

APPENDIX 1

LIST OF PLANT SPECIES FOR THE PRIMARY STUDY AREAS

Key to all lists:

1, 2, 4, R - nearby sites within the broader project area.

3. Kabilli Group

5. Hammond Hill and Ellenden Groups

6. Grose Hill Group

Introduced plant species are indicated by an asterisk (*).

PTERIDOPHYTA (Ferns)

ASPLENIACEAE

Asplenium flabellifolium Cav. Necklace Fern 1,5

DENNSTAEDTIACEAE

Pteridium esculentum (Forster f.) Cockayne Common Bracken 1,3,4,5,R

SINOPTERIDACEAE

Cheilanthes sieberi Kunze Mulga Fern 1,4,5,R

GYMNOSPERMAE (Conifers)

PINACEAE

**Pinus radiata* D. Don Radiata Pine 2,6,R

ANGIOSPERMAE (Flowering Plants)

ANTHERICACEAE

Arthropodium milleflorum (DC.) J. F. Macbr. Vanilla Lily 5

Laxmannia gracilis R. Br. Slender Wire-lily 5

Thysanotus tuberosus R. Br. Common Fringe-lily 5,R

Tricoryne elatior R. Br. Yellow Rush-lily 5,R

APIACEAE

Centella asiatica (L.) Urban Asian Pennywort 5

Eryngium rostratum Cav. Blue Devil 5

Hydrocotyle laxiflora DC. Stinking Pennywort 1,3,4,5,R

**Foeniculum vulgare* Miller Fennel 2,R

ARALIACEAE

Astrotricha ledifolia DC. Star-hair R

ASPHODELACEAE

Bulbine bulbosa (R. Br.) Haw. Bulbine Lily 5,R

ASTERACEAE

Ajuga australis R. Br. Austral Bugle 5

Brachycome rigidula (DC.) G. Davis Leafy Daisy R

Brachycome spathulata Gaudich. Spoon Daisy 4

Calocephalus citreus Less. Lemon Beauty-heads 5

Calotis anthemoides F. Muell. Cut-leaved Burr-daisy 5

Calotis scabiosifolia Sonder & F. Muell. Rough Burr-daisy R

Cassinia aculeata (Labill.) R. Br. Common Cassinia 1

Cassinia longifolia R. Br. Shiny Cassinia 4,R

Chrysocephalum apiculatum (Labill.) Steetz Common Everlasting 3,5,6,R

<i>Chrysocephalum semipapposum</i> (Labill.) Steetz	Clustered Everlasting	R
<i>Cotula australis</i> Sieber ex Sprengel	Common Cotula	1,2,3
<i>Craspedia variabilis</i> Everett & Doust	Billy Buttons	5
<i>Cymbonotus lawsonianus</i> Gaudich. Hook. f.	Austral Bears-ear	1,3,4,5
<i>Gnaphalium ? involucreatum</i> Forster. f.	Cudweed	5
<i>Helichrysum leucopsideum</i> DC.	Satin Everlasting	4
<i>Helichrysum rutidolepis</i> DC.	Pale Everlasting	5
<i>Leptorhynchus squamatus</i> (Labill.) Less.	Scaly Buttons	5,R
<i>Leucochrysum albicans</i> (A. Cunn.) Paul G. Wilson	Hoary Sunray	R
<i>Microseris lanceolata</i> (Walp.) Schultz-Bip.	Yam Daisy	R
<i>Olearia viscidula</i> (F. Muell.) Benth.	Brush Daisy Bush	1,4
<i>Ozothamnus diosmifolius</i> (Vent.) DC.	Everlasting	4
<i>Podolepis jaceoides</i> (Sims) Voss	Showy Copper-wire Daisy	R
<i>Senecio quadridentatus</i> Labill.	Cotton Fireweed	5
<i>Senecio</i> sp. N	Fireweed	4,5
<i>Solenogyne dominii</i> L. Adams	Smooth Solenogyne	1,3,4,5,6
<i>Solenogyne gunnii</i> (Hook. f.) Cabrera	Hairy Solenogyne	1,3,4,5
<i>Triptilodiscus pygmaeus</i> Turcz.	Austral Sunray	1,3,4,5,R
<i>Vittadinia cuneata</i> DC	Fuzzy New Holland Daisy	R
<i>Vittadinia muelleri</i> N. Burb.	Narrow-leaf New Holland Daisy	5,R
* <i>Arctotheca calendula</i> (L.) Levyns	Capeweed	1,2,3,4,5,6,R
* <i>Carthamus lanatus</i>	Saffron Thistle	5,6
* <i>Chondrilla juncea</i> L.	Skeleton Weed	3,R
* <i>Centaurea calcitrapa</i> L.	Star Thistle	1
* <i>Cirsium vulgare</i> (Savi) Ten.	Spear Thistle	1,3,4,R
* <i>Hypochaeris radicata</i> L.	Flatweed	1,3,4,5,6,R
* <i>Onopordum acanthium</i> L.	Scotch Thistle	2,5,6,R
* <i>Silybum marianum</i> (L.) Gaertner	Variegated Thistle	2
* <i>Sonchus asper</i> (L.) Hill	Prickly Sowthistle	R
* <i>Sonchus oleraceus</i> L.	Common Sowthistle	5,R

