

Scientific Name	Common Name	Vegetation Community Number																	Scientific Name
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
CYPERACEAE																			CYPERACEAE
<i>Baumea articulata</i>	Jointed Twig-rush								X									X	<i>Baumea articulata</i>
<i>Baumea juncea</i>	Slender Twig Rush				X	X													<i>Baumea juncea</i>
<i>Carex appressa</i>	Tall Sedge					X			X	X								X	<i>Carex appressa</i>
<i>Carex inversa</i>	Knob Sedge							X		X								X	<i>Carex inversa</i>
<i>Gahnia clarkei</i>	Tall Saw Sedge	X				X	X	X	X	X				X	X				<i>Gahnia clarkei</i>
<i>Gahnia melanocarpa</i>		X	X				X	X		X	X								<i>Gahnia melanocarpa</i>
<i>Gahnia radula</i>										X									<i>Gahnia radula</i>
<i>Isolepis nodosa</i>	Knobby Club-rush				X										X	X			<i>Isolepis nodosa</i>
<i>Lepidosperma laterale</i>	Variable Sword-sedge	X	X	X		X	X	X			X			X					<i>Lepidosperma laterale</i>
<i>Lepidosperma neesii</i>			X																
<i>Ptilothrix deusta</i>		X		X				X			X	X		X					<i>Ptilothrix deusta</i>
<i>Schoenus apogon</i>	Fluke Bogrush										X							X	<i>Schoenus apogon</i>
<i>Schoenus melanostachys</i>		X	X			X	X			X	X								<i>Schoenus melanostachys</i>
DIOSCORACEAE																			DIOSCORACEAE
<i>Dioscoria transversa</i>	Pencil Yam		X			X	X	X		X									<i>Dioscoria transversa</i>
HAEMODORACEAE																			HAEMODORACEAE
<i>Haemodorum planifolium</i>	Blood Root			X															<i>Haemodorum planifolium</i>
IRIDACEAE																			IRIDACEAE
<i>Patersonia glabrata</i>	Leafy Purple Flag										X	X							<i>Patersonia glabrata</i>
<i>Patersonia sericea</i>	Silky Purple Flag	X		X							X	X							<i>Patersonia sericea</i>
JUNCACEAE																			JUNCACEAE
<i>Juncus continuus</i>									X									X	<i>Juncus continuus</i>
<i>Juncus kraussii</i> ssp. <i>australiensis</i>	Sand Rush				X														<i>Juncus kraussii</i> ssp. <i>australiensis</i>
<i>Juncus subsecundus</i>	Finger Rush								X									X	<i>Juncus subsecundus</i>
<i>Juncus usitatus</i>	Common Rush				X												X	X	<i>Juncus usitatus</i>
LOMANDRACEAE																			LOMANDRACEAE
<i>Lomandra cylindrica</i>	Mat Rush	X																	<i>Lomandra cylindrica</i>
<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	Wattle Mat Rush	X	X					X											<i>Lomandra filiformis</i> ssp. <i>filiformis</i>
<i>Lomandra glauca</i>		X																	<i>Lomandra glauca</i>
<i>Lomandra longifolia</i>	Spiny Mat Rush	X	X			X	X	X	X	X	X		X	X	X	X			<i>Lomandra longifolia</i>
<i>Lomandra multiflora</i>		X	X					X			X	X			X				<i>Lomandra multiflora</i>
<i>Lomandra obliqua</i>	Fish Bones	X		X				X			X	X	X	X	X				<i>Lomandra obliqua</i>
LUZURIAGACEAE																			LUZURIAGACEAE
<i>Eustrephus latifolius</i>	Wombat Berry	X	X			X	X	X	X	X									<i>Eustrephus latifolius</i>
<i>Geitonoplesium cymosum</i>	Scrambling Lily		X			X	X		X	X									<i>Geitonoplesium cymosum</i>
ORCHIDACEAE																			ORCHIDACEAE
<i>Acianthus caudatus</i>	Mayfly Orchid	X	X					X											<i>Acianthus caudatus</i>
<i>Acianthus fornicatus</i>	Pixie Orchid	X	X	X		X	X	X		X			X	X	X				<i>Acianthus fornicatus</i>
<i>Caladenia carnea</i>	Pink Fingers	X						X											<i>Caladenia carnea</i>
<i>Caladenia catenata</i>	White Fingers	X						X											<i>Caladenia catenata</i>
<i>Corybas aconitiflorus</i>	Cradle Orchid	X						X											<i>Corybas aconitiflorus</i>
<i>Cryptostylis subulata</i>	Large Tongue Orchid	X	X	X									X	X	X				<i>Cryptostylis subulata</i>
<i>Dipodium punctatum</i>	Hyacinth Orchid	X	X					X											<i>Dipodium punctatum</i>
<i>Diuris aurea</i>	Golden Donkey Orchid		X								X	X							<i>Diuris aurea</i>
<i>Microtis parviflora</i>	Slender Onion Orchid	X																	<i>Microtis parviflora</i>

Scientific Name	Common Name	Vegetation Community Number																	Scientific Name
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
<i>Pterostylis baptistii</i>	King Greenhood	X						X											
<i>Pterostylis glandiflora</i>	Greenhood	X						X			X								<i>Pterostylis glandiflora</i>
<i>Pterostylis longifolia</i>	Tall Greenhood	X	X					X											<i>Pterostylis longifolia</i>
<i>Pterostylis nutans</i>	Nodding Greenhood	X	X			X		X											<i>Pterostylis nutans</i>
PHILYDRACEAE																			PHILYDRACEAE
<i>Philydrum lanuginosum</i>	Woolly Frogmouth								X										<i>Philydrum lanuginosum</i>
PHORMIACEAE																			PHORMIACEAE
<i>Dianella caerulea</i> var. <i>caerulea</i>	Blue Flax Lily							X											<i>Dianella caerulea</i> var. <i>caerulea</i>
<i>Dianella caerulea</i> var. <i>producta</i>	Blue Flax Lily	X	X	X		X	X	X		X				X					<i>Dianella caerulea</i> var. <i>producta</i>
<i>Dianella longifolia</i> var. <i>longifolia</i>			X					X											<i>Dianella longifolia</i> var. <i>longifolia</i>
<i>Dianella revoluta</i>								X											<i>Dianella revoluta</i>
POACEAE																			POACEAE
<i>*Andropogon virginicus</i>	Whisky Grass	X	X	X		X		X			X	X			X		X	X	<i>*Andropogon virginicus</i>
<i>Aristida vagans</i>	Three-awn Speargrass	X	X					X			X								<i>Aristida vagans</i>
<i>Austrodanthonia tenuior</i>	Wallaby Grass		X																<i>Austrodanthonia tenuior</i>
<i>*Axonopus affinis</i>	Narrowleaf Carpet Grass																X	X	<i>*Axonopus affinis</i>
<i>*Briza minor</i>	Shivery Grass																X		<i>*Briza minor</i>
<i>*Briza maxima</i>	Blowfly Grass																X		<i>*Briza maxima</i>
<i>*Briza subaristata</i>																	X		<i>*Briza subaristata</i>
<i>*Chloris gayana</i>	Rhodes Grass																X		<i>*Chloris gayana</i>
<i>*Cortaderia selloana</i>	Pampas Grass	X	X					X									X	X	<i>*Cortaderia selloana</i>
<i>Cynodon dactylon</i>	Common Couch														X		X		<i>Cynodon dactylon</i>
<i>Cymbopogon refractus</i>	Barbed-wire Grass	X	X																<i>Cymbopogon refractus</i>
<i>Dichelachne micrantha</i>	Plume Grass		X					X											<i>Dichelachne micrantha</i>
<i>Echinopogon caespitosus</i> var. <i>caespitosus</i>	Tufted Hedgehog Grass	X						X											<i>Echinopogon caespitosus</i> var. <i>caespitosus</i>
<i>Echinopogon ovatus</i>	Forest Hedgehog Grass	X						X											<i>Echinopogon ovatus</i>
<i>*Ehrharta erecta</i>	Panic Veldtgrass													X			X		<i>*Ehrharta erecta</i>
<i>Entolasia stricta</i>	Wiry Panic	X	X	X				X			X		X	X					<i>Entolasia stricta</i>
<i>Entolasia marginata</i>	Bordered Panic					X	X	X		X									<i>Entolasia marginata</i>
<i>Eragrostis benthamii</i>	Bentham's Love Grass		X																<i>Eragrostis benthamii</i>
<i>Eragrostis brownii</i>	Brown's Love Grass	X	X					X											<i>Eragrostis brownii</i>
<i>*Eragrostis tenuifolia</i>	Elastic Grass	X	X											X			X	X	<i>*Eragrostis tenuifolia</i>
<i>Eragrostis</i> sp.											X								<i>Eragrostis</i> sp.
<i>*Hyparrhenia rufa</i>	Giant Coolatai Grass	X	X														X	X	<i>*Hyparrhenia rufa</i>
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass	X	X			X	X	X											<i>Imperata cylindrica</i> var. <i>major</i>
<i>*Melinis repens</i>	Red Natal Grass																X		<i>*Melinis repens</i>
<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass		X					X											<i>Microlaena stipoides</i> var. <i>stipoides</i>
<i>Oplismenus aemulus</i>	Basket Grass					X	X	X		X				X					<i>Oplismenus aemulus</i>
<i>Oplismenus imbecillus</i>	Basket Grass						X	X											<i>Oplismenus imbecillus</i>
<i>Panicum simile</i>	Two Colour Panic	X						X											<i>Panicum simile</i>
<i>*Paspalum dilatatum</i>	Paspalum																X		<i>*Paspalum dilatatum</i>
<i>Paspalum distichum</i>	Water Couch								X										<i>Paspalum distichum</i>
<i>*Paspalum urvillei</i>	Vasey Grass								X								X		<i>*Paspalum urvillei</i>
<i>*Pennisetum clandestinum</i>	Kikuyu														X		X	X	<i>*Pennisetum clandestinum</i>
<i>Phragmites australis</i>	Native Reed				X													X	<i>Phragmites australis</i>
<i>*Poa annua</i>																	X		<i>*Poa annua</i>
<i>Poa labillardieri</i>	Tussock Grass	X	X				X	X											<i>Poa labillardieri</i>
<i>Poa sieberiana</i>	Tussock Grass	X	X	X				X			X	X							<i>Poa sieberiana</i>
<i>Spinifex sericeus</i>	Hairy Spinifex														X	X			<i>Spinifex sericeus</i>
<i>*Sporobolus africanus</i>	Parramatta Grass							X									X		<i>*Sporobolus africanus</i>

Scientific Name	Common Name	Vegetation Community Number																	Scientific Name
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
<i>Sporobolus virginicus</i> var. <i>minor</i>	Salt Couch				X														<i>Sporobolus virginicus</i> var. <i>minor</i>
* <i>Sporobolus elongatus</i>	Slender Rat's-tail Grass														X		X	X	* <i>Sporobolus elongatus</i>
* <i>Stenotaphrum secundatum</i>	Buffalo Grass																X		* <i>Stenotaphrum secundatum</i>
<i>Themeda australis</i>	Kangaroo Grass	X	X	X			X	X			X	X			X				<i>Themeda australis</i>
RESTIONACEAE																			RESTIONACEAE
<i>Baloskion tetraphyllum</i> ssp. <i>meiostachyum</i>	Tassel Cord Rush					X													<i>Baloskion tetraphyllum</i> ssp. <i>meiostachyum</i>
<i>Empodisma minus</i>	Spreading Rope Rush				X														<i>Empodisma minus</i>
<i>Leptocarpus tenax</i>										X			X	X					<i>Leptocarpus tenax</i>
SMILACACEAE																			SMILACACEAE
<i>Smilax australis</i>	Smilax		X			X	X	X		X									<i>Smilax australis</i>
<i>Smilax glycyphylla</i>	Native Sarsaparilla	X	X			X		X		X									<i>Smilax glycyphylla</i>
TYPHACEAE																			TYPHACEAE
<i>Typha orientalis</i>	Bull-rush																X		<i>Typha orientalis</i>
XANTHORRHOEACEAE																			XANTHORRHOEACEAE
<i>Xanthorrhoea fulva</i>			X										X	X					<i>Xanthorrhoea fulva</i>
<i>Xanthorrhoea latifolia</i> ssp. <i>latifolia</i>	Grass Tree	X		X							X								<i>Xanthorrhoea latifolia</i> ssp. <i>latifolia</i>
<i>Xanthorrhoea macronema</i>			X					X											<i>Xanthorrhoea macronema</i>
<i>Xanthorrhoea minor</i>		X																	<i>Xanthorrhoea minor</i>
<i>Xanthorrhoea resinifera</i> (Tree Form)			X										X						<i>Xanthorrhoea resinifera</i>

Appendix 3

Royal Botanic Gardens Letter



ROYAL BOTANIC GARDENS SYDNEY

Mr Sam BISHOP
Harper Somers O'Sullivan
PO Box 428
Hamilton, NSW 2303
AUSTRALIA

Inquiry No: 12820
Botanical.Is@rbgsyd.nsw.gov.au
Fax No: (02) 9251 1952
Ph No: (02) 9231 8111
Date: 9 August 2007

Dear Mr BISHOP,

In reply to your inquiry of 01-Aug-07 the following information is supplied:

Your ref: 24530:DL:SB

Your plant specimen from Catherine Hill Bay is *Pultenaea villosa*, "Hairy Bush-pea"

An invoice for \$27.50 (incl. GST) will be forwarded to you separately by our finance section to cover cost of identification.

