows for increased numbers of spiders and webs and such areas are sought by the Golden-tipped Bat (Schulz & Eyre 2000). This species is often caught over streams within rainforest are known to frequently roost within the pendulous nests of Yellow-throated and Large-billed Scrub Wrens and Brown Gerygone in such areas (Schulz & Eyre 2000).			
Grass Owl <i>Tyto capensis</i>	V	—	Reported habitats include tall grass, swampy, sometimes tidal areas, mangrove fringes, grassy plains, coastal heaths, grassy woodland, cane grass, lignum, sedges, cumbungi, cane fields and grain stubble (Pizzey and Knight, 1997). The Grass Owl nests on the ground within dense tall grass, sedges, reeds and even sugarcane plantations (Pizzey and Knight, 1997). The Grass Owl primarily feeds on rodents, hunting on the wing over heathland, grassland and sedgeland, as well as along the edge of sugar cane, crops and pastureland (Pizzey and Knight, 1997).	No	2	No
Great Egret <i>Ardea alba</i>	—	M	The Great Egret is common and widespread in Australia (McKilligan, 2005). It forages in a wide range of wet and dry habitats including permanent and ephemeral freshwaters, wet pasture and estuarine mangroves and mudflats (McKilligan, 2005).	No	0	No
Green and Golden Bell Frog <i>Litoria aurea</i>	E	V	This species has been observed utilising a variety of natural and man-made waterbodies (Pyke & White 1996) such as coastal swamps, marshes, dune swales, lagoons, lakes, other estuary wetlands, riverine floodplain wetlands and billabongs, stormwater detention basins, farm dams, bunded areas, drains, ditches and any other structure capable of storing water (DECC 2007). Fast flowing streams are not utilised for breeding purposes by this species (Mahony 1999). Preferable habitat for this species includes attributes such as shallow, still or slow flowing, permanent and/or widely fluctuating water bodies that are unpolluted and without heavy shading (DECC 2007). Large permanent swamps and ponds exhibiting well-established fringing vegetation (especially bulrushes— <i>Typha</i> sp. and spikerushes— <i>Eleocharis</i> sp.) adjacent to open grassland areas for foraging are preferable (Ehmann 1997; Robinson	No	0	No

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			1993). Ponds that are typically inhabited tend to be free from predatory fish such as Mosquito Fish ( <i>Gambusia holbrooki</i> ) (DECC 2007).			
Green Thighed Frog <i>Litoria brevipalmata</i>	V	—	Wet sclerophyll forest along the northern coast of NSW to Ourimbah (Anstis 2002). Also in a variety of habitats including dry to wet sclerophyll forest, rainforests and shrubland with a healthy understorey (DECC 2007). Breeding aggregations occur in still water habitats such as grassy temporary to semi-permanent ponds and flooded ditches in late spring and summer (Cogger 2000; Anstis 2002; DECC 2007).	No	2	No
Grey-headed Flying-Fox <i>Pteropus poliocephalus</i>	V	V	Inhabits a wide range of habitats including rainforest, mangroves, paperbark forests, wet and dry sclerophyll forests and cultivated areas (Churchill 1998, Eby 1998). Camps are often located in gullies, typically close to water, in vegetation with a dense canopy (Churchill 1998).	No	7	Unlikely
Koala <i>Phascolarctos cinereus</i>	V	—	Associated with both wet and dry eucalypt forest and woodland that contains a canopy cover of approximately 10 to 70% (Reed et al. 1990), with acceptable Eucalypt food trees. Some preferred eucalyptus species are: <i>Eucalyptus tereticornis</i> , <i>E. punctata</i> , <i>E. cypellocarpa</i> , <i>E. viminalis</i>	No	525	Unlikely Less than 15% feed trees as defined in SEPP 44 within the study area
Large-eared Pied Bat <i>Chalinolobus dwyeri</i>	V	V	The Large-eared Pied Bat has been recorded in a variety of habitats, including dry sclerophyll forests, woodland, sub-alpine woodland, edges of rainforests and wet sclerophyll forests (Churchill 1998; DECC 2007). This species roosts in caves, rock overhangs and disused mine shafts and as such is usually associated with rock outcrops and cliff faces (Churchill 1998; DECC 2007).	No	0	No
Large-footed Myotis <i>Myotis adversus</i>	V	—	Will occupy most habitat types such as mangroves, paperbark swamps, riverine monsoon forest, rainforest, wet and dry sclerophyll forest, open woodland and River Red Gum woodland, as long as they are close to water (Churchill 1998). While roosting is most commonly associated with caves, this species has been observed to roost in tree hollows, amongst vegetation, in clumps of Pandanus, under bridges, in mines, tunnels and stormwater drains (Churchill 1998). However the species apparently has specific roost requirements, and only a small percentage of available caves, mines,	No	5	Unlikely

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			tunnels and culverts are used (Richards 1998).			
Latham's Snipe <i>Gallinago hardwickii</i>	—	M	A variety of permanent and ephemeral wetlands, preferring open fresh water wetlands with nearby cover (Marchant and Higgins 1999). Occupies a variety of vegetation around wetlands (Marchant and Higgins 1999) including wetland grasses and open wooded swamps (Simpson and Day 1999).	No	0	No
Little Bent-wing Bat <i>Miniopterus australis</i>	V	—	Prefers well-timbered areas including rainforest, wet and dry sclerophyll forests, Melaleuca swamps and coastal forests (Churchill 1998). This species shelters in a range of structures including culverts, drains, mines and caves (Environment Australia 2000). Relatively large areas of dense vegetation of wet sclerophyll forest, rainforest or dense coastal banksia scrub are usually found adjacent to caves in which this species is found (DECC 2007). Breeding occurs in caves, usually in association with <i>M. schreibersii</i> (Environment Australia 2000, DECC 2007).	No	17	Unlikely
Little Tern <i>Sterna albifrons</i>	E	—	Almost exclusively coastal, preferring sheltered areas (DECC 2007), however may occur several kilometres inland in harbours, inlets and rivers (Smith 1990). Australian birds breed on sandy beaches and sand spits (Simpson & Day 1999).	No	1	No
Long-nosed Potoroo <i>Potorous tridactylus</i>	V	—	Associated with dry coastal heath and dry and wet sclerophyll forests (Strahan 1998) with dense cover for shelter and adjacent more open areas for foraging (Menkhorst & Knight 2004).	No	1	Unlikely
Long-nosed Potoroo (SE Mainland Population) <i>Potorous tridactylus tridactylus</i>	—	V				
Mangrove Honeyeater <i>Lichenostomus fasciocularis</i>	V	—	Lives in mangroves, frequently visiting flowering shrubs in towns adjacent to mangroves. Spends some of its' time feeding close to the mud in mangroves (Blakers et al. 1984; DECC 2007).	No	1	No
Masked Owl <i>Tyto novaehollandiae</i>	V	—	Associated with forest with sparse, open, understorey, typically dry sclerophyll forest and woodland (DECC 2007) and especially the ecotone between wet and dry forest, and non forest habitat (Environment Australia 2000). Known to utilise forest margins and isolated stands of trees within agricultural land (Hyem 1979) and	No	9	Unlikely