BORAGINACEAE

<i>Cynoglossum suaveolens</i> R. Br.	Sweet Hound's Tongue	2,5,R
* <i>Echium plantagineum</i> L.	Paterson's Curse	5,6,R
* <i>Echium vulgare</i> L.	Viper's Bugloss	R

BRASSICACEAE

* <i>Capsella bursa-pastoris</i> (L.) Medikus.	Shepherd's Purse	2,5,6
* <i>Hirschfeldia incana</i> (L.) Lagr.-Fossat	Buchan Weed	R

CAMPANULACEAE

<i>Wahlenbergia communis</i> Carolin	Tufted Bluebell	4,5,R
<i>Wahlenbergia gracilis</i> (Forster f.) A. DC.	Australian Bluebell	1,R
<i>Wahlenbergia luteola</i> P. J. Smith	Bluebell	5,6,R
<i>Wahlenbergia stricta</i> (R. Br.) Sweet	Tall Bluebell	5,R

CARYOPHYLLACEAE

<i>Scleranthus biflorus</i> (Forster & Forster f.) Hook. f.	Twin-flowered Knawel	5
<i>Stellaria pungens</i> Brongn.	Prickly Starwort	1,3,4,5,R
* <i>Cerastium vulgare</i> Hartm.	Mouse-ear Chickweed	1,4,R
* <i>Paronychia brasiliiana</i> DC.	Chilean Whitlow Wort	1,3,4,5
* <i>Petrorhagia nanteuilii</i> (Burnat) P. Ball & Heyw.	Proliferous Pink	1,3,5,R
* <i>Polycarpon tetraphyllum</i> (L.) L.	Four-leaved Allseed	R
* <i>Spergularia rubra</i> (L.) J. S. & C. Presl.	Sandspurry	1,2

* <i>Stellaria media</i> Villars	Chickweed	1,5,6,R
CASUARINACEAE		
<i>Allocasuarina littoralis</i> (Salisb.) L. Johnson	Black She-oak	1,3,4,5,R
<i>Allocasuarina verticillata</i> (Lam.) L. Johnson	Drooping She-oak	5
CHENOPODIACEAE		
<i>Chenopodium pumilio</i> R. Br.	Small Crumbweed	1,2,3,4,5,6
<i>Einadia hastata</i> (R. Br.) A. J. Scott	Berry Saltbush	3
<i>Einadia nutans</i> (R. Br.) A. J. Scott	Nodding Saltbush	1,3,4,5,R
* <i>Chenopodium album</i> L.	Fat Hen	5,R
CLUSIACEAE		
<i>Hypericum gramineum</i> Forster f.	Small St John's Wort	3,5
* <i>Hypericum perforatum</i> L.	St John's Wort	R
COLCHICACEAE		
<i>Wurmbea dioica</i> (R. Br.) F. Muell.	Early Nancy	5,6
CONVOLVULACEAE		
<i>Convolvulus erubescens</i> Sims	Pink Bindweed	3,5,6,R
<i>Dichondra repens</i> Forster & Forster f.	Kidney Weed	1,3,4,5
CRASSULACEAE		
<i>Crassula siebierana</i> (Schultes & Schultes f.) Druce	Australian Stonecrop	1,2,3,4,5,6,R
CYPERACEAE		
<i>Carex appressa</i> R. Br.	Tall Sedge	R
<i>Carex inversa</i> R. Br.	Knob Sedge	3,4,5,R
<i>Lepidosperma laterale</i> R. Br.	Variable Sword-sedge	1,5,R
DILLENIACEAE		
<i>Hibbertia obtusifolia</i> DC.	Grey Guinea Flower	3,4,5,R
DROSERACEAE		
<i>Drosera peltata</i> Thunb.	Pale Sundew	5
EPACRIDACEAE		
<i>Astroloma humifusum</i> (Cav.) R. Br.	Cranberry Heath	5,R
<i>Brachyloma daphnoides</i> (Smith) Benth.	Daphne Heath	3,4,5,R
<i>Leucopogon virgatus</i> (Labill.) R. Br.	Common Beard-heath	3,R
<i>Lissanthe strigosa</i> (Smith) R. Br.	Peach Heath	4,5
<i>Melichrus urceolatus</i> R. Br.	Urn Heath	3,5,R
<i>Monotoca scoparia</i> (Smith) R. Br.	Prickly Broom-heath	4
EUPHORBIACEAE		
<i>Chamaesyce drummondii</i> (Boiss.) Hassall	Caustic Weed	3
<i>Poranthera microphylla</i> Brongn.	Small Poranthera	1,3,4,R
FABACEAE		
FABOIDEAE (subfamily)		
<i>Bossiaea buxifolia</i> A. Cunn.	Matted Bossiaea	5,R
<i>Daviesia mimosoides</i> R. Br.	Blunt-leaf Bitter Pea	5,R