Thank you for your inquiry.

Yours sincerely

Barbara Wiecek
Identification Botanist
Botanical Information Service



Go to our online Botanical Information Services at
plantnet.rbgsyd.nsw.gov.au to find out more about
plants of New South Wales

Appendix 4

Fauna Species List

EXPECTED FAUNA SPECIES LIST

Below is a list of fauna species that could be *reasonably* expected to be found within the study area at some occurrence. Such an approach has been taken given the unlikelihood to record *all* potentially occurring species within an area during formal fauna surveys (due to seasonality, climatic limitations, crypticism etc).

Family sequencing and taxonomy follow for each fauna class:

Birds – Christidis and Boles (1994).

Herpetofauna - Cogger (1996).

Mammals - Strahan (ed) (1995) and Churchill (1998).

Known and Expected Bird List

Appendix Key:

✓ = Species Detected

* = Introduced species

(E) = Species listed under NSW TSC Act 1995 as Endangered.

(V) = Species listed under NSW TSC Act 1995 as Vulnerable.

(V*) = Species listed under the Commonwealth EPBC Act 1999 as Vulnerable

(E*) = Species listed under the Commonwealth EPBC Act 1999 as Endangered

(M*) = Species listed under the Commonwealth EPBC Act as Migratory

Species indicated in **BOLD** font are those threatened species known from within 10km of site (Atlas of NSW Wildlife 2010)

Data Source:

1 = Species recorded at CBH during this survey

Family Name	Scientific Name	Common Name	1
Phasianidae (True Quails, Pheasants and Fowls)	<i>Coturnix ypsilophora</i>	Brown Quail	
Pelecanidae (Pelicans)	<i>Pelicanus conspicillatus</i>	Australian Pelican	
Phalacrocoracidae (Cormorants)	<i>Phalacrocorax varius</i>	Pied Cormorant	✓
	<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant	✓
Anatidae (Swans, Geese and Ducks)	<i>Anas castanea</i>	Chestnut Teal	
	<i>Anas gracilis</i>	Grey Teal	
	<i>Anas superciliosa</i>	Pacific Black Duck	
	<i>Aythya australis</i>	Hardhead	
	<i>Chenonetta jubata</i>	Australian Wood Duck	✓
Ardeidae (Hérons, Bitterns and Egrets)	<i>Ardea alba</i>	Great Egret	
	<i>Ardea pacifica</i>	White-necked Heron	
	<i>Egretta novaehollandiae</i>	White-faced Heron	
	<i>Ardea picata</i>	Eastern Reef	
	<i>Egretta garzetta</i>	Little Egret	
	<i>Ardea ibis</i>	Cattle Egret	
	<i>Ardea intermedia</i>	Intermediate Egret	
	<i>Ixobrychus flavicollis</i>	Black Bittern (V)	
	<i>Nycticorax caledonicus</i>	Nankeen Night Heron	
Threskiornithidae (Ibises and Spoonbills)	<i>Threskiornis molucca</i>	Australian White Ibis	
	<i>Threskiornis spinicollis</i>	Straw-necked Ibis	
Ciconiidae	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork (E)	

(Storks)			
Accipitridae (Hawks, Kites and Eagles)	<i>Accipiter fasciatus</i>	Brown Goshawk	
	<i>Accipiter cirrhocephalus</i>	Collared Sparrowhawk	
	<i>Accipiter novaehollandiae</i>	Grey Goshawk	✓
	<i>Aquila audax</i>	Wedge-tailed Eagle	
	<i>Elanus axillaris</i>	Black-shouldered Kite	✓
	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle (*M)	✓
	<i>Haliastur sphenurus</i>	Whistling Kite	✓
	<i>Hieraaetus morphnoides</i>	Little Eagle	
	Lophoictinia isura	Square-tailed Kite (V)	
	Pandion haliaetus	Osprey (V)	
Falconidae (Falcons)	<i>Falco berigora</i>	Brown Falcon	
	<i>Falco cenchroides</i>	Nankeen Kestrel	
	<i>Falco longipennis</i>	Australian Hobby	
	<i>Falco peregrinus</i>	Peregrine Falcon	✓
Rallidae (Crakes, Rails and Gallinules)	<i>Fulica atra</i>	Eurasian Coot	
	<i>Gallinula philippensis</i>	Buff-banded Rail	
	<i>Gallinula tenebrosa</i>	Dusky Moorhen	✓
	<i>Porphyrio porphyrio</i>	Purple Swampphen	✓
	<i>Porzana fluminea</i>	Australian Spotted Crake	
	<i>Porzana pusilla</i>	Baillon's Crake	
	<i>Porzana tabuensis</i>	Spotless Crake	
	<i>Rallus pectoralis</i>	Lewin's Rail	
	<i>Vanellus miles</i>	Masked Lapwing	✓
Haematopodidae (Oystercatchers)	Haematopus longirostris	Pied Oystercatcher (V)	✓
	Haematopus fuliginosus	Sooty Oystercatcher (V)	✓
	<i>Vanellus miles</i>	Masked Lapwing	
Laridae (Gulls and Terns)	<i>Larus novaehollandiae</i>	Silver Gull	✓
	<i>Sterna bergii</i>	Crested Tern	
	<i>Sterna striata</i>	White-fronted Tern	
	<i>Sterna hirundo</i>	Common Tern	
Columbidae (Pigeons and Doves)	* <i>Columba livia</i>	Rock Dove	
	<i>Chalcophaps indica</i>	Emerald Dove	
	<i>Geopelia humeralis</i>	Bar-shouldered Dove	✓
	<i>Geopelia striata</i>	Peaceful Dove	
	<i>Lopholaimus antarcticus</i>	Topknot Pigeon	✓
	<i>Leucosarcia melanoleuca</i>	Wonga Pigeon	
	<i>Macropygia amboinensis</i>	Brown Cuckoo-Dove	
	<i>Ocyphaps lophotes</i>	Crested Pigeon	
	<i>Phaps chalcoptera</i>	Common Bronzewing	
	<i>Phaps elegans</i>	Brush Bronzewing	✓
	Ptilinopus magnificus	Wompoo Fruit-dove (V)	
	Ptilinopus regina	Rose-crowned Fruit-Dove (V)	
	Ptilinopus superbus	Superb Fruit-Dove (V)	
	* <i>Streptopelia chinensis</i>	Spotted Turtle-Dove	✓
Cacatuidae (Cockatoos)	<i>Calyptrorhynchus funereus</i>	Yellow-tailed Black-Cockatoo	✓
	Calyptrorhynchus lathami	Glossy Black-Cockatoo (V)	✓
	<i>Cacatua roseicapilla</i>	Galah	✓
	<i>Cacatua tenuirostris</i>	Long-billed Corella	
	<i>Cacatua sanguinea</i>	Little Corella	✓

	<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	✓
Psittacidae (Parrots)	<i>Alisterus scapularis</i>	Australian King Parrot	
	<i>Glossopsitta pusilla</i>	Little Lorikeet	✓
	<i>Lathamus discolor</i>	Swift Parrot (E, E*)	
	<i>Platycercus elegans</i>	Crimson Rosella	
	<i>Platycercus eximius</i>	Eastern Rosella	
	<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet	
	<i>Trichoglossus concina</i>	Musk Lorikeet	✓
	<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	✓
Cuculidae (Old World Cuckoos)	<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	✓
	<i>Cacomantis variolosus</i>	Brush Cuckoo	
	<i>Chrysococcyx basalis</i>	Horsfield's Bronze-Cuckoo	✓
	<i>Chrysococcyx lucidus</i>	Shining Bronze-Cuckoo	✓
	<i>Cuculus pallidus</i>	Pallid Cuckoo	
	<i>Eudynamys scolopacea</i>	Common Koel	✓
	<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo	✓
Centropodidae (Coucals)	<i>Centropus phasianinus</i>	Pheasant Coucal	
Strigidae (Hawk Owls)	<i>Ninox strenua</i>	Powerful Owl (V)	✓
	<i>Ninox boobook</i>	Southern Boobook	
Tytonidae (Barn Owls)	<i>Tyto alba</i>	Barn Owl	
	<i>Tyto novaehollandiae</i>	Masked Owl (V)	
Podargidae (Frogmouths)	<i>Podargus strigoides</i>	Tawny Frogmouth	✓
Caprimulgidae (Nightjars)	<i>Aegotheles cristatus</i>	Owlet Nightjar	
	<i>Eurostopodus mystacalis</i>	White-throated Nightjar	
Halcyonidae (Kingfishers and Kookaburras)	<i>Alcedo azurea</i>	Azure Kingfisher	
	<i>Dacelo novaeguineae</i>	Laughing Kookaburra	✓
	<i>Todiramphus sanctus</i>	Sacred Kingfisher	✓
	<i>Todiramphus sanctus</i>	Sacred Kingfisher	
Meropidae (Bee-eaters)	<i>Merops ornatus</i>	Rainbow Bee-eater (M*)	
Coraciidae (Typical Rollers)	<i>Eurystomus orientalis</i>	Dollarbird	
Climacteridae (Australo-Papuan Treecreepers)	<i>Cormobates leucophaeus</i>	White-throated Treecreeper	✓
Maluridae (Fairy-Wrens and Emu-Wrens)	<i>Malurus cyaneus</i>	Superb Fairy-wren	✓
	<i>Malurus lamberti</i>	Variegated Fairy-wren	✓
	<i>Stipiturus malachurus</i>	Southern Emu-wren	✓
Pardalotidae (Pardalotes, Scrubwrens, Thornbills)	<i>Pardalotus punctatus</i>	Spotted Pardalote	✓
	<i>Pardalotus striatus</i>	Striated Pardalote	
	<i>Sericornis frontalis</i>	White-browed Scrubwren	✓
	<i>Gerygone mouki</i>	Brown Gerygone	✓
	<i>Gerygone olivacea</i>	White-throated Gerygone	✓
	<i>Acanthiza pusilla</i>	Brown Thornbill	✓
	<i>Acanthiza reguloides</i>	Buff-rumped Thornbill	
	<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill	
	<i>Acanthiza nana</i>	Yellow Thornbill	✓