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			heavily disturbed forest where its prey of small and medium sized mammals can be readily obtained (Kavanagh & Peake 1993).			
Osprey <i>Pandion haliaetus</i>	V	—	Associated with waterbodies including coastal waters, inlets, lakes, estuaries, beaches, offshore islands and sometimes along inland rivers (Schodde and Tidemann 1986; Clancy 1991; Olsen 1995). Osprey may nest on the ground, on sea cliffs or in trees (Olsen 1995). Osprey generally prefer emergent trees, often dead or partly dead with a broken off crown (Olsen 1995).	No	38	Unlikely
Painted Snipe (Australian subspecies) <i>Rostratula benghalensis australis</i>	E	E, M	Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber (DECC 2007). Nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds ( <i>ibid.</i> ). Breeding is often in response to local conditions; generally occurs from September to December (DECC 2007). Roosts during the day in dense vegetation (NSW Scientific Committee 2004). Forages nocturnally on mud-flats and in shallow water (DECC 2007). Feeds on worms, molluscs, insects and some plant-matter ( <i>ibid.</i> ).	No	0	No
Pied Oystercatcher <i>Haematopus longirostris</i>	V	—	Roosts and forages on sandy beaches, sand banks, mudflats and estuaries (Marchant & Higgins 1993, Simpson & Day 1999).	No	2	No
Powerful Owl <i>Ninox strenua</i>	V	—	Powerful Owls are associated with a wide range of wet and dry forest types with a high density of prey, such as arboreal mammals, large birds and flying foxes (Environment Australia 2000, Debus & Chafer 1994). Large trees with hollows at least 0.5m deep are required for shelter and breeding (Environment Australia 2000).	No	7	Unlikely
Rainbow Bee-eater <i>Merops ornatus</i>	—	M	Resident in coastal and subcoastal northern Australia; regular breeding migrant in southern Australia, arriving September to October, departing February to March, some occasionally present April to May (Pizzey and Doyle 1988). Occurs in open country, chiefly at suitable breeding places in areas of sandy or loamy soil: sand-ridges, riverbanks, road-cuttings, sand-pits, occasionally coastal cliffs ( <i>ibid.</i> ). Nest is a chamber at the end of a burrow, up to 1.6 m long, tunnelled in flat or sloping ground, sandy bank or cutting ( <i>ibid.</i> ).	No	0	No
Red-tailed Black-Cockatoo <i>Calyptorhynchus banksii</i>	V	—	Occurs in coastal forests and woodlands or inland open shrubland near water (Simpson & Day 1999). This species is noted to feed mainly on seeds, especially of eucalypts, casuarinas, acacia and	No	5	Unlikely

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			banksias. May also take berries, nectar, flowers and occasionally insects and their larvae (Marchant & Higgins 1993).			
Regent Honeyeater <i>Xanthomyza phrygia</i>	E	E, M	Associated with temperate eucalypt woodland and open forest including forest edges, wooded farmland and urban areas with mature eucalypts, and riparian forests of River Oak ( <i>Casuarina cunninghamiana</i> ) (Garnett 1993). Areas containing Swamp Mahogany ( <i>Eucalyptus robusta</i> ) in coastal areas have been observed to be utilised (NPWS 1997). The Regent Honeyeater primarily feeds on nectar from box and ironbark eucalypts and occasionally from banksias and mistletoes (NPWS 1995). As such it is reliant on locally abundant nectar sources with different flowering times to provide reliable supply of nectar (Environment Australia 2000).	No	0	Unlikely
Rose-crowned Fruit-Dove <i>Ptilinopus regina</i>	V	—	Tall tropical and subtropical, evergreen or semi-deciduous rainforests, especially with a dense growth of vines trees (Marchant and Higgins 1999). Also located in closed wet sclerophyll forest, gallery forests or sclerophyll woodlands with abundant fruiting trees, near or next to rainforest (DECC 2007). Is thought to prefer large areas of vegetation, but has been located in patches and occasionally in parks and gardens with fruiting trees (Marchant and Higgins 1999).	No	12	Potential (7PT required)
Rufous Fantail <i>Rhipidura rufifrons</i>	—	M	The Rufous Fantail is a summer breeding migrant to southeastern Australia (Morcombe, 2004). The Rufous Fantail is found in rainforest, dense wet eucalypt and monsoon forests, paperbark and mangrove swamps and riverside vegetation (Morcombe, 2004). Open country may be used by the Rufous Fantail during migration (Morcombe, 2004).	No	0	Unlikely
Satin Flycatcher <i>Myiagra cyanoleuca</i>	—	M	Associated with drier eucalypt forests, absent from rainforests (Blakers et al. 1984), open forests, often at height (Simpson & Day 1999).	No	0	Unlikely
Sooty Owl <i>Tyto tenebricosa</i>	V	—	Sooty Owls are associated with tall wet old growth forest on fertile soil with a dense understorey and emergent tall Eucalyptus species (Environment Australia 2000, Debus 1994). Pairs roost in the daytime amongst dense vegetation, in tree hollows and sometimes in caves. The Sooty Owl is typically associated with an abundant and diverse supply of prey items and a selection of large tree	No	16	Unlikely

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			hollows (Debus 1994, Garnett 1993, Hyem 1979).			
Spectacled Monarch <i>Monarcha trivirgatus</i>	—	M	Wet forests, mangroves (Simpson and Day 1999).	No	0	Unlikely
Spotted-tailed Quoll <i>Dasyurus maculatus</i>	V	—	The Spotted-tailed Quoll inhabits a range of forest communities including wet and dry sclerophyll forests, coastal heathlands and rainforests (Mansergh 1984; DECC 2007j), more frequently recorded near the ecotones of closed and open forest. This species requires habitat features such as maternal den sites, an abundance of food (birds and small mammals) and large areas of relatively intact vegetation to forage in (DECC 2007). Maternal den sites are logs with cryptic entrances; rock outcrops; windrows; burrows (Environment Australia 2000).	No	15	Unlikely
Spotted-tailed Quoll (SE Mainland Population) <i>Dasyurus maculatus maculatus</i>	—	E				
Square-tailed Kite <i>Lophoictinia isura</i>	V	—	In coastal areas associated tropical and temperate forests and woodlands on fertile soils with an abundance of passerine birds (Marchant & Higgins 1993, DECC 2007). May be recorded inland along timbered watercourses (DECC 2007). In NSW it is commonly associated with ridge or gully forests dominated by Woollybutt ( <i>Eucalyptus logiflora</i> ), Spotted Gum ( <i>E. maculata</i> ), or Peppermint Gum ( <i>E. elata</i> , <i>E. smithii</i> ) (DECC 2007).	No	10	Unlikely
Squirrel Glider <i>Petaurus norfolkensis</i>	V	—	Associated with dry hardwood forest and woodlands (Menkhorst et al. 1988; Quin 1995). Habitats typically include gum barked and high nectar producing species, including winter flower species (Menkhorst et al. 1988). The presence of hollow bearing eucalypts is a critical habitat value (Quin 1995).	No	1	No
Stephen's Banded Snake <i>Hoplocephalus stephensii</i>	V	—	Found in a variety of habitats from rainforest through wet and moist sclerophyll forests to dry sclerophyll forests (DECC 2007). However it is most commonly found in wet to moist forests with rocky outcrops, cliffs or ridges and tends to favour ecotones between wet and dry forests (DECC 2007). It most frequently uses gaps in the peeling bark of large senescent or dead trees for daytime shelter (DECC 2007). However it can use hollow trunks, limbs, epiphytes, vine thickets, rock crevices or rock slabs (DECC 2007).	No	1	No
Stuttering Frog <i>Mixophyes balbus</i>	E	V	A variety of forest habitats from rainforest through wet and moist sclerophyll forest to riparian habitat in dry sclerophyll forest (DECC 2007) that are generally characterised by deep leaf litter or thick	No	0	No



Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			cover from understorey vegetation (Ehmann 1997). Breeding habitats are streams and occasionally springs. Not known from streams disturbed by humans (Ehmann 1997) or still water environments (NSW Scientific Committee 2002).			
Swift Parrot <i>Lathamus discolor</i>	E	E	Breeds in Tasmania between September and January. Migrates to mainland in autumn, where it forages on profuse flowering Eucalypts (Blakers et al. 1984; Schodde and Tidemann 1986; Forshaw and Cooper 1981). Hence, in this region, autumn and winter flowering eucalypts are important for this species. Favoured feed trees include winter flowering species such as Swamp Mahogany ( <i>Eucalyptus robusta</i> ), Spotted Gum ( <i>Corymbia maculata</i> ), Red Bloodwood ( <i>C. gummifera</i> ), Mugga Ironbark ( <i>E. sideroxylon</i> ), and White Box ( <i>E. albens</i> ) (DECC 2007).	No	0	Unlikely
Wallum Froglet <i>Crinia tinnula</i>	V	—	Wallum swamps and associated low land meandering watercourses on coastal plains (Ehmann 1997). Occurs in elevations up to around 50m and is closely related to freshwater habitats in the coastal zone (DECC 2007). Found most commonly in wallum wetlands characterised by low nutrients, highly acidic, tannin-stained waters that are typically dominated by paperbarks and tea-trees. Also found in sedgeland and wet heathland (DECC 2007)	No	1	No
White-bellied Sea-Eagle <i>Haliaeetus leucogaster</i>	—	M	Forages over large open fresh or saline waterbodies, coastal seas and open terrestrial areas (Marchant & Higgins 1993, Simpson & Day 1999). Breeding habitat consists of tall trees, mangroves, cliffs, rocky outcrops, silts, caves and crevices and is located along the coast or major rivers. Breeding habitat is usually in or close to water, but may occur up to a kilometre away (Marchant & Higgins 1993).	No	0	Unlikely
White-throated Needletail <i>Hirundapus caudacutus</i>	—	M	Forages aerially over a variety of habitats usually over coastal and mountain areas, most likely with a preference for wooded areas (Marchant & Higgins 1993; Simpson & Day 1999). Has been observed roosting in dense foliage of canopy trees, and may seek refuge in tree hollows in inclement weather (Marchant & Higgins 1993).	No	0	Unlikely
Wompoo Fruit-Dove <i>Ptilinopus magnificus</i>	V	—	Associated with large, undisturbed patches of tall tropical or subtropical rainforest, at all altitudes, preferably with a diversity of	No	59	No

Scientific Name	Conservation Significance		Habitat Associations	Recorded During Field Survey	TSC Records within 10 km	Likelihood of Occurrence
	TSC Act	EPBC Act				
			fruit (Marchant and Higgins 1999; DECC 2007). Occasionally located in patches of monsoon rainforest, closed gallery forest, wet sclerophyll forest, tall open forest, open woodland or vine thickets near rainforest (Marchant and Higgins 1999; DECC 2007).			
Yellow-bellied Glider <i>Petaurus australis</i>	V	—	This species is restricted to tall mature forests, preferring productive tall open sclerophyll forests with a mosaic of tree species including some that flower in winter (Environment Australia 2000, Braithwaite 1984, Davey 1984, Kavanagh 1984; DECC 2007). Large hollows within mature trees are required for shelter, nesting and breeding (Henry and Craig 1984; DECC 2007).	No	17	No
Yellow-bellied Sheathtail-bat <i>Saccolaimus flaviventris</i>	V	—	Found in almost all habitats, from wet and dry sclerophyll forest, open woodland (Churchill 1998), open country, mallee, rainforests, heathland and waterbodies (SFNSW 1995). Roosts in tree hollows; may also use caves; has also been recorded in a tree hollow in a paddock (Environment Australia 2000) and in abandoned sugar glider nests (Churchill 1998). The Yellow-bellied Sheathtail-bat is dependent on suitable hollow-bearing trees to provide roost sites, which may be a limiting factor on populations in cleared or fragmented habitats (Environment Australia 2000).	No	1	Unlikely

## **APPENDIX F – EP&A ACT 7-PART TESTS**

## FLORA

### ***Parsonsia dorrigoensis***

*Parsonsia dorrigoensis* is listed as vulnerable on the TSC Act. The species was not recorded during the field survey; however it was concluded that potential habitat existed for the species within the study area within the Camphor Laurel Weed Forest as shown in Figure 2. As such, this Seven Part Test has been conducted to assess the significance of the impact of the Proposal on *Parsonsia dorrigoensis*.

The vegetation of the study area was assessed as being in poor condition and dominated by weed species. Approximately 1.6 ha of potential habitat for *Parsonsia dorrigoensis* will be removed by the Proposal.

*Parsonsia dorrigoensis* is a slender, trailing climber that grows to 5 m long. Plants exude a milky sap if cut. The leaves vary from narrow to broad, are 4 - 12 cm long, have a fine point and have green to purplish undersides. There are no glands at the base of the leaf-blade. Clusters of white or yellowish, tubular flowers are produced in summer, followed by narrow capsules (up to 7 cm long) that split lengthwise to release many seeds, each bearing a tuft of long, silky hairs.

*Parsonsia dorrigoensis* is found only within NSW in subtropical and warm-temperature rainforest, on rainforest margins and in moist eucalypt forest up to 800 m, on brown clay soils, with scattered populations in the north coast region between Kendall and Woolgoolga.

**In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.**

*Parsonsia dorrigoensis* flowers in summer. Due to its well developed root stock, it is likely to be able to withstand moderate levels of disturbance and may resprout from fire. The seeds have a tuft of long, silky hairs and are dispersed by wind.

*Parsonsia dorrigoensis* is considered to be a relatively conspicuous species but was not recorded during the field survey. It is unlikely that the species would have remained undetected during the field survey and, therefore, a viable local population of the species is unlikely to exist within the study area. As such, it is unlikely that a viable local population of the species will be placed at risk of extinction by the Proposal.

**In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.**

N/A

**In the case of a critically endangered or endangered ecological community, whether the action proposed:**

- i. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or
- ii. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.

N/A

**In relation to the habitat of a threatened species, population or ecological community:**

- i. the extent to which habitat is likely to be removed or modified as a result of the action proposed, and

- ii. **whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and**
- iii. **the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the Locality.**

#### **Extent**

*Parsonsia dorrigoensis* was not recorded within the study area during the field survey and the potential habitat for the species was considered to be in poor condition.