<i>Desmodium varians</i> (Labill.) G. Don.	Slender Tick-trefoil	5,R
<i>Dillwynia phyllicoides</i> A. Cunn.	Twisted Parrot-pea	3,4,R
<i>Glycine clandestina</i> J.C. Wendl.	Twining Glycine	5
<i>Glycine tabacina</i> (Labill.) Benth.	Vanilla Glycine	1,4,5
<i>Gompholobium huegelii</i> Benth.	Pale Wedge Pea	R
<i>Hardenbergia violacea</i> (Schneev.) Stearn	Native Sarsaparilla	1,4,R
<i>Hovea linearis</i> (Sm.) R. Br.	Erect Hovea	3,4,R
<i>Indigofera australis</i> Willd.	Austral Indigo	5,R
<i>Pultenaea subspicata</i> Benth.	Bush-pea	R
* <i>Cytisus scoparius</i>	English Broom	R
* <i>Robinia</i> sp.	Locust Tree	2
* <i>Trifolium arvense</i> L.	Haresfoot Clover	3,R
* <i>Trifolium dubium</i> Sibth.	Yellow Suckling Clover	1,5,R
* <i>Trifolium glomeratum</i> L.	Clustered Clover	
* <i>Trifolium subterraneum</i> L.	Subterranean Clover	1,2,3,5,6
* <i>Ulex europaeus</i> L.	Gorse	R
* <i>Vicia sativa</i> L.	Vetch	R
MIMOSOIDEAE (subfamily)		
<i>Acacia dealbata</i> Link	Silver Wattle	R
<i>Acacia falciformis</i> DC.	Broad-leaved Hickory	1,2,3,4,5,R
<i>Acacia implexa</i> Benth.	Hickory Wattle	3,5,R
<i>Acacia mearnsii</i> De Wild.	Black Wattle	1,3,4,5,R
<i>Acacia melanoxylon</i> R. Br.	Blackwood	4,5
<i>Acacia rubida</i> A. Cunn.	Red-stem Wattle	R
<i>Acacia ulicifolia</i> (Salisb.) Court	Prickly Moses	1
GENTIANACEAE		
* <i>Centaurium erythraea</i> Rafn	Common Centaury	3,5
GERANIACEAE		
<i>Geranium solanderi</i> Carolin	Native Geranium	1,4,5,R
* <i>Erodium botrys</i> (Cav.) Bertol.	Long Storksbill	2,3,5,6
GOODENIACEAE		
<i>Goodenia hederacea</i> Smith	Forest Goodenia	1,4,5,R
<i>Velleia paradoxa</i> R. Br.	Spur Velleia	R
HALORAGACEAE		
<i>Gonocarpus tetragynus</i> Labill.	Poverty Raspwort	1,3,4,5,R
<i>Haloragis heterophylla</i> Brongn.	Swamp Raspwort	5

IRIDACEAE

<i>Patersonia sericea</i> R. Br.	Native Iris	R
* <i>Romulea rosea</i> (L.) Eckl.	Onion Grass	5

JUNCACEAE

<i>Juncus australis</i> Hook. f.	Austral Rush	5,R
<i>Juncus filicaulis</i> Buchenau	Thread Rush	4,5
<i>Luzula densiflora</i> (H. Nordensk.) Edgar	Woodrush	5

LAMIACEAE

<i>Ajuga australis</i> R. Br.	Austral Bugle	5
* <i>Marrubium vulgare</i> L.	Horehound	4
* <i>Salvia verbenaca</i> L.	Wild Sage	2,R

LINACEAE

<i>Linum marginale</i> A. Cunn. ex Planchon	Native Flax	R
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LOBELIACEAE

<i>Isotoma fluviatilis</i> (R. Br.) F. Muell. ex Benth.	Swamp Isotome	3,4,5
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LOMANDRACEAE

<i>Lomandra filiformis</i> (Thunb.) Britten	Wattle Mat-rush	1,4,5,R
<i>Lomandra longifolia</i> Labill.	Spiny-headed Mat-rush	1,3,4,5,R
<i>Lomandra multiflora</i> (R. Br.) J. Britt.	Many-flowered Mat-rush	4,5,R

LORANTHACEAE

<i>Amyema pendulum</i> (Sieber ex Sprengel) Tieghem	Drooping Mistletoe	1,3,5
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LYTHRACEAE

<i>Lythrum hyssopifolia</i> L.	Hyssop Loosestrife	R
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MALVACEAE

* <i>Malva parviflora</i> L.	Small-flowered Mallow	2,5
* <i>Modiola caroliniana</i> (L.) G. Don	Red-flowered Mallow	R