	<i>Acanthiza lineata</i>	Striated Thornbill	✓
	<i>Hylacola pyrrhopygia</i>	Chestnut-rumped Heathwren	
Meliphagidae (Honeyeaters)	<i>Anthochaera carunculata</i>	Red Wattlebird	✓
	<i>Anthochaera chrysoptera</i>	Little Wattlebird	✓
	<i>Plectrhynga lanceolata</i>	Striped Honeyeater	
	<i>Philemon corniculatus</i>	Noisy Friarbird	✓
	<i>Xanthomyza phrygia</i>	Regent Honeyeater (E, E*)	
	<i>Manorina melanophrys</i>	Bell Miner	✓
	<i>Manorina melanocephala</i>	Noisy Miner	✓
	<i>Meliphaga lewinii</i>	Lewin's Honeyeater	✓
	<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater	✓
	<i>Lichenostomus fuscus</i>	Fuscous Honeyeater	
	<i>Lichenostomus melanops</i>	Yellow-tufted Honeyeater	
	<i>Lichenostomus penicillatus</i>	White-plumed Honeyeater	
	<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater	
	<i>Melithreptus lunatus</i>	White-naped Honeyeater	✓
	<i>Lichmera indistincta</i>	Brown Honeyeater	
	<i>Phylidonyris nigra</i>	White-cheeked Honeyeater	✓
	<i>Phylidonyris novaehollandiae</i>	Hew Holland Honeyeater	✓
	<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill	✓
	<i>Myzomela sanguinolenta</i>	Scarlet Honeyeater	✓
Eopsaltriidae (Robins)	<i>Microeca fascians</i>	Jacky Winter	
	<i>Petroica rosea</i>	Rose Robin	
	<i>Eopsaltria australis</i>	Eastern Yellow Robin	✓
Cinclosomidae (Quail-thrushes and allies)	<i>Psophodes olivaceus</i>	Eastern Whipbird	✓
Neosittidae (Sittellas)	<i>Daphoenositta chrysoptera</i>	Varied Sittella	✓
Pycnonotidae (Bulbuls)	<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	✓
Pachycephalidae (Whistlers, Shrike-tit, Shrike-thrushes)	<i>Falcunculus frontatus</i>	Crested Shrike-tit	
	<i>Pachycephala pectoralis</i>	Golden Whistler	✓
	<i>Pachycephala rufiventris</i>	Rufous Whistler	✓
	<i>Colluricincla harmonica</i>	Grey Shrike-thrush	✓
Dicruridae (Monarchs, Fantails and Drongo)	<i>Monarcha melanopsis</i>	Black-faced Monarch	✓
	<i>Myiagra cyanoleuca</i>	Satin Flycatcher	
	<i>Myiagra rubecula</i>	Leaden Flycatcher	✓
	<i>Myiagra inquieta</i>	Restless Flycatcher	
	<i>Grallina cyanoleuca</i>	Magpie-lark	
	<i>Rhipidura rufifrons</i>	Rufous Fantail	
	<i>Rhipidura fuliginosa</i>	Grey Fantail	✓
	<i>Rhipidura leucophrys</i>	Willie Wagtail	✓
	<i>Dicrurus bracteatus</i>	Spangled Drongo	
Campephagidae (Cuckoo-shrikes and Trillers)	<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike	✓
	<i>Coracina papuensis</i>	White-bellied Cuckoo-shrike	
	<i>Lalage sueurii</i>	White-winged Triller	
Oriolidae (Orioles and Figbird)	<i>Oriolus sagittatus</i>	Olive-backed Oriole	✓
	<i>Sphecotheres viridis</i>	Figbird	✓
Artamidae (Woodswallows, Butcherbirds, Currawongs)	<i>Artamus leucorhynchus</i>	White-breasted Woodswallow	

	<i>Artamus cyanopterus</i>	Dusky Woodswallow	
	<i>Cracticus torquatus</i>	Grey Butcherbird	✓
	<i>Cracticus nigrogularis</i>	Pied Butcherbird	
	<i>Gymnorhina tibicen</i>	Australian Magpie	✓
	<i>Strepera graculina</i>	Pied Currawong	✓
Corvidae (Crows and allies)	<i>Corvus coronoides</i>	Australian Raven	✓
Ptilinorhynchidae (Bowerbirds)	<i>Ptilinorhynchus violaceus</i>	Satin Bowerbird	
	<i>Sericulus chrysocephalus</i>	Regent Bowerbird	
Motacillidae (Old World Wagtails, Pipits)	<i>Anthus novaeseelandiae</i>	Richard's Pipit	
Passeridae (Sparrows, Weaverbirds, Waxbills)	* <i>Passer domesticus</i>	House Sparrow	
	<i>Taeniopygia guttata</i>	Zebra Finch	
	<i>Taeniopygia bichenovii</i>	Double-barred Finch	
	<i>Neochmia temporalis</i>	Red-browed Finch	✓
	<i>Lonchura castaneothorax</i>	Chestnut-breasted Mannikin	
Dicaeidae (Flowerpeckers)	<i>Dicaeum hirundinaceum</i>	Mistletoebird	✓
Hirundinidae (Swallows and Martins)	<i>Hirundo neoxena</i>	Welcome Swallow	✓
	<i>Hirundo nigricans</i>	Tree Martin	
	<i>Hirundo ariel</i>	Fairy Martin	
Zosteropidae (White-eyes)	<i>Zosterops lateralis</i>	Silvereye	✓
Sturnidae (Starlings and allies)	* <i>Sturnus vulgaris</i>	Common Starling	
	* <i>Acridotheres tristis</i>	Common Myna	✓

Known and Expected Mammal List

Appendix Key: ✓ = Species Detected
 * = Introduced species
(E) = Species listed under NSW TSC Act 1995 as Endangered.
(V) = Species listed under NSW TSC Act 1995 as Vulnerable.
(V*) = Species listed under the Commonwealth EPBC Act 1999 as Vulnerable
(E*) = Species listed under the Commonwealth EPBC Act 1999 as Endangered
(M*) = Species listed under the Commonwealth EPBC Act as Migratory
 Species indicated in **BOLD** font are those threatened species known from within 10km of site (Atlas of NSW Wildlife 2010)

Data Source: 1 = Species recorded at CBH during this survey

Family Name	Scientific Name	Common Name	1
Tachyglossidae (Echidnas)	<i>Tachyglossus aculeatus</i>	Short-beaked Echidna	✓
Dasyuridae (Dasyurids)	<i>Antechinus stuartii</i>	Brown Antechinus	✓
	<i>Antechinus swainsonii</i>	Dusky Antechinus	
	Dasyurus maculatus	Tiger Quoll (V, V*)	
	Planigale maculata	Common Planigale (V)	
	<i>Sminthopsis murina</i>	Common Dunnart	
Peramelidae (Bandicoots and Bilbies)	<i>Isodon macrourus</i>	Northern Brown Bandicoot	
	<i>Peremeles nasuta</i>	Long-nosed Bandicoot	
Phascolarctidae (Koala)	Phascolarctos cinereus	Koala (V)	
Petauridae (Wrist-winged Gliders)	<i>Petaurus breviceps</i>	Sugar Glider	✓
	Petaurus norfolcensis	Squirrel Glider (V)	
	Petaurus australis	Yellow-bellied Glider (V)	
Pseudocheiridae (Ringtail Possums, Greater Glider)	<i>Pseudocheirus peregrinus</i>	Common Ringtail Possum	✓
Acrobatidae (Feathertail Glider)	<i>Acrobates pygmaeus</i>	Feathertail Glider	
Phalangeridae (Brushtail Possums and Cuscuses)	<i>Trichosurus vulpecula</i>	Common Brushtail Possum	✓
Potoroidae (Potoroos and Bettongs)	Potorous tridactylus	Long-nosed Potoroo (V, V*)	
Macropodidae (Wallabies and Kangaroos)	<i>Macropus giganteus</i>	Eastern Grey Kangaroo	
	<i>Macropus rufogriseus</i>	Red-necked Wallaby	
	<i>Wallabia bicolor</i>	Swamp Wallaby	✓
Pteropodidae (Flying-foxes, Blossom-bats)	Pteropus poliocephalus	Grey-headed Flying-fox (V, V*)	✓
	<i>Pteropus scapulatus</i>	Little Red Flying-fox	
Rhinolophidae (Horseshoe-bats)	<i>Rhinolophus megaphyllus</i>	Eastern Horseshoe-bat	
Emballonuridae (Sheath-tail-bats)	Saccolaimus flaviventris	Yellow-bellied Sheath-tail-bat (V)	
Molossidae (Freetail-bats)	Mormopterus norfolkensis	East Coast Freetail-bat (V)	
	<i>Mormopterus</i> sp.1	Little Freetail-bat	
	<i>Mormopterus</i> sp.2	Eastern Freetail-bat	

	<i>Tadarida australis</i>	White-striped Freetail-bat	
Vespertilionidae (Vespertilionid Bats)	<i>Miniopterus australis</i>	Little Bentwing-bat (V)	✓
	<i>Miniopterus schreibersii</i>	Common Bentwing-bat (V)	✓
	<i>Nyctophilus geoffroyi</i>	Lesser Long-eared Bat	
	<i>Nyctophilus gouldii</i>	Gould's Long-eared Bat	
	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat (V, V*)	
	<i>Chalinolobus gouldii</i>	Gould's Wattled Bat	✓
	<i>Chalinolobus morio</i>	Chocolate Wattled Bat	✓
	<i>Falsistrellus tasmaniensis</i>	Eastern Falsistrelle (V)	
	<i>Myotis adversus</i> (<i>Myotis macropus</i>)	Large-footed Myotis (V)	✓
	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat (V)	
	<i>Scotorepens greyii</i>	Little Broad-nosed Bat	
	<i>Scotorepens orion</i>	Eastern Broad-nosed Bat	
	<i>Vespadelus darlingtoni</i>	Large Forest Bat	✓
	<i>Vespadelus regulus</i>	Southern Forest Bat	✓
	<i>Vespadelus pumilus</i>	Eastern Forest Bat	✓
	<i>Vespadelus vulturnus</i>	Little Forest Bat	✓
Muridae (Murids)	<i>Hydromys chrysogaster</i>	Water Rat	
	<i>*Mus musculus</i>	House Mouse	✓
	<i>Pseudomys novaehollandiae</i>	New Holland Mouse	
	<i>Rattus fuscipes</i>	Bush Rat	
	<i>Rattus lutreolus</i>	Swamp Rat	✓
	<i>*Rattus norvegicus</i>	Brown Rat	
	<i>*Rattus rattus</i>	Black Rat	✓
Canidae (Dogs)	<i>*Canis familiaris</i>	Dog	
	<i>Canis familiaris dingo</i>	Dingo	
	<i>*Vulpes vulpes</i>	Red Fox	✓
Felidae (Cats)	<i>*Felis catus</i>	Feral Cat	
Leporidae (Rabbit and Hare)	<i>*Oryctolagus cuniculus</i>	European Rabbit	
	<i>*Lepus capensis</i>	Brown Hare	
Equidae (Horse and Donkey)	<i>*Equus caballus</i>	Horse	
Suidae (Pigs)	<i>*Sus scrofa</i>	Pig	
Bovidae (Horned Ruminants)	<i>*Bos taurus</i>	Cow	
	<i>*Capra hircus</i>	Goat	

Known and Expected Reptile List

Appendix Key: ✓ = Species Detected
(E) = Species listed under NSW TSC Act 1995 as Endangered.
(V) = Species listed under NSW TSC Act 1995 as Vulnerable.
(V*) = Species listed under the Commonwealth EPBC Act 1999 as Vulnerable
(E*) = Species listed under the Commonwealth EPBC Act 1999 as Endangered
(M*) = Species listed under the Commonwealth EPBC Act as Migratory
Species indicated in **BOLD** font are those threatened species known from within 10km of site (Atlas of NSW Wildlife data 2010)