Following an analysis of NPWS (2001) *Completion of GIS products for the lower north east CRAFTI structural and floristic layers, Lower North East RFA Region*, it has been estimated that the potential habitat for *Parsonsia dorrigoensis* within the locality is approximately 4,800 ha. This is the sum of all rainforest, subtropical rainforest and other mesophyllic habitat within 5 km of the study area.

Approximately 1.6 ha of potential habitat for *Parsonsia dorrigoensis* will be removed by the Proposal. Furthermore, this habitat within the study area is in poor condition and marginal for the species. As such, the impact of the Proposal on the extent of *Parsonsia dorrigoensis* habitat within the locality is likely to be negligible.

#### **Fragmentation and Isolation**

The potential habitat for *Parsonsia dorrigoensis* within the study area is degraded and fragmented. The Proposal will fragment two existing patches of Camphor Laurel Weed Forest into 3 patches; however this is unlikely to exacerbate the existing fragmentation of the habitat within the study area.

#### **Importance**

*Parsonsia dorrigoensis* was not recorded during the field surveys and a negligible amount of potential and degraded habitat for the species will be removed by the Proposal. Furthermore, the potential fragmentation of habitat associated with the Proposal is unlikely to exacerbate the existing fragmentation on the site. Therefore, the importance of the potential habitat within the study area to the ecological integrity and long term survival of *Parsonsia dorrigoensis* is considered to be low.

#### **Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).**

Under the TSC Act, the Director-General of Department of Environment and Climate Change maintains a Register of Critical Habitat. To date, no critical habitat has been declared for *Parsonsia dorrigoensis*.

The Proposal will not have an adverse effect on critical habitat (directly or indirectly).

#### **Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.**

To date, no recovery plan has been prepared for *Parsonsia dorrigoensis* and no Priority Actions have been specified for the species.

The Threatened Species Profile for *Parsonsia dorrigoensis* (DECC 2005) suggests that the following two measures (relevant to this Proposal) are required for the recovery of the species:

- Control introduced weeds in potential habitat areas.
- Protect known habitat from clearing, high levels of disturbance and development.

#### **Whether the action proposed constitutes or is part of a Key Threatening Process or is likely to result in the operation of, or increase the impact of, a Key Threatening Process.**

The Proposal will result in the removal of 1.6 ha of degraded native vegetation which is potential habitat for *Parsonsia dorrigoensis* within the study area. The 'Clearing of Native Vegetation' constitutes a Key Threatening Process under the TSC Act.

Clearing will also result in the minimal removal of dead wood and trees from the site. The 'Removal of Dead Wood and Dead Trees' constitutes a Key Threatening Process under the TSC Act.

Additionally, the Proposal may indirectly result in the operation or increase the impact of following Key Threatening Processes:

- 'Invasion of Native Plant Communities by Exotic Perennial Grasses' – through the creation of disturbed edges, especially along newly battered road edges. However, this is not considered to be exacerbated by the Proposal due to the existing pressures of adjacent land uses and the highly degraded condition of the study area.
- 'Human-caused Climate Change' – through the loss of vegetation as a carbon-sink and the use of fossil fuels during the construction and operation of the Proposal. This is considered to be a relatively minor impact of the Proposal and is unlikely to increase the impact of this KTP on *Parsonsia dorrigoensis* in this case.

## Conclusion

It is considered unlikely that the Proposal will have a significant impact on *Parsonsia dorrigoensis* as:

- The species was not recorded within the study area during the field survey;
- A viable local population of the species is unlikely to exist within the study area;
- The removal or modification of 1.6 ha of the potential habitat for *Parsonsia dorrigoensis*, for which there is an estimated 4,800 ha within the locality, is considered to be negligible;
- The Proposal will not exacerbate the existing fragmentation of the habitat for *Parsonsia dorrigoensis* within the locality;
- The importance of the habitat to be impacted by the Proposal is considered to be low and therefore is unlikely to be important to the long term survival of the species in the locality; and
- The Proposal will not have an adverse effect on critical habitat (directly or indirectly).

## FAUNA

### Rose-crowned Fruit-dove

The Rose-crowned Fruit-dove (*Ptilinopus regina*) is listed as vulnerable on the TSC Act. The species was not detected during the field survey conducted on 19 August 2008 however it was concluded that potential habitat existed within the study area in the Camphor Laurel Weed Forest represented in Figure 2. The species is known to utilise the environmental weed Camphor Laurel (*Cinnamomum camphora*) as a feed tree. Some Camphor Laurel specimens will be removed as a result of the Proposal.

The Rose-crowned Fruit-dove inhabits tall tropical and subtropical, evergreen or semi-deciduous rainforests, especially with a dense growth of vines trees (Marchant and Higgins 1999). It will also inhabit closed wet sclerophyll forest, gallery forests or sclerophyll woodlands with abundant fruiting trees, near or next to rainforest (DECC 2007).

The species prefers large areas of vegetation, but has been located in patches and occasionally in parks and gardens with fruiting trees (Marchant and Higgins 1999). On this basis, and given that it has previously been recorded within the locality on 12 separate occasions, a Seven Part Test has been conducted.

The potential habitat for Rose-crowned Fruit-dove within the study area was assessed as being dominated by weed species, had a denuded structure and was in poor condition.

**In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.**

The Rose-crowned Fruit-dove is usually solitary or in pairs and can be shy and inconspicuous among foliage. The nest is a platform of twigs, usually in low growth or vines and one pure white, oval egg is produced during breeding. The species is thought to be fairly common in suitable habitat and populations are migratory in response to food availability. Numbers in north-east NSW increase during spring and summer then decline in April or May.

There are 12 records for Rose-crowned Fruit-dove within 10 km of the study area, the nearest of which is approximately 4.4 km to the north west. The species was not detected during the field survey and potential habitat for the species is considered to be less than ideal and in poor condition.

As such, it is unlikely that the Proposal will have an adverse effect on the life cycle of Rose-crowned Fruit-dove such that viable local populations will be placed at risk of extinction.

**In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.**

N/A

**In the case of a critically endangered or endangered ecological community, whether the action proposed:**

- iii. **is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or**
- iv. **is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.**

N/A

**In relation to the habitat of a threatened species, population or ecological community:**

- iv. **the extent to which habitat is likely to be removed or modified as a result of the action proposed, and**
- v. **whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and**
- vi. **the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the Locality.**

#### **Extent**

The Rose-crowned Fruit-dove was not recorded during the field survey.

Following an analysis of NPWS (2001) *Completion of GIS products for the lower north east CRAFTI structural and floristic layers, Lower North East RFA Region*, it has been estimated that the potential habitat for the Rose-crowned Fruit-dove within the locality is approximately 4,800 ha. This is the sum of all rainforest, subtropical rainforest and other mesophylllic habitat within 5 km of the study area.

Approximately 1.6 ha of potential habitat for the Rose-crowned Fruit-dove will be removed by the Proposal. The area of potential habitat within the study area is in poor condition and marginal for the species. As such,

the impact of the Proposal on the extent of potential Rose-crowned Fruit-dove habitat within the locality is likely to be negligible.