MYRTACEAE

<i>Eucalyptus bridgesiana</i> R.T. Baker	Apple Box	5,R
<i>Eucalyptus dives</i> Schauer	Broad-leaved Peppermint	1,2,3,4,5,6,R
<i>Eucalyptus macrorhyncha</i> F. Muell. ex Benth.	Red Stringybark	1
<i>Eucalyptus mannifera</i> Mudie	Brittle Gum	2,3,4,5
<i>Eucalyptus melliodora</i> A. Cunn. ex. Schauer	Yellow Box	5
<i>Eucalyptus pauciflora</i> Sieber ex Sprengel	Snow Gum	5,6,R
<i>Eucalyptus radiata</i> Sieber ex DC.	Narrow-leaved Peppermint	1,2,4,5,R
<i>Eucalyptus rossii</i> R.T. Baker & H. G. Sm.	Scribbly Gum	1,3,4,5,R
<i>Eucalyptus rubida</i> H. Deane & Maiden	Candlebark	R
<i>Eucalyptus sieberi</i> L. Johnson	Silvertop Ash	1,4
<i>Eucalyptus stellulata</i> Sieber ex DC.	Black Sallee	R
<i>Eucalyptus viminalis</i> Labill.	Manna Gum	1,3,4,5
<i>Kunzea ericoides</i> (A. Rich.) Joy Thomps.	Burgan	5
<i>Leptospermum myrtifolium</i> Sieber ex DC.	Grey Teatree	5,R
<i>Melaleuca parvostaminea</i> Byrnes	Paperbark	5

ONAGRACEAE

* <i>Oenothera</i> sp.	Primrose	R
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OPHIOGLOSSACEAE

<i>Ophioglossum lusitanicum</i> L.	Adder's Tongue	5
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ORCHIDACEAE

<i>Caladenia ? carnea</i> R. Br.	Pink Fingers	4,5
<i>Diuris lanceolata</i> Lindl.	Golden Moths	5
<i>Diuris punctata</i> Sm.	Purple Donkey Orchid	R
<i>Diuris sulphurea</i> R. Br.	Tiger Orchid	1,R
<i>Pterostylis</i> sp.	Greenhood	1

OXALIDACEAE

<i>Oxalis perennans</i> Haw.	Grassland Wood Sorrel	3,4,5,R
<i>Oxalis</i> sp.	Wood Sorrel	1,3
* <i>Oxalis articulata</i> Savigny	Pink Wood Sorrel	R

PHORMIACEAE

<i>Dianella caerulea</i> Sims	Flax-lily	4
<i>Dianella longifolia</i> R. Br.	Long-leaved Flax-lily	R
<i>Dianella revoluta</i> R. Br.	Spreading Flax-lily	R
<i>Stypandra glauca</i> R. Br.	Nodding Blue Lily	1,3,4,5

PLANTAGINACEAE

<i>Plantago gaudichaudii</i> Barneoud	Narrow Plantain	5
<i>Plantago varia</i> R. Br.	Variable Plantain	5,6,R
* <i>Plantago coronopus</i> L.	Buck's-horn Plantain	5
* <i>Plantago lanceolata</i> L.	Ribbed Plantain	2,5,R

POACEAE

<i>Aristida ramosa</i> R. Br.	Three-awned Speargrass	3,5
<i>Bothriochloa macra</i> (Steud.) S. T. Blake	Red-leg Grass	2
<i>Chionochloa pallida</i> (R. Br.) SWL Jacobs	Silvertop Wallaby Grass	5
<i>Cynodon dactylon</i> (L.) Pers.	Couch Grass	5
<i>Danthonia carphoides</i> F. Muell. ex Benth.	Short Wallaby Grass	2,3,4,5,6
<i>Danthonia monticola</i> Vickery	Wallaby Grass	R
<i>Danthonia racemosa</i> R. Br.	Wallaby Grass	5
<i>Eragrostis brownii</i> (Kunth) Nees	Lovegrass	5
<i>Eragrostis</i> sp.	Lovegrass	5
<i>Imperata cylindrica</i> P. Beauv. var. <i>major</i> (Nees) C. E. Hubb.		5
<i>Microlaena stipoides</i> (Labill.) R. Br.	Weeping Grass	1,3,4,5,R
<i>Panicum effusum</i> R. Br.	Hairy Panic	2,5
<i>Poa labillardieri</i> Steud.	River Tussock	R
<i>Poa sieberiana</i> Spreng.	Poa Tussock	1,2,3,4,5,6,R
<i>Stipa bigeniculata</i> Hughes	Tall Speargrass	5,6
<i>Stipa scabra</i> Lindl.	Corkscrew Speargrass	2,3,4,5,R
<i>Themeda australis</i> (R. Br.) Stapf	Kangaroo Grass	5,R
* <i>Andropogon virginicus</i>	Whiskey Grass	R
* <i>Avena</i> sp.	Oats	R
* <i>Briza maxima</i> L.	Quaking Grass	3,5,R
* <i>Briza minor</i> L.	Shivery Grass	3
* <i>Bromus cartharticus</i> Vahl.	Prairie Grass	R
* <i>Bromus diandrus</i> Roth	Great Brome	R