Data Source: 1 = Species recorded at CBH during this survey

Family Name	Scientific Name	Common Name	1
Chelidae (Tortoises)	<i>Chelodina longicollis</i>	Long-necked Tortoise	
Agamidae (Dragons)	<i>Amphibolurus muricatus</i>	Jacky Lizard	
	<i>Amphibolurus nobbi</i>	Nobbi	
	<i>Physignathus lesuerii</i>	Eastern Water Dragon	
	<i>Pogona barbata</i>	Eastern Bearded Dragon	
Pygopodidae (Legless Lizards)	<i>Lialis burtonis</i>	Burton's Snake Lizard	
	<i>Pygopus lepidopus</i>	Common Scaly-foot	
	<i>Delma plebeia</i>	Leaden Delma	
Gekkonidae (Geckoes)	<i>Diplodactylus vittatus</i>	Wood Gecko	
	<i>Phyllurus platurus</i>	Southern Leaf-tailed Gecko	
	<i>Oedura lesueurii</i>	Lesueur's Velvet Gecko	
	<i>Underwoodisaurus milii</i>	Thick-tailed Gecko	
Varanidae (Monitors)	<i>Varanus gouldii</i>	Gould's Monitor	
	<i>Varanus varius</i>	Lace Monitor	
Scincidae (Skinks)	<i>Carlia tetradactyla</i>		
	<i>Cryptoblepharus virgatus</i>		
	<i>Ctenotus taeniolatus</i>	Copper-tailed Skink	
	<i>Ctenotus robustus</i>	Striped Skink	✓
	<i>Cyclodomorphus casuarinae</i>	She-oak Skink	
	<i>Egernia cunninghamii</i>	Cunningham's Skink	
	<i>Egernia major</i>	Land Mullet	
	<i>Egernia modesta</i>		
	<i>Egernia striolata</i>	Tree-crevice Skink	
	<i>Egernia saxatilis</i>	Black Rock Skink	
	<i>Egernia whitii</i>	White's Skink	
	<i>Eulamprus quoyii</i>	Eastern Water Skink	
	<i>Eulamprus tenuis</i>		
	<i>Lampropholis delicata</i>	Grass Skink	✓
	<i>Lampropholis guichenoti</i>	Garden Skink	
	<i>Lygisaurus foliorum</i>	Tree-base Litter-skink	
	<i>Morethia boulengeri</i>	South-eastern Morethia	
	<i>Pseudomoia platynota</i>	Red-throated Skink	
	<i>Saiphos equalis</i>	Three-toed Skink	✓
	<i>Saproscincus mustelinus</i>	Weasel Skink	
	<i>Tiliqua scincoides</i>	Eastern Blue-tongued Lizard	
Typhlopidae (Blind Snakes)	<i>Ramphotyphlops bituberculatus</i>	Prong-snouted Blind Snake	
	<i>Ramphotyphlops weidii</i>	Brown-snouted Blind Snake	
	<i>Ramphotyphlops nigrescens</i>	Black Blind Snake	
Boidae	<i>Morelia spilota</i>	Diamond Python	✓

Family Name	Scientific Name	Common Name	1
(Pythons)			
Colubridae (Tree Snakes)	<i>Boiga irregularis</i>	Brown Tree Snake	
	<i>Dendrolaphis punctulata</i>	Green Tree Snake	
Elapidae (Venomous Snakes)	<i>Furina diadema</i>	Red-naped Snake	
	<i>Cacophis kreftii</i>	Dwarf Crowned Snake	
	<i>Demansia psammophis</i>	Yellow-faced Whip Snake	
	<i>Furina diadema</i>	Red-naped Snake	
	<i>Notechis scutatus</i>	Eastern Tiger Snake	
	<i>Pseudonaja textilis</i>	Eastern Brown Snake	
	<i>Rhinoplocephalus nigrescens</i>	Eastern Small-eyed Snake	
	<i>Vermicella annulata</i>	Bandy Bandy	
	<i>Hemiaspis signata</i>	Black-bellied Swamp Snake	✓
	<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake	✓

Known and Expected Frog List

Appendix Key:

✓ = Species Detected

(E) = Species listed under NSW TSC Act 1995 as Endangered.

(V) = Species listed under NSW TSC Act 1995 as Vulnerable.

(V*) = Species listed under the Commonwealth EPBC Act 1999 as Vulnerable

(E*) = Species listed under the Commonwealth EPBC Act 1999 as Endangered

(M*) = Species listed under the Commonwealth EPBC Act as Migratory

Species indicated in **BOLD** font are those threatened species known from within 10km of site (Atlas of NSW Wildlife data 2010)

Data Source:

1 = Species recorded at CBH during this survey

Family Name	Scientific Name	Common Name	1
Hylidae (Tree Frogs)	Litoria aurea	Green and Golden Bell Frog (E, V*)	
	<i>Litoria caerulea</i>	Green Tree Frog	
	<i>Litoria chloris</i>	Red-eyed Green Tree Frog	
	<i>Litoria dentata</i>	Bleating Tree Frog	
	<i>Litoria fallax</i>	Eastern Dwarf Tree Frog	✓
	<i>Litoria latopalmata</i>	Broad-palmed Frog	✓
	<i>Litoria lesueuri</i>	Lesueur's Frog	
	<i>Litoria nasuta</i>	Rocket Frog	
	<i>Litoria peronii</i>	Peron's Tree Frog	
	<i>Litoria phyllochroa</i>	Green Leaf Tree Frog	
	<i>Litoria tyleri</i>	Tyler's Tree Frog	
	<i>Litoria verreauxii</i>	Verreaux's Frog	
Myobatrachidae (Ground Frogs)	<i>Adelotus brevis</i>	Tusked Frog	
	<i>Crinia signifera</i>	Common Eastern Froglet	✓
	Crinia tinnula	Wallum Froglet (V)	
	<i>Limnodynastes dumerilli</i>	Eastern Banjo Frog	
	<i>Limnodynastes ornatus</i>	Ornate Burrowing Frog	
	<i>Limnodynastes peronii</i>	Striped Marsh Frog	✓
	<i>Limnodynastes tasmaniensis</i>	Spotted Grass Frog	
	<i>Mixophyes fasciolatus</i>	Great Barred Frog	
	<i>Pseudophryne coriacea</i>	Red-backed Toadlet	
	<i>Pseudophryne bibronii</i>	Brown Toadlet	
	<i>Uperoleia fusca</i>	Dusky Toadlet	✓
	<i>Uperoleia laevisgata</i>	Smooth Toadlet	

Appendix 5

Vegetation Communities Photographs



Plate 1. Coastal Plains Smooth- barked Apple Woodland



Plate 2. Narabeen Wallarah Sheltered Grassy Woodland



Plate 3. Coastal Plains Scribbly Gum Woodlands



Plate 4. Swamp Oak Rushland Forest (EEC- Swamp Oak Floodplain Forest on Coastal Floodplains)



Plate 5. Swamp Mahogany – Paperbark Forest (EEC – Swamp Sclerophyll Forest on Coastal Floodplains)



Plate 6. Riparian Melaleuca Swamp Woodland (EEC - Swamp Sclerophyll Forest on Coastal Floodplains)



Plate 7. Coastal Foothills Spotted Gum – Ironbark Forest



Plate 8. Freshwater Wetland Complex (EEC – Freshwater Wetland on Coastal Floodplains)



Plate 9. Apple - Palm Gully Forest



Plate 10. Coastal Clay Heath



Plate 11. Themedia Grassland on Seacliffs and Coastal Heathlands (EEC)



Plate 12. Coastal Sand Wallum Heath



Plate 13 – Coastal Sand Wallum Woodland



Plate 14 – Coastal Sand Scrub



Plate 15 – Beach Spinifex



Plate 16 – Weeds and Cleared Areas



Plate 17 – Dam

Appendix 6

Qualifications of Personnel



Curriculum Vitae

MATTHEW DOHERTY

Manager - Ecology & GIS

Newcastle, NSW

Bachelor of Landscape Management and Conservation (Land & Water Conservation Major), University of Western Sydney, 2002

Bushland Regeneration Certificate II, Western Sydney Institute of TAFE, 1999

Spikeless Tree Climbing Techniques, Total Height Safety, 2004

OH&S Induction Training (Green Card)

NPWS Scientific Investigation Licence

NSW Animal Ethics Research Authority

Senior First Aid

AREAS OF EXPERTISE:

Matt has seven years experience in the environmental industry with key skills in project management, survey design, GIS and client relations. In his position as Ecology & GIS Manager, Matt manages environment department including the day to day running of projects, verification of reports and other outputs and ensures clients are well informed of project progress and key findings. Matthew's background in local government, state government and private consultancy gives him a high level of appreciation of the environmental and consultancy sector, thus allowing him to take a pragmatic approach to providing successful conservation and development outcomes whilst meeting the aims and objectives of clients and determining authorities.

SELECTED PROJECT EXPERIENCE:

Ecology and GIS

- **Various large-scale land development, mining, energy and infrastructure projects** – Matt has project managed and/or participated in numerous large-scale land development, mining, energy and infrastructure projects including Queensland Hunter Gas Pipeline (850km); Hunter Gas Pipeline; Rio Tinto Lower Hunter Lands Project; GIS biodiversity, large scale vegetation, habitat and predictive modelling mapping works; wind farms and coordination of environmental monitoring programs for mines

PREVIOUS EXPERIENCE:

Ecologist – Andrews Neil Pty Ltd

2004 - 2005

Duties included: preparation of Fee Proposals for Ecological Services; General and Targeted Flora and Fauna Surveys including Flora and Fauna Identification; Desktop Studies and Literature Searches; Interpretation and Application of Legislation; report preparation including Threatened Species Assessments (8 part test), Vegetation Management Plans (Riparian Restoration/ Rehabilitation, Bush Regeneration), Species Impact Statements, Weed Management Strategies, Habitat Management Strategies and Tree Assessments; GIS/ Spatial Analysis and Database Management; Liaison with Client, Stakeholder Groups, State and Local Governing Bodies; Site Supervision of Ecological Conditions; Tree Climbing for installation, maintenance and monitoring of nestboxes.

Project Officer / Horticultural Services – Gosford City Council

06/2003 – 05/2004

Comprehensively reviewed noxious weed management; performed vegetation surveys on GCC landfills to identify the presence of noxious weeds; quantify the extent of infestation of each noxious weeds species and map the



Curriculum Vitae

- CONTINUED -

affected areas; developed a management plan for the control of NW species identified in the survey in accordance with relevant legislation; maintained Japanese Gardens along with City Wide Gardens and Streetscapes.

Various Roles whilst at University

1997 - 2002

Environmental Officer - Dept of Land & Water Conservation, Newcastle

01/1999 – 12/1999

Liaised with relevant agency and stakeholder groups; researched and prepared an extensive literature review of issues pertaining to riparian vegetation; assessed current best practice for revegetation and rehabilitation of degraded sites; prepared a Riparian Revegetation Management Strategy

Volunteer – Maitland City Council

07/1999 – 12/1999

Assisted with Rivercare implementation throughout LGA. Utilised primary, secondary and field research to prepare a River Plan under 'Rivercare' guidelines.

Volunteer – Brisbane Waters & Gosford Lagoons Catchment Management Committee

03/1998 – 05/1998

Prepared Riparian Zone Rehabilitation Plan for Degraded Creek Management, Research and prepared a Riparian Zone Rehabilitation Project. Member on several Gosford City Council steering committees and working groups.

MEMBERSHIPS & ACHIEVEMENTS:

- Fire Protection Association Australia (FPAA)



Curriculum Vitae

CRAIG ANDERSON

Senior Ecologist – Senior Project Manager

Newcastle, NSW

Bachelor Applied Science (Environmental Assessment & Management), University of Newcastle, 1994

Graduate Diploma in Archaeological Heritage, UNE, Current

RFS/PIA NSW Consulting Planners Bushfire Training

AREAS OF EXPERTISE:

Craig has over 15 years experience in a wide range of environmental consulting. He has undertaken and managed commissions for a diverse range of projects within land development, energy, mining, infrastructure and conservation, including State Significant developments.