### **Fragmentation and Isolation**

The potential habitat for Rose-crowned Fruit-dove within the study area is highly degraded and fragmented. The Proposal will fragment two existing patches of Camphor Laurel Weed Forest into 3 patches; however this is unlikely to exacerbate the existing fragmentation of potential habitat within the study area.

### **Importance**

The Rose-crowned Fruit-dove was not recorded during the field surveys and a negligible amount of potential and degraded habitat for the species will be removed by the Proposal. Furthermore, the potential fragmentation of habitat associated with the Proposal is unlikely to exacerbate the existing fragmentation on the site. Therefore, the importance of the potential habitat within the study area to the ecological integrity and long term survival of the Rose-crowned Fruit-dove is considered to be low.

### **Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).**

Under the TSC Act, the Director-General of Department of Environment and Climate Change maintains a Register of Critical Habitat. To date, no critical habitat has been declared for the Rose-crowned Fruit-dove.

The Proposal will not have an adverse effect on critical habitat (directly or indirectly).

### **Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.**

To date, no recovery plan has been prepared for the Rose-crowned Fruit-dove.

The Threatened Species Profile for Rose-crowned Fruit-dove (DECC 2005) suggests that the following measures are required for the recovery of the species:

- Ensure Camphor Laurel removal is accompanied by replacement with local native laurel species;
- Protect known and potential food trees; and
- Protect remnant stands of rainforest and moist forest from clearing or development.

Furthermore, DECC has identified 19 Priority Actions to help recover Rose-crowned Fruit-dove, of which the following is considered to be relevant to the Proposal:

- Ensure that Camphor Laurel removal is compensated for by replacement with winter-fruiting native laurels, figs and Elaeocarpaceae to avoid significant reduction of existing food resources.

The Proposal will involve the removal of Camphor Laurel trees and therefore is not consistent with the objective of the above listed Priority Action for the species.

### **Whether the action proposed constitutes or is part of a Key Threatening Process or is likely to result in the operation of, or increase the impact of, a Key Threatening Process.**

The Proposal will result in the removal of 1.6 ha of degraded native vegetation which is potential habitat for the Rose-crowned Fruit-dove within the study area. The 'Clearing of Native Vegetation' constitutes a Key Threatening Process under the TSC Act.

Clearing will also result in the minimal removal of dead wood and trees from the site. The 'Removal of Dead Wood and Dead Trees' constitutes a Key Threatening Process under the TSC Act.

Additionally, the Proposal may indirectly result in the operation or increase the impact of following Key Threatening Processes:



- 'Invasion of Native Plant Communities by Exotic Perennial Grasses' – through the creation of disturbed edges, especially along newly battered road edges. However, this is not considered to be exacerbated by the Proposal due to the existing pressures of adjacent land uses and the highly degraded condition of the study area.
- 'Human-caused Climate Change' – through the loss of vegetation as a carbon-sink and the use of fossil fuels during the construction and operation of the Proposal. This is considered to be a relatively minor impact of the Proposal and is unlikely to increase the impact of this KTP on Rose-crowned Fruit-dove in this case.

### **Conclusion**

The Proposal is inconsistent with the objective of one Priority Action for the recovery of Rose-crowned Fruit-dove (as defined by DECC) and is likely to lead to the minor operation of three Key Threatening Processes.

However, The Proposal is unlikely to result in a significant impact on the Rose-crowned Fruit-dove, as:

- The species was not recorded within the study area during the field survey;
- The removal or modification of 1.6 ha of the potential habitat for Rose-crowned Fruit-dove, for which there is an estimated 4,800 ha within the locality, is considered to be negligible;
- The Proposal will not exacerbate the existing fragmentation of the habitat for Rose-crowned Fruit-dove within the locality;
- The importance of the habitat to be impacted by the Proposal is considered to be low and therefore is unlikely to be important to the long term survival of Rose-crowned Fruit-dove; and
- The Proposal will not have an adverse effect on critical habitat (directly or indirectly).

## **APPENDIX G – EPBC ACT SIGNIFICANT IMPACT CRITERIA**

## CRITICALLY ENDANGERED AND ENDANGERED SPECIES

### ***Parsonsia dorrigoensis***

*Parsonsia dorrigoensis* is listed as endangered on the EPBC Act. The species was not recorded during the field survey, however it was concluded that potential habitat existed for the species within the study area within the Camphor Laurel Weed Forest as shown in Figure 2.

The vegetation of the study area was assessed as being in poor condition and dominated by weed species. Approximately 1.6 ha of potential habitat for *Parsonsia dorrigoensis* will be removed by the Proposal.

*Parsonsia dorrigoensis* is a slender, trailing climber that grows to 5 m long. Plants exude a milky sap if cut. The leaves vary from narrow to broad, are 4 - 12 cm long, have a fine point and have green to purplish undersides. There are no glands at the base of the leaf-blade. Clusters of white or yellowish, tubular flowers are produced in summer, followed by narrow capsules (up to 7 cm long) that split lengthwise to release many seeds, each bearing a tuft of long, silky hairs.

*Parsonsia dorrigoensis* is found only within NSW in subtropical and warm-temperature rainforest, on rainforest margins and in moist eucalypt forest up to 800 m, on brown clay soils, with scattered populations in the north coast region between Kendall and Woolgoolga.

### Population of a Species

A 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:

- A geographically distinct regional population, or collection of local populations; or
- A population, or collection of local populations, that occurs within a particular bioregion.

The Atlas of NSW Wildlife contains 12 separate records for *Parsonsia dorrigoensis* within 10 km of the study area and therefore the species is considered to have a distinct regional population. However, *Parsonsia dorrigoensis* is considered to be a relatively conspicuous species but was not recorded during the field survey. Furthermore, the nearest record for the species to the study area is approximately 4.4 km to the northwest. Therefore, a viable local population of the species is unlikely to exist within the study area.

**An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:**

#### **a) Lead to a long-term decrease in the size of a population.**

As a viable local population of *Parsonsia dorrigoensis* is unlikely to exist within the study area, it is unlikely that the Proposal will lead to a long-term decrease in the size of a population of the species.

#### **b) Reduce the area of occupancy of the species.**

*Parsonsia dorrigoensis* was not recorded within the study area during the field survey and the potential habitat for the species was considered to be in poor condition.

Following an analysis of NPWS (2001) *Completion of GIS products for the lower north east CRAFTI structural and floristic layers, Lower North East RFA Region*, it has been estimated that the potential habitat for *Parsonsia dorrigoensis* within the locality is approximately 4,800 ha. This is the sum of all rainforest, subtropical rainforest and other mesophyllic habitat within 5 km of the study area.

Approximately 1.6 ha of potential habitat for *Parsonsia dorrigoensis* will be removed by the Proposal. Furthermore, this habitat within the study area is in poor condition and marginal for the species. As such, the impact of the Proposal on the extent of *Parsonsia dorrigoensis* habitat within the locality is likely to be negligible.

The Proposal is unlikely to reduce the area occupancy of *Parsonsia dorrigoensis*.