* <i>Bromus hordaceus</i> L.	Soft Brome	5,R
* <i>Cynosurus echinatus</i> L.	Rough Dog's Tail	5
* <i>Dactylis glomerata</i> L.	Cocksfoot	R
* <i>Holcus lanatus</i> L.	Yorkshire Fog	3,5,R
* <i>Hordeum</i> sp.	Barley Grass	1,2,3,5,6,R
* <i>Lolium</i> sp.	Ryegrass	R
* <i>Nassella trichotoma</i> (Nees) Hack. ex Arechav	Serrated Tussock	5,R
* <i>Paspalum dilatatum</i> Poir.	Paspalum	R
* <i>Pentaschistis airoides</i> (Nees) Stapf	False Hairgrass	2,3,5,R
* <i>Phalaris aquatica</i> L.	Phalaris	2,R
* <i>Poa annua</i> L.	Winter Grass	2,3,5,6,R
* <i>Vulpia bromoides</i> (L.) Gray	Squirrel's Tail	5

POLYGONACEAE

<i>Persicaria prostrata</i> (R. Br.) Sojak	Creeping Knotweed	5
<i>Rumex brownii</i> Campd.	Swamp Dock	1,2,5,6,R
* <i>Acetosella vulgaris</i> Fourr.	Sheep Sorrel	1,2,3,4,5,6,R
* <i>Rumex crispus</i> L.	Curled Dock	R

PRIMULACEAE

* <i>Anagallis arvensis</i> L.	Scarlet Pimpernel	R
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PROTEACEAE

<i>Persoonia linearis</i> Andrews	Narrow-leaved Geebung	3,4,5,R
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RANUNCULACEAE

<i>Clematis aristata</i> R. Br. ex DC.	Travellers Joy	1
<i>Ranunculus lappaceus</i> Smith	Common Buttercup	5,R

RESEDACEAE

* <i>Reseda luteola</i> L.	Wild Mignonette	R
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RHAMNACEAE

<i>Cryptandra amara</i> Smith	Bitter Cryptandra	R
<i>Discaria pubescens</i> (Brongn.) Druce	Australian Anchor Plant	R

ROSACEAE

<i>Acaena agnipila</i> Gand.	Sheep's Burr	1,3,4,5,6,R
<i>Rubus parvifolius</i> L.	Native Raspberry	5,R
* <i>Cotoneaster</i> sp.	Cotoneaster	R
* <i>Crataegus monogyna</i> Jacq.	Hawthorn	2,3
* <i>Malus</i> sp.	Apple Tree	R
* <i>Prunus</i> sp.	Plum	R
* <i>Rosa rubiginosa</i> L.	Briar Rose	2,3,5,R
* <i>Rubus fruticosus</i> sp. agg.	Blackberry	3,R
* <i>Sanguisorba minor</i> Scop. ssp. <i>muricata</i> Briq.	Sheep's Burnet	R

RUBIACEAE

<i>Asperula conferta</i> Hook. f.	Common Woodruff	5,6,R
<i>Galium gaudichaudii</i> DC.	Rough Bedstraw	4,5,R
<i>Pomax umbellata</i> (Gaertner) Sol. ex A. Rich.	Pomax	4
* <i>Sherardia arvensis</i> L.	Field Madder	3

SALICACEAE

* <i>Salix</i> sp.	Willow	R
* <i>Populus nigra</i> L.	Lombardy Poplar	R
SANTALACEAE		
<i>Exocarpos cupressiformis</i> Labill.	Native Cherry	3,5,R
SCROPHULARIACEAE		
<i>Veronica calycina</i> R. Br.	Cup Speedwell	1,4
* <i>Linaria pelisseriana</i> (L.) Miller	Pelisser's Toadflax	R
* <i>Verbascum thapsus</i> L.	Great Mullein	R
* <i>Verbascum virgatum</i> Stokes	Twiggy Mullein	R
SIMAROUBACEAE		
* <i>Ailanthus altissima</i> (Mill.) Swingle	Tree-of-Heaven	R
SOLANACEAE		
* <i>Lycium ferocissimum</i> Miers	African Boxthorn	2,5
STACKHOUSIACEAE		
<i>Stackhousia monogyna</i> Labill.	Creamy Stackhousia	3,5,R
STYLIDIACEAE		
<i>Stylidium graminifolium</i> Sw. ex. Willd.	Grass Triggerplant	R
THYMELAEACEAE		
<i>Pimelea curviflora</i> R. Br.	Curved Rice-flower	3,5,R
<i>Pimelea glauca</i> R. Br.	Smooth Rice Flower	R
TREMANDRACEAE		
<i>Tetradlea bauerifolia</i> F. Muell. ex Schuchardt	Tetradlea	R
TYPHACEAE		
<i>Typha orientalis</i> C. Presl	Broad-leaved Cumbungi	R
URTICACEAE		
* <i>Urtica urens</i> L.	Small Nettle	2,3
VIOLACEAE		
<i>Viola betonicifolia</i> Smith	Purple Violet	1,3,5
<i>Viola hederacea</i> Labill.	Ivy-leaved Violet	1,3,4