Craig has an extensive background in ecological field surveys, encompassing all aspects of flora and fauna identification, targeted surveying and mapping. He was involved in the initial formulation of an Association of Consulting Ecologists for NSW in 1998 and has acted as an expert witness in several Land and Environment Court matters relating to ecology and bushfire assessment. He is an experienced negotiator of ecological / development outcomes, and has a detailed understanding of legislation related to ecological matters.

Craig has been actively involved in representations to the Department of Environment on behalf of the NSW Urban Taskforce in regards to proposed changes to the NSW Threatened Species Conservation Act, and for the Urban Development Institute of Australia (UDIA) on matters relating to issues such as the proposed listing of endangered ecological communities, regional environmental biodiversity strategies, and the Native Vegetation Act and the operations of the Catchment Management Authority (CMA).

SELECTED PROJECT EXPERIENCE:

Ecology

- **Buttaba Hills (336 Lots) – Species Impact Statement**
- **Hunter Economic Zone (800+ ha industrial estate) – Species Impact Statement**
- **Pelaw Main By-Pass to Hunter Economic Zone – Species Impact Statement**
- **Residential development / Eco-Resort / Fauna Sanctuary at Paxton - Flora and Fauna Assessment incorporating Seven Part Tests of Significance of Impact under Threatened Species Legislation**
- **SEPP 5 Aged Care facilities, Kariong, Hawks Nest, Wallsend, Glenhaven - Flora and Fauna Assessment incorporating Seven Part Tests of Significance of Impact under Threatened Species Legislation**
- **Caravan Park extensions, Fern Bay - Flora and Fauna Assessment incorporating Seven Part Tests of Significance of Impact under Threatened Species Legislation**
- **Road & Rail Infrastructure for the Hunter Economic Zone - Flora and Fauna Assessment incorporating Seven Part Tests of Significance of Impact under Threatened Species Legislation**
- **Alignments for Hunter Gas Pipeline Infrastructure - Flora and Fauna Assessment incorporating Seven Part Tests of Significance of Impact under Threatened Species Legislation**
- **Landscape Concept Plan, rural subdivision at Oakhampton Heights - Vegetation Management Plan**
- **Creek Rehabilitation Plan, Warners Bay - Vegetation Management Plan**
- **Vegetation Management Plan for a retained creek line with Sugar Valley Golf Course, West Wallsend - Vegetation Management Plan**
- **Individual Koala Plan of Management under SEPP 44 at Hawks Nest – Management Plan**



Curriculum Vitae

- CONTINUED -

- **Ecological Constraints Management Plan, Hawks Nest North** - Management Plan
- **Management Plan for the Green & Golden Bell Frog at Culburra** - Management Plan
- **Fuel Management Plan over lots within a rural-residential estate at Glen Oak** - Management Plan
- **Ecological Constraints Master Plan for Hunter Economic Zone** - Management Plan
- **Environmental Plan of Management for Residential / Tourism Sanctuary Project at Paxton** - Management Plan
- **Green and Golden Bell Frog Survey and Management Plan, Gillieston Heights** - Targeted Species Study
- Targeted Species Studies as part of the Ecological Constraints Master Plan for the Hunter Economic Zone

PREVIOUS EXPERIENCE:

Senior Ecologist, Wildthing Environmental Consulting

1995 – 2000

Oversaw operations in NSW and Qld, and project managed and undertook numerous ecological and bushfire assessments for a diverse array of clients / projects.

Environmental Officer, Pulver Cooper & Blackley / Kel Nagle Cooper & Associates

1994 - 1995

Undertook a range of environmental, planning and survey investigations; fieldwork; reporting for a range of land development; and golf course development projects.

MEMBERSHIPS & ACHIEVEMENTS:

- Frog and Tadpole Study Group (FATS)
- Hunter Birds Observers Club (HBOC). Committee Member 2009. Records Appraisal Committee, 2008 – present
- Bird Observers Club of Australia (BOCA)
- Donaldson Conservation Trust. Board member (independent environmental expert). 2009 – present.



Curriculum Vitae

Name: Allan Richardson

Office: RPS Harper Somers O'Sullivan

Position in Company: Senior Ecologist

Qualifications / Awards

- B.Env.Sc. (Environmental Management)
- B.Env.Sc. (Hons) (Biology) – Migratory Wading Bird Study
- 2002 Hunter Environmental Institute Scholarship
- Waterways Authority Boating Licence
- OH&S Induction Training (Green Card)
- NSW Driver's Licence (Class C)
- NPWS Scientific Licence
- NSW Animal Ethics Research Authority
- St John Ambulance Senior First Aid Certificate

Memberships:

- Hunter Bird Observers Club
- Victorian Wader Study Group

Areas of Expertise:

- Ornithological Surveys and Research
- Targeted and general Terrestrial flora and fauna surveys
- Threatened Flora & Fauna Assessment, Reporting and Legislation
- GPS Survey and GIS Mapping Projects
- High Level Nature Photography
- Tertiary and General Ecological Tutoring, Demonstrating and Presenting

Recent Experience Includes:

Allan Richardson has broad range of Ecological Assessment reporting experience underpinned by over 27 years of ecological field experience. Over four and a half years of project experience has primarily included a range of flora and fauna assessment disciplines as required by a wide range of corporate and domestic client requirements. Allan has a strong grounding in threatened species ecology in both coastal and western NSW regional areas, with specialist migratory wader studies expertise in Central NSW and Roebuck Bay in North Western Australia.

Allan's wide ranging interest across different ecological disciplines, has been a central part of important threatened species projects, including, the Critically Endangered North Rothbury Persoonia, Hunter Estuary Green and Golden Bell Frog populations, Migratory Wader habitat usage surveys, seasonal Swift Parrot movements and specialised Avifauna Wind Farm Surveys on the east and west coast. Allan's broad ecological experience also represents an important part of RPS HSO's threatened flora and vegetation community mapping, targeted fauna survey works and threatened species habitat assessments over both small and large spatial areas for a range of client needs. His depth of experience and a strong knowledge of Australian fauna and regional vegetation contribute strongly to RPS HSO's ability to meet the consultation and regulatory needs of the development community.

SARAH JONES

Ecologist / Bushfire Planner

Newcastle, NSW

B. Env.Sc, University of Newcastle

G.Dip (Design for Bushfire Areas)

RFS / PIA NSW Consulting Planners Bushfire Training Course

AREAS OF EXPERTISE:

Sarah has over 10 years experience as an Ecologist, including over 8 years with RPS as the company's bushfire planning specialist. Sarah has gained extensive experience in Bushfire Threat Assessment & Management reporting, Bushfire Risk Management Plans, Fuel Management Plans, Bushfire Evacuation Plans, understanding of fire regimes upon flora and fauna, Vegetation Management Plans, Terrestrial flora and fauna surveys, Flora and Fauna Assessments, along with understanding of environmental legislation and threatened species issues.

PREVIOUS EXPERIENCE:

Ecologist – Ecotone Environmental Consultants, Waratah, NSW

Jan 2001 – Nov 2001

**Volunteer Environmental Educator – Community Partnership,
Newcastle City Council**

Sept 2000 – Dec 2000

MEMBERSHIPS & ACHIEVEMENTS:

- Member of the Fire Protection Association Australia (FPA)
- Member of the Bushfire Planning and Design Special Interest Group (BPAD)
- NSW Driver's Licence (Class C)
- OH&S Induction Training (Green Card)
- NPWS Scientific Investigation Licence
- NSW Animal Ethics Research Authority



Curriculum Vitae

TOBY LAMBERT

Senior Ecologist / Senior Project Manager

Newcastle, NSW

Bachelor of Environmental Science, University of Newcastle, 1993 - 1996

Accredited BioBanking Assessor, Tafe NSW – Ryde, 2009

NSW Driver's Licence (Class C)

OH&S Induction Training (Green Card)

NPWS Scientific Investigation Licence and NSW Animal Ethics Research Authority

AREAS OF EXPERTISE:

Toby has over fourteen years experience in undertaking and managing a diverse array of ecological and environmental surveys and assessments. As a Senior Ecologist – Senior Project Manager, he supervises all facets of flora and fauna assessment and related reports: planning, supervision of field and reporting staff, project scheduling, budget management, liaising with clients and Government departments and providing advice of all kinds. He has also been called upon to prepare expert evidence for matters at the NSW Land and Environment Court. Toby has produced ecological and environmental documentation for private and public projects ranging in complexity. These include a number of wind farms throughout Australia and New Zealand, coal mines and a range of infrastructure projects within the Hunter region. Toby has also managed ecological master planning for residential projects in Sydney, the Central Coast and the Hunter. Toby's fields of expertise are Environmental Impact Assessment and mediation, flora, fauna and habitat survey method, design and identification, detailed understanding of legislation and threatened species issues, terrestrial fauna surveys and project management. He has experience in conducting comprehensive fauna surveys and preparing related documentation in a broad array of environments throughout New South Wales, with most projects located in the greater Sydney area, Blue Mountains, Central Coast, Hunter and Forster / Great Lakes regions. Toby has also undertaken ecological projects in Western Australia, Queensland, the ACT and New Zealand.

SELECTED PROJECT EXPERIENCE:

Ecology

- **Hunter Economic Zone Industrial Estate** - Project Manager for the environmental component of the development of the Hunter Economic Zone industrial estate at Kurri Kurri, to be the largest industrial estate in NSW.
- **Centennial Coal** - Environmental Project Manager for consultancy works to Centennial Coal covering a broad range of disciplines, but primarily focussed on ecological impact assessments, monitoring and management at six coal mines in the western Blue Mountains and Lake Macquarie NSW.
- **Peabody Energy Australia** - Senior Project Manager for project specific and ongoing monitoring requirements for Wambo Coal Mine at Warkworth in the Upper Hunter Valley. Toby liaises directly with the Environmental Manager of the mine in relation to requirements to fulfil consent conditions for the ongoing development and operation of the project.
- **Allco Wind Energy** - This involved undertaking fauna surveys for a 100 turbine wind farm on the North Island of New Zealand and coordinating other ecological specialists to prepare an ecological impact assessment for submission to Taranaki Council. Aspects included regular liaison with the Department of Conservation regarding issues of significance, survey methodology, and mitigation and management measures to protect significant ecological features. Local bird groups were also involved and Toby was involved in the public consultation sessions.



Curriculum Vitae

- CONTINUED -

- **Stockland Wallarah Peninsula** - This Lake Macquarie, NSW project required a multi-disciplinary approach to an innovative residential proposal on environmentally sensitive land. Project management of, and participation in, a large and diverse planning team were major features of this work. Toby was a pivotal member of the project management team that provided the detailed ecological input and advice that was required from the early stages of the planning process to the point of submission to determining authorities. The proposal required sophisticated and creative impact assessment and reporting. Toby made a major contribution to the production of a series of comprehensive ecological reports that ensured the ecological integrity of the site was maintained in the post-development landscape.

PREVIOUS EXPERIENCE:

Senior Project Manager - Cumberland Ecology, Epping **2005**

Duties included flora and fauna surveying and survey design; overseeing and contribution to the preparation of complex ecological and environmental reports for both small and large projects; flora and fauna surveying and survey design; liaison with both the private sector and federal, state and local government departments.

Principal Consultant / Co-Founder - Keystone Ecological, Kariong **2004 - 2005**

Preparation and development of Keystone Ecological Flora and Fauna Impact Assessment report format; development of client database, including organisation of promotional material, logo design and customer relations; administration including preparation of quotes and invoices and organising accounts and BAS statements; Flora and fauna surveying and survey design; along with Anabat II Data Analysis.