**c) Fragment an existing population into two or more populations.**

As a viable local population of *Parsonsia dorrigoensis* is unlikely to exist within the study area, it is unlikely that the Proposal will fragment an existing population into two or more populations.

**d) Adversely affect habitat critical to the survival of a species.**

Whilst the study area is considered to have potential habitat for *Parsonsia dorrigoensis*, this habitat is not considered to be critical to the survival of the species.

No critical habitat as listed on the EPBC Act is present within the study area.

**e) Disrupt the breeding cycle of a population.**

As a viable local population of *Parsonsia dorrigoensis* is unlikely to exist within the study area, it is unlikely that the Proposal will disrupt the breeding cycle of a population.

**f) Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

*Parsonsia dorrigoensis* was not recorded within the study area during the field survey and the potential habitat for the species was considered to be in poor condition.

Following an analysis of NPWS (2001) *Completion of GIS products for the lower north east CRAFTI structural and floristic layers, Lower North East RFA Region*, it has been estimated that the potential habitat for *Parsonsia dorrigoensis* within the locality is approximately 4,800 ha. This is the sum of all rainforest, subtropical rainforest and other mesophyllic habitat within 5 km of the study area.

Approximately 1.6 ha of potential habitat for *Parsonsia dorrigoensis* will be removed by the Proposal. Furthermore, this habitat within the study area is in poor condition and marginal for the species. As such, the impact of the Proposal on the extent of *Parsonsia dorrigoensis* habitat within the locality is likely to be negligible.

It is unlikely that the removal or modification of 1.6 ha of poor condition habitat for *Parsonsia dorrigoensis* within the study area will decrease the availability or quality of habitat to the extent that the species is likely to decline.

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.**

The vegetation of the study area was assessed as being in poor condition and dominated by weed species. It is therefore unlikely that the Proposal will result in invasive species that are harmful to *Parsonsia dorrigoensis* becoming established in the species' habitat.

**h) Introduce disease that may cause the species to decline.**

No known disease adversely affects *Parsonsia dorrigoensis* and, therefore, the Proposal is unlikely to introduce a disease that may cause the species to decline.

**i) Interfere with the recovery of the species.**

To date, no recovery plan has been prepared for *Parsonsia dorrigoensis* under either the TSC Act or EPBC Act.

## **Conclusion**

For the reasons stated in the Significant Impact Criteria above, the Proposal is considered unlikely to have a significant impact on *Parsonsia dorrigoensis*.

## **APPENDIX H – RESULTS OF DATABASE SEARCHES**



## Protected Matters Search Tool

You are here: [Environment Home](#) > [EPBC Act](#) > [Search](#)

3 October 2008 14:18

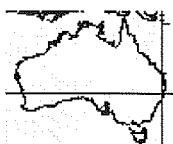
## EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Information on the coverage of this report and qualifications on data supporting this report are contained in the [caveat](#) at the end of the report.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

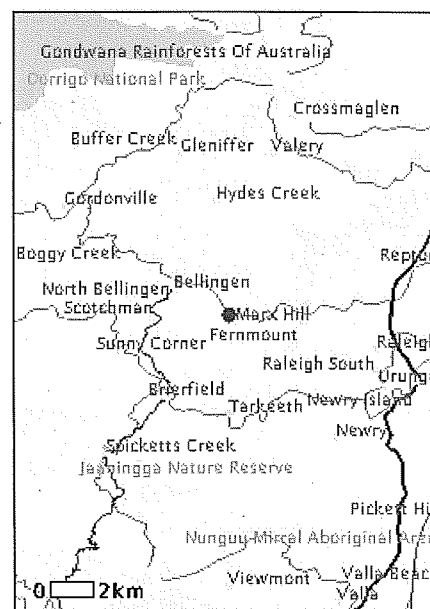
**Search Type:** Point  
**Buffer:** 10 km  
**Coordinates:** -30.464797,152.923947



**Report Contents:** [Summary](#)  
[Details](#)

- [Matters of NES](#)
- [Other matters protected by the EPBC Act](#)

• [Extra Information](#)  
[Caveat](#)  
[Acknowledgments](#)



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## Summary

### Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

<b>World Heritage Properties:</b>	None
<b>National Heritage Places:</b>	None
<b>Wetlands of International Significance: (Ramsar Sites)</b>	None
<b>Commonwealth Marine Areas:</b>	None
<b>Threatened Ecological Communities:</b>	None

<b>Threatened Species:</b>	21
<b>Migratory Species:</b>	15

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>.

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at <http://www.environment.gov.au/epbc/permits/index.html>.

<b>Commonwealth Lands:</b>	1
<b>Commonwealth Heritage Places:</b>	None
<b>Places on the RNE:</b>	6
<b>Listed Marine Species:</b>	13
<b>Whales and Other Cetaceans:</b>	None
<b>Critical Habitats:</b>	None
<b>Commonwealth Reserves:</b>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<b>State and Territory Reserves:</b>	2
<b>Other Commonwealth Reserves:</b>	None
<b>Regional Forest Agreements:</b>	2

## Details

### Matters of National Environmental Significance

Threatened Species [ <a href="#">Dataset Information</a> ]	Status	Type of Presence
<b>Birds</b>		
<i>Lathamus discolor</i> Swift Parrot	Endangered	Species or species habitat may occur within area
<i>Rostratula australis</i> Australian Painted Snipe	Vulnerable	Species or species habitat may occur within area
<i>Xanthomyza phrygia</i> Regent Honeyeater	Endangered	Species or species habitat likely to occur within area
<b>Frogs</b>		
<i>Litoria aurea</i> Green and Golden Bell Frog	Vulnerable	Species or species habitat likely to occur within area