APPENDIX 2

VEGETATION SURVEY SHEETS

Grassland Plot Survey Form

Kevin Mills & Associates

Site Name: Tarago **Plot No.:** TR01 **Plot Size:** 10m x 10m (100m²)
Location: Hammond Hill (Osborne Property), adjacent to Tarago to Bungendore Road.
Date: 26 October 2004
Community: Yellow Box Woodland, with secondary native grassland.
GPS (north-east corner of plot): 55 0733437 6106330
Land Tenure: Freehold. **Soil:** Deep and clayey.
Geology: Granite **Topography:** Lower slope.
Altitude: 805 m **Slope:** very gentle. **Aspect:** north
Plant Species Cover: (1: <1%; 2: 1-10%, 3: 11-25%; 4:26-50%; 5:51-75%; 6: 76-100%)

Natives (24 species)		Exotics (4 species)	
<i>Calocephalus citreus</i>	1	<i>Acetosella vulgaris</i>	1
<i>Chrysocephalum apiculatum</i>	4	<i>Briza maxima</i>	1
<i>Crassula siebierana</i>	1	<i>Hypochaeris radicata</i>	1
<i>Cymbonotus lawsonianus</i>	1	<i>Trifolium subterraneum</i>	1
<i>Danthonia carphoides</i>	1		
<i>Drosera peltata</i>	1		
<i>Eryngium rostratum</i>	1		
<i>Gnaphalium ? involucreatum</i>	1		
<i>Gonocarpus tetragynus</i>	1		
<i>Haloragis heterophylla</i>	1		
<i>Hydrocotyle laxiflora</i>	1		
<i>Leptorhynchos squamatus</i>	2		
<i>Lissanthe strigosa</i>	1		
<i>Lomandra filiformis</i>	1		
<i>Luzula densiflora</i>	1		
<i>Ophioglossum lusitanicum</i>	1		
<i>Oxalis perennans</i>	1		
<i>Panicum effusum</i>	1		
<i>Poa sieberiana</i>	1		
<i>Solenogyne dominii</i>	1		
<i>Solenogyne gunnii</i>	1		
<i>Themeda australis</i>	5		
<i>Vittadinia muelleri</i>	1		
<i>Wahlenbergia communis</i>	1		
Unidentified grasses	2		

Estimated Percent Cover:	95%	Estimated Percent Cover:	1%
		Bare Ground:	4%

Grassland Plot Survey Form
Kevin Mills & Associates

Site Name: Tarago **Plot No.:** TR02 **Plot Size:** 10m x 10m (100m²)

Location: Hammond Hill (NE corner of Osborne Property),
adjacent to Tarago to Bungendore Road.

Date: 26 October 2004

Community: Yellow Box Woodland, with secondary native grassland.

GPS (north-east corner of plot): 55 0733556 6105635

Land Tenure: Freehold.

Soil: Deep and clayey.

Geology: Granite

Topography: Lower slope.

Altitude: 805 m **Slope:** Gentle.

Aspect: Northeast

Plant Species Cover: (1: <1%; 2: 1-10%, 3: 11-25%; 4:26-50%; 5:51-75%; 6: 76-100%)

Natives (29 species)

Exotics (5 species)

<i>Asperula conferta</i>	1	<i>Acetosella vulgaris</i>	1
<i>Astroloma humifusum</i>	1	<i>Bromus hordaceus</i>	1
<i>Bossiaea buxifolia</i>	1	<i>Centaurium erythraea</i>	1
<i>Bulbine bulbosa</i>	1	<i>Hypochaeris radicata</i>	1
<i>Centella asiatica</i>	1	<i>Trifolium subterraneum</i>	1
<i>Chrysocephalum apiculatum</i>	1		
<i>Cymbonotus lawsonianus</i>	1		
<i>Cynoglossum suaveolens</i>	1		
<i>Danthonia carphoides</i>	2		
<i>Drosera peltata</i>	1		
<i>Eryngium rostratum</i>	1		
<i>Gnaphalium ? involucreatum</i>	1		
<i>Gonocarpus tetragynus</i>	1		
<i>Goodenia hederacea</i>	1		
<i>Hydrocotyle laxiflora</i>	1		
<i>Juncus filicaulis</i>	1		
<i>Leptorhynchus squamatus</i>	1		
<i>Lissanthe strigosa</i>	2		
<i>Lomandra filiformis</i>	1		
<i>Luzula densiflora</i>	1		
<i>Melichrus urceolaris</i>	1		
<i>Oxalis perennans</i>	1		
<i>Panicum effusum</i>	1		
<i>Pimelea curviflora</i>	1		
<i>Poa sieberiana</i>	1		
<i>Solenogyne dominii</i>	1		
<i>Stipa bigeniculata</i>	1		
<i>Themeda australis</i>	6		
<i>Wahlenbergia stricta</i>	1		

Estimated Percent Cover: 95%

Estimated Percent Cover: 1%

Bare Ground: 4%

Grassland Plot Survey Form
Kevin Mills & Associates

Site Name: Tarago **Plot No.:** TR03 **Plot Size:** 10m x 10m (100m²)

Location: Hammond Hill (SE corner of Osborne Property),
adjacent to Tarago to Bungendore Road.