Project Manager - Ecology - Conacher Travers Environmental, Somersby **1998 - 2004**

Supervision of flora and fauna survey design; report quality control; production of technical reports such as Review of Environmental Factors, Flora & Fauna Assessments, Statement of Environmental Effects, Species Impact Statements and Plans of Management, Land and Environment Court Evidence preparation, EPBC Act Referrals and Preliminary Information preparation; Flora & fauna surveying; liaison with Department of Environment and Conservation, Department of Environment and Heritage, Department of Infrastructure, Planning and Natural Resources, Department of Agriculture, Local Governments and private clients; Anabat II Data Analysis; Water Testing; Data Recording and Statistical Analysis.

Volunteer for Green and Golden Bell Frog Survey - Australian Museum, North Avoca **1999 - 2001**

Survey and searches for the endangered species Green & Golden Bell Frog; assisting in weighing, measuring and micro-chipping frogs for on-going research purposes.

Environmental Scientist - Australian Defence Industries (ADI), St Marys **1998**

Bore Water Sampling; statistical analysis of test results; and report production.

Environmental Scientist - Anne Clements & Associates, North Sydney **1997**

Field Assistant to Botanist and data recording.

Research Assistant - University of Newcastle **1996**

Initiation of design of final year project for Biology Dept; research into fire regimes on species composition & regeneration in open woodland; use of advanced scientific equipment including infra red gas analyser in the field, and replication of experiments using computer database; theoretical knowledge on soils, nutrient cycles & vegetation types.

MEMBERSHIPS & ACHIEVEMENTS:

- Ecological Consultants Association of NSW (ECA) – Council Member
- Newcastle Green Drinks for Environmental Professionals organising committee

Curriculum Vitae

Name: Shaun Corry

Office: RPS Newcastle

Position in Company: Ecologist

Qualifications / Memberships: Dip Conservation and Land Mgt
NSW Driver's Licence (Class C)
Waterways Authority Boating Licence
OH&S Induction Training (Green Card)
NPWS Scientific Investigation Licence
NSW Animal Ethics Research Authority

Areas of Expertise:

- Flora and fauna identification and habitat assessment
- Targeted threatened flora and fauna surveys
- Delineation and mapping of vegetation communities
- Endangered Ecological Community (EEC) assessment
- Experience with GPS/GIS for project design and mapping
- Conducting Field Surveys for Flora, Fauna and Habitat Identification
- Report Preparation including Fauna & Flora Assessments
- Ecological Monitoring and Reporting
- Bushfire Threat Assessment & Management reporting
- Understanding of environmental legislation

Recent Experience Includes:

Shaun has a broad range of Ecological Assessment reporting experience and ecological field experience. Experience within the consulting industry has primarily included a wide range of flora assessment disciplines as required by a wide range of public and private clients. Shaun has a strong grounding in threatened flora species, endangered ecological communities and populations throughout NSW. Shaun has undertaken flora and fauna surveys including targeted surveys for threatened flora species within the Blue Mountains, Hunter, Central Coast, Mid North Coast and Southern Queensland.

Appendix 7

EPBC Act Approval



The Hon Peter Garrett AM MP

Minister for Environment Protection, Heritage and the Arts

B09/3401

Mr Keith Dedden
Project Director
Coal & Allied Operations Pty Ltd
Level 3, 410 Ann Street
BRISBANE QLD 4000

Dear Mr Dedden

23 MAR 2010

Decision on approval

Coal & Allied Southern Estates Residential Development - Gwandalan, Catherine Hill Bay and Nords Wharf, NSW

I refer to your proposal to subdivide and develop approximately 101 hectares of land owned by Coal & Allied Operations Pty Ltd on the Wallarah Peninsula, as described in the referral documentation submitted on 20 August 2008.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Coal & Allied Operations Pty Ltd. The details of my decision are attached. The proposal must be undertaken in accordance with the conditions specified in the approval.

Please note any plans required as conditions of approval will be regarded as public documents unless you provide sufficient justification to warrant commercial-in-confidence status.

It should also be noted that, although an approval has been granted under Part 9 of the EPBC Act, this approval does not relieve the person to whom it has been granted from an obligation to comply with any other law of the Commonwealth, state or territory that is applicable to the action, and to have any right, title or interest that is required to access land or waters and to do the action.

My Department has an active audit program for proposals that have been referred or approved under the EPBC Act. The audit program aims to ensure that proposals are implemented as planned and that there is a high degree of compliance with any associated conditions. You should be aware that your project may be selected for audit by the Department at any time and all related records and documents may be subject to scrutiny. Information about the Department's audit strategy is enclosed. In addition, a request for the person undertaking the action to undertake an independent audit of compliance with the conditions of approval may be made under Section 458 of the EPBC Act.

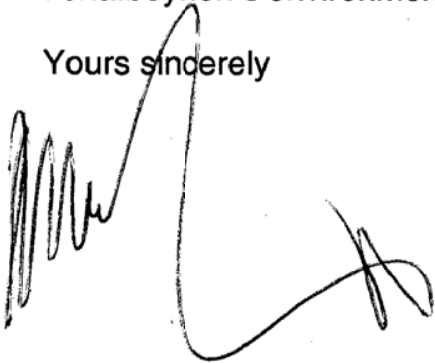
I have also written to the following parties to advise them of this decision:

State/territory
authority/authorities

Mr John Ross, Department of Planning

If you have any questions about this decision, please contact Ms Fiona Beynon, Director, SEQld/NSW Section, Environment Assessment Branch on 02 6275 9263 or fiona.beynon@environment.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter Garrett', with a large, sweeping flourish extending to the right.

Peter Garrett



APPROVAL

Coal & Allied residential subdivision, Wallarah Peninsula NSW (EPBC 2008/4419)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed action

person to whom the approval is granted

Coal & Allied Operations Pty Ltd
ACN: 000 023 656

proposed action

The subdivision and residential development of approximately 101 hectares of land owned by Coal & Allied Operations Pty Ltd on the Wallarah Peninsula at Gwandalan, Catherine Hill Bay and Nords Wharf to create up to 935 dwellings and associated infrastructure. The dedication of approximately 849 hectares of land to the New South Wales Government for permanent conservation is included as part of the action, as described in the referral documentation submitted on 20 August 2008.

Approval

relevant controlling provisions

The decision to approve has effect for:

- Listed threatened species and communities (sections 18 & 18A)

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

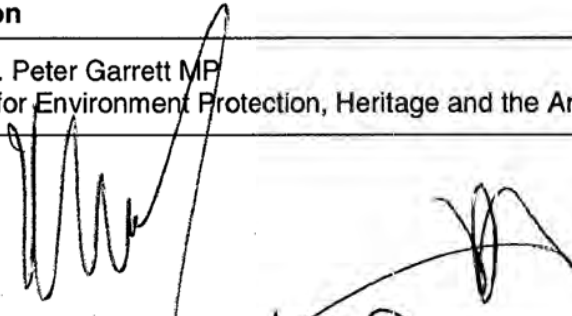
This approval has effect until 2039.

Person authorised to make decision

name and position

The Hon. Peter Garrett MP
Minister for Environment Protection, Heritage and the Arts

signature



date of decision

23rd March 2010

ANNEXURE 1

Conditions attached to the approval for Gwandalan developable area and conservation area.

- A1. The person taking the action must undertake the action in accordance with the conditions of this approval and as described in the referral documentation dated 20 August 2008. Where the referral documentation and these conditions are contradictory, these conditions shall prevail to the extent of the contradiction.
- A2. Prior to any commencement of works, the person taking the action must dedicate the approximate 206 ha of land identified as the Gwandalan conservation area to the NSW Government to be conserved in perpetuity.
- A3. The person taking the action must develop a management plan that:
- (a) ensures the long term management for conservation and viability of the *Angophora inopina* population in the northern section of the buffer zone on the eastern side of Kanangra Drive (refer to the map at Figure 2); and
 - (b) identifies actions for managing the long term impacts on the *A. inopina* population in the northern section of the buffer zone from the adjacent residential areas.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- A4. The person taking the action must develop a management plan that:
- (a) provides for monitoring of the impacts of mineral exploration and extraction on the viability of the *A. inopina* in the Gwandalan conservation area;
 - (b) identifies measures of viability that are critical thresholds which indicate a reduction in viability of the *A. inopina* in the Gwandalan conservation area which, once exceeded, will trigger a requirement for the person proposing to take the action to put in place management actions to address any reduction in viability; and
 - (c) identifies measures of viability that are critical thresholds which, once exceeded, will trigger a requirement for the person proposing take the action to source an additional area containing viable *A. inopina* to compensate for the impacts that the development in the Gwandalan developable area will have on *A. inopina*.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- A5. In order to minimise any potential impacts on the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed threatened species and suitable habitat that is known to, or likely to occur in the Gwandalan conservation area, a management and monitoring plan must be developed to address the following interface management issues between the Gwandalan developable area and the Gwandalan conservation area:
- (a) pedestrian access arrangements;
 - (b) edge effects due to disturbance of adjacent areas;
 - (c) procedures for identifying and conserving, hollow bearing and old growth habitat trees in the Gwandalan developable area;
 - (d) sediment and erosion control measures;
 - (e) water quality and quantity;
 - (f) domestic animals;
 - (g) spread of exotic and invasive species; and
 - (h) foreshore rehabilitation.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- A6. In order to minimise the potential impacts on the EPBC Act listed threatened species and suitable habitat that is known to, or likely to occur in the Gwandalan conservation area, the person proposing to take the action must develop a Stormwater Management Plan which ensures that stormwater discharged from the Gwandalan developable area meets the objective reductions set out in the October 2007 draft *Managing Urban Stormwater: environmental targets*, Department of Environment and Climate Change NSW.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- A7. Within ten calendar days of commencement of the works, the person taking the action must advise the Department in writing of the actual date of commencement.
- A8. Within three months of every 12 month anniversary of the commencement of the works, the person taking the action must submit to the Department an annual report addressing compliance with the conditions of this approval, including measures taken to implement the management plans required by this approval. Annual reports must be provided until the Minister is satisfied and the Department advises in writing that the proponent has complied with all conditions of the approval.
- A9. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, reports or strategies referred to in condition numbers A3, A4, A5 and A6 the person taking the action must submit for the Minister's approval a revised version of any such plan, report or strategy. If the Minister approves such a revised plan, report or strategy, that plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.
- A10. If the Minister believes that it is necessary or desirable for the better protection of listed threatened species and communities to do so, the Minister may request that the person taking the action make specified revisions to the plans, reports or strategies approved pursuant to condition numbers A3, A4, A5 and A6 and submit the revised plan, report or strategy for the Minister's approval. The person taking the action must comply with any such request. The revised approved plan, report or strategy must be implemented.
- A11. If, at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of the Minister.
- A12. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.

Definitions:

Commencement of works: Undertaking of any activity identified below under the definition of works.

Gwandalan conservation area: The area identified as conservation land (marked green) on the map at Figure 1.

Gwandalan developable area: The area identified as developable land (marked blue) on the map at Figure 1.

Department: The Australian Government Department responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Minister: The Minister responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Substantial commencement: the commencement of works.

Works: Includes any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy equipment for the purpose of breaking the ground for buildings or infrastructure. Works excludes any activity required to be undertaken to fulfil the requirements of condition numbers A2, A3, A4 and A5 above.

ANNEXURE 2

Conditions attached to the approval for Catherine Hill Bay developable area and conservation area.