<u><i>Litoria booroolongensis</i></u> Booroolong Frog	Endangered	Species or species habitat may occur within area
<u><i>Mixophyes balbus</i></u> Stuttering Frog, Southern Barred Frog (in Victoria)	Vulnerable	Species or species habitat likely to occur within area
<u><i>Mixophyes iteratus</i></u> Southern Barred Frog, Giant Barred Frog	Endangered	Species or species habitat likely to occur within area
<b>Insects</b>		
<u><i>Phyllodes imperialis</i></u> (southern subsp. - ANIC 3333) a moth	Endangered	Species or species habitat likely to occur within area
<b>Mammals</b>		
<u><i>Chalinolobus dwyeri</i></u> Large-eared Pied Bat, Large Pied Bat	Vulnerable	Species or species habitat may occur within area
<u><i>Dasyurus maculatus maculatus</i></u> (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered	Species or species habitat may occur within area
<u><i>Potorous tridactylus tridactylus</i></u> Long-nosed Potoroo (SE mainland)	Vulnerable	Species or species habitat may occur within area
<u><i>Pteropus poliocephalus</i></u> Grey-headed Flying-fox	Vulnerable	Roosting known to occur within area
<b>Reptiles</b>		
<u><i>Emydura signata</i></u> Bellinger River Emydura (Bellinger River, NSW)	Vulnerable	Species or species habitat likely to occur within area
<b>Plants</b>		
<u><i>Arthraxon hispidus</i></u> Hairy-joint Grass	Vulnerable	Species or species habitat likely to occur within area
<u><i>Cynanchum elegans</i></u> White-flowered Wax Plant	Endangered	Species or species habitat likely to occur within area
<u><i>Hicksbeachia pinnatifolia</i></u> Monkey Nut, Bopple Nut, Red Bopple, Red Bopple Nut, Red Nut, Beef Nut, Red Apple Nut, Red Boppel Nut, Ivory Silky Oak	Vulnerable	Species or species habitat likely to occur within area
<u><i>Marsdenia longiloba</i></u> Clear Milkvine	Vulnerable	Species or species habitat likely to occur within area
<u><i>Parsonsia dorrigoensis</i></u> Milky Silkpod	Endangered	Species or species habitat likely to occur within area
<u><i>Taeniophyllum muelleri</i></u> Minute Orchid, Ribbon-root Orchid	Vulnerable	Species or species habitat may occur within area
<u><i>Thesium australe</i></u> Austral Toadflax, Toadflax	Vulnerable	Species or species habitat likely to occur within area
<u><i>Tylophora woollyi</i></u>	Endangered	Species or species habitat likely to occur within area
Migratory Species [ Dataset Information ]	Status	Type of Presence
<b>Migratory Terrestrial Species</b>		
<b>Birds</b>		
<u><i>Haliaeetus leucogaster</i></u> White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area
<u><i>Hirundapus caudacutus</i></u> White-throated Needletail	Migratory	Species or species habitat may occur within area
<u><i>Merops ornatus</i></u> Rainbow Bee-eater	Migratory	Species or species habitat may occur within area
<u><i>Monarcha melanopsis</i></u> Black-faced Monarch	Migratory	Breeding may occur within area
<u><i>Monarcha trivirgatus</i></u> Spectacled Monarch	Migratory	Breeding likely to occur within area

<i>Myiagra cyanoleuca</i> Satin Flycatcher	Migratory	Breeding likely to occur within area
<i>Rhipidura rufifrons</i> Rufous Fantail	Migratory	Breeding may occur within area
<i>Xanthomyza phrygia</i> Regent Honeyeater	Migratory	Species or species habitat likely to occur within area
<b>Migratory Wetland Species</b>		
<b>Birds</b>		
<i>Ardea alba</i> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Migratory	Breeding likely to occur within area
<i>Gallinago hardwickii</i> Latham's Snipe, Japanese Snipe	Migratory	Species or species habitat may occur within area
<i>Rostratula benghalensis s. lat.</i> Painted Snipe	Migratory	Species or species habitat may occur within area
<b>Migratory Marine Birds</b>		
<i>Apus pacificus</i> Fork-tailed Swift	Migratory	Species or species habitat may occur within area
<i>Ardea alba</i> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Migratory	Breeding likely to occur within area

### Other Matters Protected by the EPBC Act

Listed Marine Species [ [Dataset Information](#) ]

#### Birds

	Status	Type of Presence
<i>Apus pacificus</i> Fork-tailed Swift	Listed - overfly marine area	Species or species habitat may occur within area
<i>Ardea alba</i> Great Egret, White Egret	Listed - overfly marine area	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Listed - overfly marine area	Breeding likely to occur within area
<i>Gallinago hardwickii</i> Latham's Snipe, Japanese Snipe	Listed - overfly marine area	Species or species habitat may occur within area
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
<i>Hirundapus caudacutus</i> White-throated Needletail	Listed - overfly marine area	Species or species habitat may occur within area
<i>Lathamus discolor</i> Swift Parrot	Listed - overfly marine area	Species or species habitat may occur within area
<i>Merops ornatus</i> Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area
<i>Monarcha melanopsis</i> Black-faced Monarch	Listed - overfly	Breeding may occur within area

<i>Monarcha trivirgatus</i> Spectacled Monarch	marine area Listed - overfly marine area	Breeding likely to occur within area
<i>Myiagra cyanoleuca</i> Satin Flycatcher	Listed - overfly marine area	Breeding likely to occur within area
<i>Rhipidura rufifrons</i> Rufous Fantail	Listed - overfly marine area	Breeding may occur within area
<i>Rostratula benghalensis s. lat.</i> Painted Snipe	Listed - overfly marine area	Species or species habitat may occur within area

Commonwealth Lands [ [Dataset Information](#) ]

Communications, Information Technology and the Arts -  
Telstra Corporation Limited

Places on the RNE [ [Dataset Information](#) ]

Note that not all Indigenous sites may be listed.

#### Historic

[Chemist Shop NSW](#)

[Commercial Emporium NSW](#)

[Federal Hotel NSW](#)

[Hyde Street Group NSW](#)

[Ladies Hairdresser Building \(former\) NSW](#)

[Newsagency NSW](#)

### Extra Information

State and Territory Reserves [ [Dataset Information](#) ]

Bindarri National Park, NSW

Jaaningga Nature Reserve, NSW

Regional Forest Agreements [ [Dataset Information](#) ]

Note that all RFA areas including those still under consideration have been included.

Lower North East NSW RFA, New South Wales

Upper North East NSW RFA, New South Wales

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### Caveat

The information presented in this report has been provided by a range of data sources as [acknowledged](#) at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the *Environment Protection and Biodiversity Conservation Act 1999*. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans,

State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under "type of presence". For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the migratory and marine provisions of the Act have been mapped.

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites;
- seals which have only been mapped for breeding sites near the Australian continent.

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

## Acknowledgments

This database has been compiled from a range of data sources. The Department acknowledges the following custodians who have contributed valuable data and advice:

- New South Wales National Parks and Wildlife Service
- Department of Sustainability and Environment, Victoria
- Department of Primary Industries, Water and Environment, Tasmania
- Department of Environment and Heritage, South Australia Planning SA
- Parks and Wildlife Commission of the Northern Territory
- Environmental Protection Agency, Queensland
- Birds Australia
- Australian Bird and Bat Banding Scheme
- Australian National Wildlife Collection
- Natural history museums of Australia
- Queensland Herbarium
- National Herbarium of NSW
- Royal Botanic Gardens and National Herbarium of Victoria
- Tasmanian Herbarium
- State Herbarium of South Australia
- Northern Territory Herbarium
- Western Australian Herbarium
- Australian National Herbarium, Atherton and Canberra
- University of New England
- Other groups and individuals

ANUCLiM Version 1.8, Centre for Resource and Environmental Studies, Australian National University was used extensively for the production of draft maps of species distribution. Environment Australia is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Department of the Environment, Water, Heritage and the  
Arts  
GPO Box 787 Canberra ACT 2601 Australia  
Telephone: +61 (0)2 6274 1111

Last updated: Monday, 21-Jul-2008 10:56:50 EST

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## Search Results

30 results found.