Date: 9 November 2004

Community: Yellow Box Woodland, with *E. pauciflora* and *E. bridgeiana*.

GPS (north-east corner of plot): 55 0730710 6102723

Land Tenure: Freehold.

Soil: Deep and clayey.

Geology: Granite

Topography: Low, broad ridge.

Altitude: 760 m **Slope:** Level.

Aspect: North

Plant Species Cover: (1: <1%; 2: 1-10%, 3: 11-25%; 4:26-50%; 5:51-75%; 6: 76-100%)

Natives (18 species)

Exotics (8 species)

<i>Acaena agnipila</i>	1	<i>Bromus hordaceus</i>	1
<i>Aristida ramosa</i>	1	<i>Acetosella vulgaris</i>	1
<i>Chrysocephalum apiculatum</i>	1	<i>Hypochaeris radicata</i>	1
<i>Cymbonotus lawsonianus</i>	1	<i>Onopordum acanthium</i>	1
<i>Danthonia racemosa</i>	1	<i>Pentaschistis airoides</i>	1
<i>Desmodium varians</i>	1	<i>Petrorhagia nanteuillii</i>	1
<i>Dichondra repens</i>	1	<i>Vulpia bromoides</i>	2
<i>Einadia nutans</i>	1	<i>Trifolium subterranean</i>	1
<i>Glycine tabicina</i>	1		
<i>Hydrocotyle laxiflora</i>	1		
<i>Hypericum gramineum</i>	1		
<i>Lomandra filiformis</i>	1		
<i>Oxalis perennans</i>	1		
<i>Plantago gaudichaudii</i>	1		
<i>Poa sieberiana</i>	5		
<i>Themeda australis</i>	1		
<i>Tricoryne elatior</i>	1		
<i>Wahlenbergia stricta</i>	1		

Estimated Percent Cover: **95%**

Estimated Percent Cover: **1%**

Bare Ground: **4%**

Grassland Plot Survey Form
Kevin Mills & Associates

Site Name: Tarago **Plot No.:** TR04 **Plot Size:** 10m x 10m (100m²)

Location: Hammond Hill (Osborne Property), north of transmission line
(substation site).

Date: 9 November 2004

Community: Native pasture/exotic grassland.

GPS (north-east corner of plot): 55 0729770 6103058

Land Tenure: Freehold.

Soil: Deep and clayey.

Geology: Old sediments

Topography: Valley floor.

Altitude: 760 m **Slope:** Level

Aspect: north

Plant Species Cover: (1: <1%; 2: 1-10%, 3: 11-25%; 4:26-50%; 5:51-75%; 6: 76-100%)

Natives (12 species)

Exotics (8 species)

<i>Acaena agnipila</i>	1	<i>Acetosella vulgaris</i>	2
<i>Chenopodium pumilio</i>	1	<i>Bromus hordaceus</i>	1
<i>Chrysocephalum apiculatum</i>	1	<i>Hypochaeris radicata</i>	1
<i>Crassula sieberiana</i>	2	<i>Nassella trichotoma</i>	1
<i>Danthonia carphoides</i>	1	<i>Onopordum acanthium</i>	1
<i>Danthonia</i> sp.	1	<i>Paronychia brasiliiana</i>	1
<i>Eragrostis</i> sp.	5	<i>Pentaschistis airoides</i>	2
<i>Juncus</i> ? <i>filicaulis</i>	1	<i>Trifolium subterranean</i>	1
<i>Lissanthe strigosa</i>	1	Unidentified grasses	2
<i>Lomandra filiformis</i>	1		
<i>Oxalis</i> sp.	1		
<i>Triptilodiscus pygmaeus</i>	1		

Estimated Percent Cover: 50%

Estimated Percent Cover: 40%

Bare Ground: 10%

Grassland Plot Survey Form
Kevin Mills & Associates

Site Name: Tarago **Plot No.:** TR05 **Plot Size:** 10m x 10m (100m²)
Location: Hammond Hill (Osborne Property), north of transmission line (substation site).
Date: 9 November 2004
Community: Native pasture/exotic grassland.
GPS (north-east corner of plot): 55 0729723 6103125
Land Tenure: Freehold. **Soil:** Deep and clayey.
Geology: Old sediments. **Topography:** Valley floor.
Altitude: 760 m **Slope:** Level. **Aspect:** North.
Plant Species Cover: (1: <1%; 2: 1-10%, 3: 11-25%; 4:26-50%; 5:51-75%; 6: 76-100%)