- B1. The person taking the action must undertake the action in accordance with the conditions of this approval and as described in the referral documentation dated 20 August 2008. Where the referral documentation and these conditions are contradictory, these conditions shall prevail to the extent of the contradiction.
- B2. Prior to any commencement of works, the person taking the action must dedicate the approximate 527 ha of land identified as the Catherine Hill Bay conservation area to the NSW Government to be conserved in perpetuity.
- B3. In order to minimise any potential impacts on the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed threatened species and suitable habitat that is known to, or is likely to occur in the Catherine Hill Bay conservation area, a management and monitoring plan must be developed to address the following interface management issues between the Catherine Hill Bay developable area and the Catherine Hill Bay conservation area:
- (a) pedestrian access arrangements;
 - (b) edge effects due to disturbance of adjacent areas;
 - (c) procedures for identifying and conserving, hollow bearing and old growth habitat trees in the Catherine Hill Bay developable area;
 - (d) sediment and erosion control measures;
 - (e) water quality and quantity;
 - (f) domestic animals; and
 - (g) spread of exotic and invasive species.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- B4. In order to minimise the potential impacts on the EPBC Act listed threatened species and suitable habitat that is known to, or likely to occur in the Catherine Hill Bay Conservation area, the person proposing to take the action must prepare Stormwater Management Plans which ensure that stormwater discharged from the Catherine Hill Bay developable area meets the objective reductions set out in the October 2007 draft *Managing Urban Stormwater: environmental targets, Department of Environment and Climate Change NSW*.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented

- B5. Within ten calendar days of commencement of the works, the person taking the action must advise the Department in writing of the actual date of commencement.
- B6. Within three months of every 12 month anniversary of the commencement of the works, the person taking the action must submit to the Department an annual report addressing compliance with the conditions of this approval, including measures taken to implement the management plans required by this approval. Annual reports must be provided until the Minister is satisfied and the Department advises in writing that the proponent has complied with all conditions of the approval.
- B7. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, reports or strategies referred to in condition numbers B3 and B4 the person taking the action must submit for the Minister's approval a revised version of any such plan, report or strategy. If the Minister approves such a revised plan, report or strategy, that plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.

- B8. If the Minister believes that it is necessary or desirable for the better protection of listed threatened species and communities to do so, the Minister may request that the person taking the action make specified revisions to the plans, reports or strategies approved pursuant to condition numbers B3 and B4 and submit the revised plan, report or strategy for the Minister's approval. The person taking the action must comply with any such request. The revised approved plan, report or strategy must be implemented.
- B9. If, at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of the Minister.
- B10. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Departments website. The results of audits may also be publicised through the general media.

Definitions:

Catherine Hill Bay conservation area: The area identified as conservation land (marked green) on the map at Figure 3.

Catherine Hill Bay developable area: The area identified as developable land (marked blue) on the Map at Figure 3.

Commencement of works: Undertaking of any activity identified below under the definition of works.

Department: The Australian Government Department responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Minister: The Minister responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Substantial commencement: the commencement of works.

Works: Includes any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy equipment for the purpose of breaking the ground for buildings or infrastructure. Works excludes any activity required to be undertaken to fulfil the requirements of condition numbers B2, B3 and B4 above.

ANNEXURE 3

Conditions attached to the approval for Nords Wharf developable area and conservation area

- C1. The person taking the action must undertake the action in accordance with the conditions of this approval and as described in the referral documentation dated 20 August 2008. Where the referral documentation and these conditions are contradictory, these conditions shall prevail to the extent of the contradiction.
- C2. Prior to any commencement of works, the person taking the action must dedicate the approximate 116 ha of land identified as the Nords wharf conservation area to the NSW Government to be conserved in perpetuity.
- C3. In order to minimise any potential impacts on the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed threatened species and suitable habitat that is known to, or likely to occur in the Nords wharf conservation area, a management and monitoring plan must be developed to address the following interface issues between Nords Wharf developable area and Nords Wharf conservation area:
- (a) pedestrian access arrangements;
 - (b) edge effects due to disturbance of adjacent areas;
 - (c) procedures for identifying and conserving, hollow bearing and old growth habitat trees in the Nords Wharf developable area;
 - (d) sediment and erosion control measures;
 - (e) water quality and quantity;
 - (f) domestic animals; and
 - (g) spread of exotic and invasive species.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- C4. In order to minimise the potential impacts on the EPBC Act listed threatened species and suitable habitat that is known to, or likely to occur in the Nords Wharf conservation area, the person proposing to take the action must prepare Stormwater Management Plans which ensure that stormwater discharged from the Nords wharf developable area meets the objective reductions set out in the October 2007 draft *Managing Urban Stormwater: environmental targets*, Department of Environment and Climate Change NSW.

The plan must be approved in writing by the Minister prior to commencement of works. The approved plan must be implemented.

- C5. Within ten calendar days of commencement of the works, the person taking the action must advise the Department in writing of the actual date of commencement.
- C6. Within three months of every 12 month anniversary of the commencement of the works, the person taking the action must submit to the Department an annual report addressing compliance with the conditions of this approval, including measures taken to implement the management plans required by this approval. Annual reports must be provided until the Minister is satisfied and the Department advises in writing that the proponent has complied with all conditions of the approval.
- C7. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, reports or strategies referred to in condition numbers C3 and C4 the person taking the action must submit for the Minister's approval a revised version of any such plan, report or strategy. If the Minister approves such a revised plan, report or strategy, that plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.

- C8. If the Minister believes that it is necessary or desirable for the better protection of listed threatened species and communities to do so, the Minister may request that the person taking the action make specified revisions to the plans, reports or strategies approved pursuant to condition numbers C3 and C4 and submit the revised plan, report or strategy for the Minister's approval. The person taking the action must comply with any such request. The revised approved plan, report or strategy must be implemented.
- C9. If, at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of the Minister.
- C10. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Departments website. The results of audits may also be publicised through the general media.

Definitions:

Commencement of works: Undertaking of any activity identified below under the definition of works.

Department: The Australian Government Department responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Minister: The Minister responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Nords Wharf conservation area: The area identified as land (marked green) on the map at Figure 4.

Nords Wharf developable area: The area identified as developable land (marked blue) on the map at Figure 4.

Substantial commencement: the commencement of works.

Works: Includes any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy equipment for the purpose of breaking the ground for buildings or infrastructure. Works excludes any activity required to be undertaken to fulfil the requirements of condition numbers C2, C3 and C4.