<u>Bellingen Conservation Area</u>	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Bellingen Courthouse</u> Hyde St	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Bellingen Island Reserve</u> Dowle St	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Bellingen River (North Arm) Valley</u> Bellingen - Raleigh Rd	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Bielsdown State Forest</u> Prakes Rd	Dorrigo, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Bobo River Area</u> Cascade - Brooklana Rd	Cascade, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Bongil Bongil Area</u>	Sawtell, NSW, Australia	(Registered) Register of the National Estate
<u>Chemist Shop</u> 69-71 Hyde St	Bellingen, NSW, Australia	(Registered) Register of the National Estate
<u>Commercial Emporium</u> 73-77 Hyde St	Bellingen, NSW, Australia	(Registered) Register of the National Estate
<u>Dorrigo National Park (1978 boundary)</u> Dome Rd	Dorrigo, NSW, Australia	(Registered) Register of the National Estate
<u>Dorrigo National Park (1986 boundary)</u> Dome Rd	Dorrigo, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Federal Hotel</u> 79-81 Hyde St	Bellingen, NSW, Australia	(Registered) Register of the National Estate
<u>George Hewitt Arboretum</u> Watson St	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Gondwana Rainforests of Australia</u>	Lismore, NSW, Australia	(Declared property) World Heritage List
<u>Gondwana Rainforests of Australia</u>	Lismore, NSW, Australia	(Listed place) National Heritage List
<u>Headmasters Residence (former)</u> Hyde St	Bellingen, NSW, Australia	(Indicative Place) Register of the

<u>Hyde Street Group</u> 69-89 Hyde St	Bellingen, NSW, Australia	National Estate (Registered) Register of the National Estate
<u>Ladies Hairdresser Building (former)</u> 87-89 Hyde St	Bellingen, NSW, Australia	(Registered) Register of the National Estate
<u>Muldiva Nature Reserve</u>	Bostobrick, NSW, Australia	(Registered) Register of the National Estate
<u>New England National Park (1978 boundary)</u> Armidale - Dorrigo Rd	Ebor, NSW, Australia	(Registered) Register of the National Estate
<u>New England National Park (1989 boundary)</u> Armidale - Dorrigo Rd	Ebor, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Newsagency</u> 83 Hyde St	Bellingen, NSW, Australia	(Registered) Register of the National Estate
<u>Police Station</u> Hyde St	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Promised Land Escarpment and Never Never Creek</u> Promised Land Rd	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>School (former)</u> Hyde St	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>School Buildings Group</u> Hyde St	Bellingen, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Southern Clarence River Tributaries Catchments</u>	Glen Innes, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Upper Bellingen Valley</u> Thora Rd	Dorrigo, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Upper Nymboida River Nature Reserve Proposal</u> Harness Cask Rd	Tyringham, NSW, Australia	(Indicative Place) Register of the National Estate
<u>Wenonah Ornithological Area</u> Pacific Hwy	Urunga, NSW, Australia	(Indicative Place) Register of the National Estate

Report Produced: Fri Oct 3 14:19:56 2008
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Click on the BACK button of your browser to return to the search.

## Statutory Listed Items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into two sections.

- **Section 1.** contains items listed by the **Heritage Council** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Branch.
- **Section 2.** contains items listed by **Local Councils & Shires and State Government Agencies**. This section may also contain additional information on some of the items listed in the first section.

### Section 1. Items listed under the NSW Heritage Act.

Click on an item name to view the full details.

The search results can be re-sorted by clicking on the **(sort)** option at the top of each column.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Listed Under Heritage Act
<b>Hammond and Wheatley Commercial Emporium</b>	69-75 Hyde Street	Bellingen	Bellingen	Yes
<b>North East Rainforest World Heritage Area</b>		Various	Upper Hunter	Yes

There were **2** records in this section matching your search criteria.

### Section 2. Items listed by Local Government and State agencies.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Information Source (sort)
<b>Bellingen Ambulance Station</b>	6 Church Street	Bellingen	Bellingen	SGOV
<b>Bellingen Conservation Area</b>		Bellingen	Bellingen	LGOV
<b>Bellingen Fire Station</b>	22 Hyde Street	Bellingen	Bellingen	SGOV
<b>Bellingen River District Hospital - Original Building</b>	Church Street	Bellingen	Bellingen	SGOV
<b>Dorrigo Station Group</b>		Dorrigo	Bellingen	SGOV
<b>Federal Hotel</b>	Hyde Street	Bellingen	Bellingen	GAZ
<b>Osprey Nest Sites</b>		South Bellingen	Bellingen	LGOV

There were **7** records in this section matching your search criteria.



There was a total of **9** records matching your search criteria.

**Key:**

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

**Note:** The Heritage Branch seeks to keep the State Heritage Inventory (SHI) up to date, however the latest listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included. Always check with the relevant Local Council or Shire for the most recent listings.

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**Registers**

**Search applications**

You Searched for **Applications** using the criteria:-

Federal Court file numbers for native title determination applications

Local Government is **Bellingen**

**Search determinations**

1 to 5 of 5 Result(s) - Page 1 of 1

**Search registration test decisions**

Date filed	Application name	Application type	Status	State or Territory	Tribunal file no.	Federal Court file no.
04/03/2005	Anthony Bernard Kelly, MLC., Minister for Lands for the State of New South Wales as the State Minister under the Native Title Act 1993 (Cth)	Non-claimant application	Finalised - Discontinued	New South Wales	NN05/5	NSD327/05
03/06/1998	Gumbaynggirr People	Claimant application	Active	New South Wales	NC98/15	NSD6104/98
03/06/1998	Gumbaynggirr People	Claimant application	Finalised - Discontinued	New South Wales	NC98/16	NSD6105/98
24/11/1997	Gumbangirri People	Claimant application	Finalised - Struck-out	New South Wales	NC97/34	NSD6086/98
16/02/1996	NSW Government # 21	Non-claimant application	Finalised - Withdrawn	New South Wales	NN96/4	

1 - 5 of 5 Result(s) | Page 1 of 1  
<< Search Again

Was this information useful? Email comments to [enquiries@nntt.gov.au](mailto:enquiries@nntt.gov.au)



**Add species to map groups**

**Selected Area:** Local Government Area - BELLINGEN  
**Search Type:** Fauna  
**Agencies:** NSW Fisheries  
**Threatened Status:** E1,E4,FE,FV,V,FP,P,P13  
**Search Term:** Search All Records

You can now determine which species you would like to map. You do this by adding the species you want to map to a map group. There are five map groups. The species allocated to each map group are displayed on the map in the same symbol.

By default only the first 500 species found are displayed. If your search produces more results than this, then please choose "Next 500" to view the next five hundred search results, or choose "Show All" to view all records (upto 3000 results).

Note that a MAXIMUM total of 20 species can be assigned to Map Groups.

**Matching Records: 1** (Showing: 1 - 1)

Auto assign to Group 1		Next Step						
Order	Family	Sci Name	Common Name	Agency	Threat	Count	MapGroup	
<b>FISH</b>								
	<b>Perciformes</b>		Percies and allies					
	<b>Serranidae</b>							
		<i>Epinephelus daemeli</i>	Black Cod	FishPub	FV	1	<input type="text" value=""/>	

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Print



Close page

## Search results

---

Your search for: LGA: Bellingen Shire Council

Matched 2 notices relating to 1 site.

<b>Suburb</b>	<b>Address</b>	<b>Site Name</b>	<b>Notices related to this site</b>
Urunga	Hillside Drive	Antimony Treatment Plant	2 current

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3 October 2008