FIGURE 1

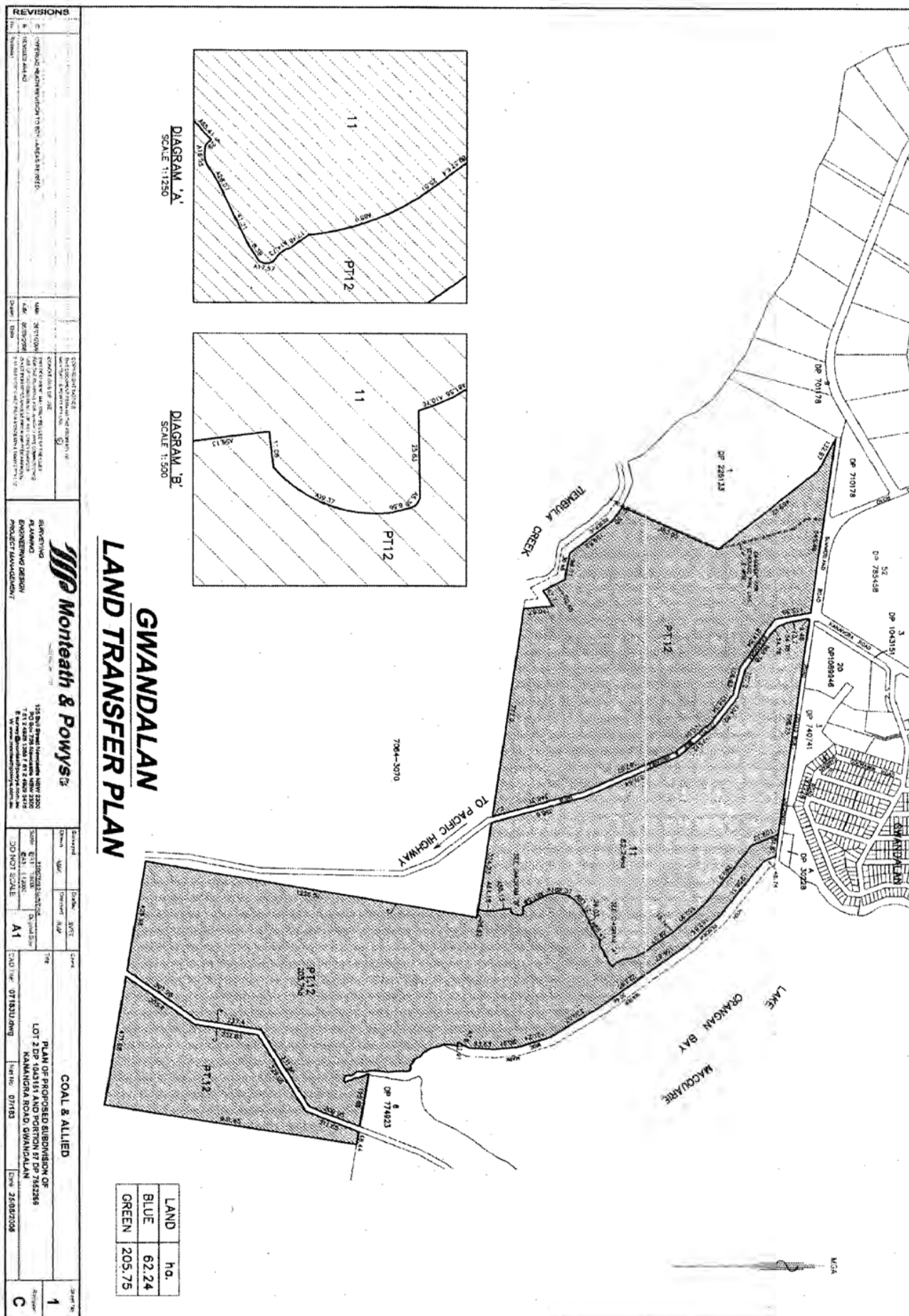


FIGURE 2

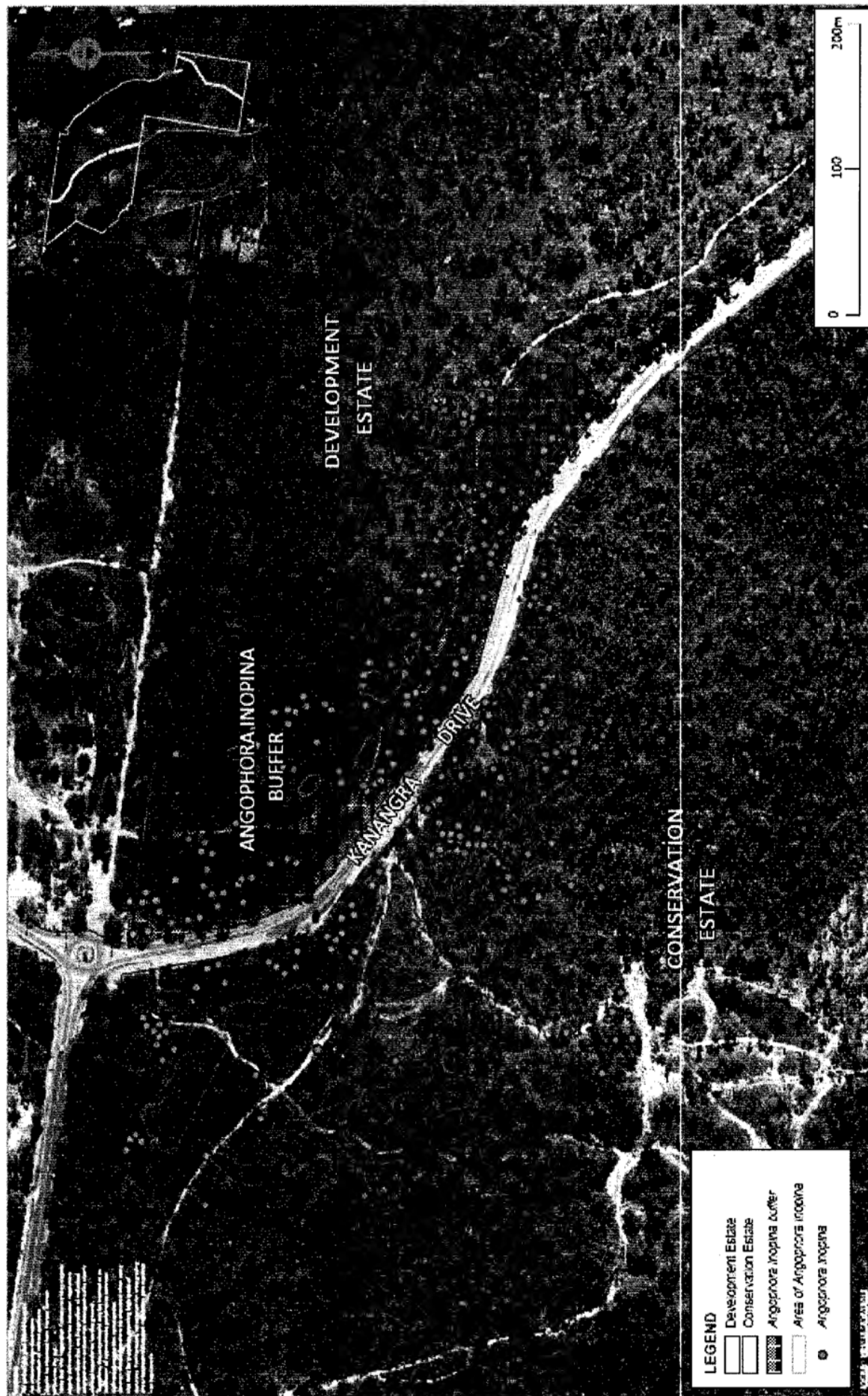


FIGURE 3

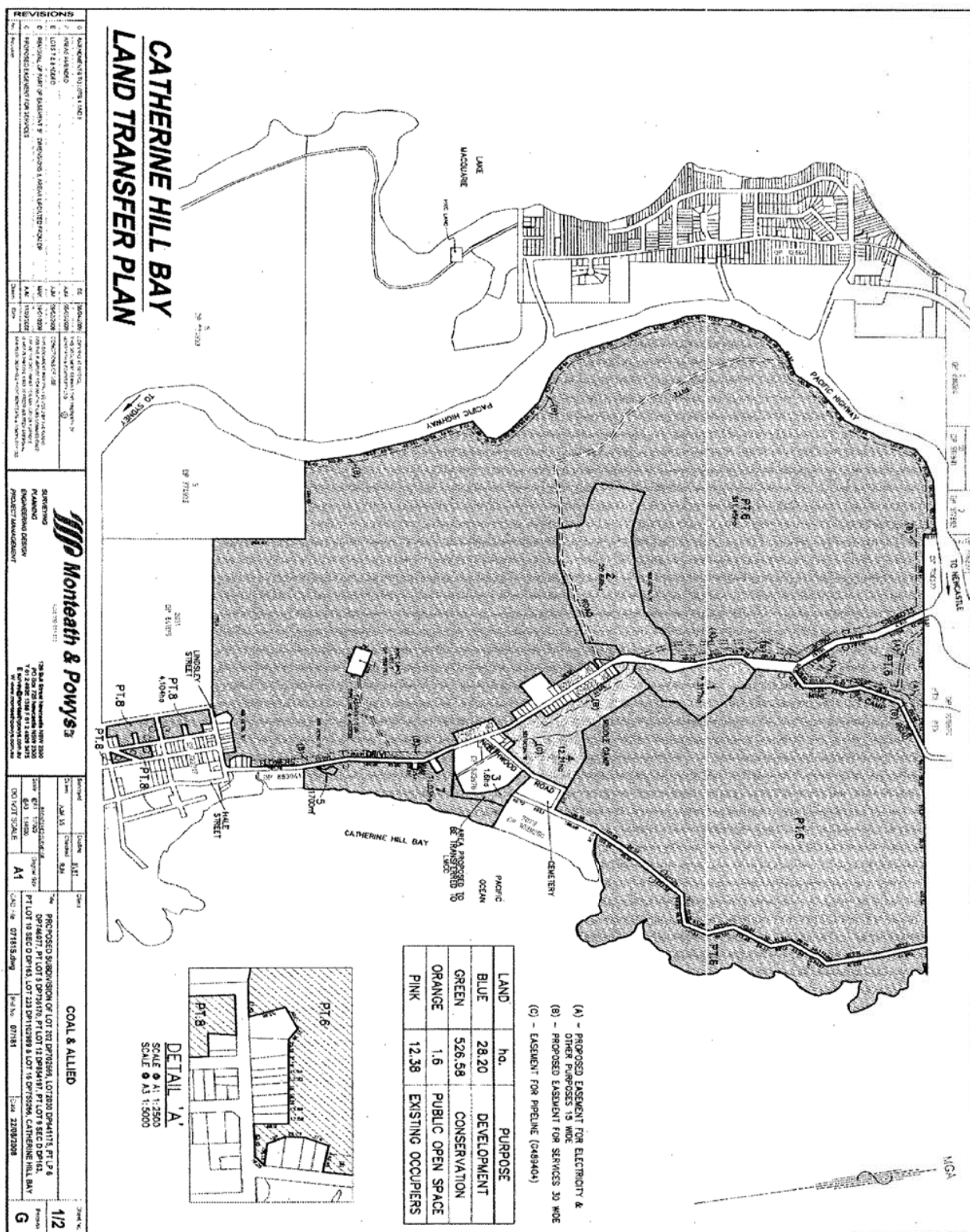
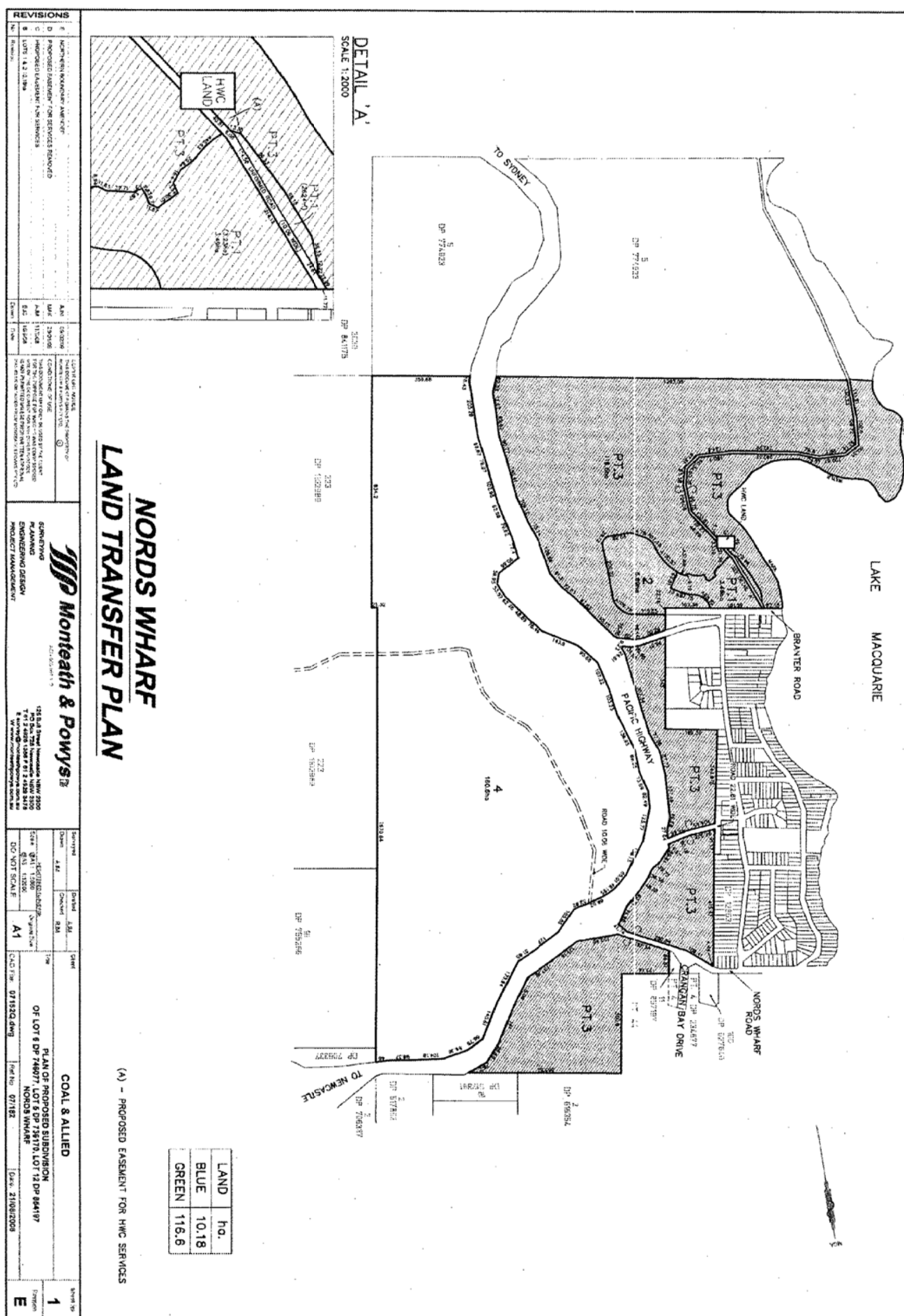


FIGURE 4

Appendix 8

Justification of EPBC Approval Consistency

Catherine Hill Bay (Middle Camp)

Condition	EPBC Act Approval	Consistency of Part 3A Concept Plan EA (The Proposal) with EPBC Act Approval
B1.	The person taking the action must undertake the action in accordance with the conditions of this approval and as described in the referral documentation dated 20 August 2008. Where the referral documentation and these conditions are contradictory, these conditions shall prevail to the extent of the contradiction.	The Proposal is consistent with the relevant conditions of the EPBC Act approval as follows:
B2.	Prior to any commencement of works, the person taking the action must dedicate the approximate 527ha of land identified as the Catherine Hill Bay conservation area to the NSW Government to be conserved in perpetuity.	The Catherine Hill Bay conservation area will be dedicated to the NSW Government, in accordance with clause 4 of Schedule 4 of the Voluntary Planning Agreement, prior to any commencement of works.
B3.	<p>In order to minimise any potential impacts on the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) listed threatened species and suitable habitat that is known to, or likely to occur in the Catherine Hill Bay conservation area, a management and monitoring plan must be developed to address the following interface management issues between the Catherine Hill Bay development area and the Catherine Hill Bay conservation area:</p> <ul style="list-style-type: none"> (a) pedestrian access arrangements; (b) edge effects due to disturbance of adjacent areas; (c) procedures for identifying and conserving, hollow bearing and old growth habitat trees in the Catherine Hill Bay development area; (d) sediment and erosion control measures; (e) water quality and quantity; (f) domestic animals; and (g) spread of exotic and invasive species. <p>The plan must be approved in writing by the Minister prior to the commencement of works. The approved plan must be implemented.</p>	<p>The Proposal is consistent with this condition A5 as follows:</p> <p>The Proposal commits to the preparation of a Statement of Interim Management Intent (SIMI) in the “Environmental Management” clause of the Statement of Commitments. The SIMI will be prepared in consultation with DECCW and will be, to the extent possible, consistent with the plan approved by the Minister with respect to clauses (a), (b), and (g) of this condition B3.</p> <p>The Proposal commits to the preparation of a Tree Management Plan in the “Tree Management” clause of the Statement of Commitments. The Tree Management Plan will be, to the extent possible, consistent with the plan approved by the Minister with respect to clause (c) of this condition B3.</p> <p>The Proposal commits to the preparation and implementation of a range of stormwater management measures in the “Water Quality and Quantity Management” clause of the Statement of Commitments. The management measures will be, to the extent possible, consistent with the plan approved by the Minister with respect to clause (d) and (e) of this condition B3.</p> <p>The Proposal commits to the development of strategies to address potential impacts associated with pet ownership in the “Pet Management” clause of the Statement of Commitments. The management measures will be, to the extent possible, consistent with the plan approved by the Minister with respect to clause (f) of this condition</p>