Natives (10 species)		Exotics (9 species)	
<i>Acaena agnipila</i>	1	<i>Acetosella vulgaris</i>	2
<i>Carex inversa</i>	1	<i>Bromus hordaceus</i>	1
<i>Chrysocephalum apiculatum</i>	1	<i>Hypochaeris radicata</i>	1
<i>Crassula sieberiana</i>	1	<i>Nassella trichotoma</i>	1
<i>Danthonia</i> sp.	3	<i>Paronychia brasiliana</i>	1
<i>Eragrostis</i> sp.	3	<i>Pentaschistis airoides</i>	1
<i>Juncus filicaulis</i>	1	<i>Trifolium dubium</i>	1
<i>Oxalis</i> sp.	1	<i>Trifolium subterranean</i>	2
<i>Stipa scabra</i>	1	<i>Vulpia bromoides</i>	2
<i>Triptilodiscus pygmaeus</i>	1		
Estimated Percent Cover:	40%	Estimated Percent Cover:	30%
		Bare Ground:	30%

Grassland Plot Survey Form
Kevin Mills & Associates

Site Name: Tarago **Plot No.:** TR06 **Plot Size:** 10m x 10m (100m²)
Location: Hammond Hill (Osborne Property), adjacent to Tarago to Bungendore Road.
Date: 9 November 2004
Community: Yellow Box Woodland, with secondary native grassland.
GPS (north-east corner of plot): 55 0730554 6102572
Land Tenure: Freehold. **Soil:** Deep and clayey.
Geology: Granite **Topography:** Broad lower slope.
Altitude: 755 m **Slope:** Level. **Aspect:** West.
Plant Species Cover: (1: <1%; 2: 1-10%, 3: 11-25%; 4:26-50%; 5:51-75%; 6: 76-100%)

Natives (28 species)		Exotics (4 species)	
<i>Acaena agnipila</i>	1	<i>Acetosella vulgaris</i>	1
<i>Ajuga australis</i>	1	<i>Bromus hordaceus</i>	1
<i>Aristida ramosa</i>	5	<i>Centaureum erythraea</i>	1
<i>Astroloma humifusum</i>	1	<i>Hypocheiros radicata</i>	1
<i>Chielanthes sieberi</i>	1		
<i>Chrysocephalum apiculatum</i>	1		
<i>Danthonia carphoides</i>	1		
<i>Eragrostis brownii</i>	1		
<i>Eucalyptus melliodora</i>	1		
<i>Gonocarpus tetragynus</i>	1		
<i>Haloragis heterophyllus</i>	1		
<i>Hydrocotyle laxiflora</i>	1		
<i>Hypericum gramineum</i>	1		
<i>Laxmania gracilis</i>	1		
<i>Leptorhynchos squamatus</i>	1		
<i>Lomandra filiformis</i>	1		
<i>Lomandra longifolia</i>	1		
<i>Oxalis perennans</i>	1		
<i>Panicum effusum</i>	1		
<i>Pimelea curviflora</i>	1		
<i>Plantago gaudichaudii</i>	1		
<i>Poa sieberiana</i>	2		
<i>Solenogyne dominii</i>	1		
<i>Themeda australis</i>	1		
<i>Tricoryne elatior</i>	1		
<i>Viola betonicifolia</i>	1		
<i>Wahlenbergia communis</i>	1		
<i>Wahlenbergia stricta</i>	1		
Estimated Percent Cover:	95%	Estimated Percent Cover:	1%
		Bare Ground:	5%

APPENDIX 3

LIST OF ANIMAL SPECIES FOR THE PROJECT AREA

Key to all lists:

1, 2, 4 nearby properties within the broader project area.

3. Kabilli

5. Hammond Hill

6. Groses Hill

0. Other records for the locality; see text.

Introduced species are indicated by an asterisk *.

3.1 MAMMALS

Nomenclature is based on *The Mammals of Australia* (Strahan 1995).

Note that this study is not concerned with bats, so that none are listed below.

TACHYGLOSSIDAE

Short-beaked Echidna	<i>Tachyglossus aculeatus</i>	3	5	0
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PHASCOLARCTIDAE

Koala	<i>Phascolarctos cinereus</i>			0
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VOMBATIDAE

Common Wombat	<i>Vombatus ursinus</i>	1	3	4	5	0
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PSEUDOCHEIRIDAE

Common Ringtail Possum	<i>Pseudocheirus peregrinus</i>		3	4		
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PHALANGERIDAE

Common Brushtail Possum	<i>Trichosurus vulpecula</i>					0
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MACROPODIDAE

Eastern Grey Kangaroo	<i>Macropus giganteus</i>	1	3	4	5	0
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Common Wallaroo	<i>Macropus robustus</i>					0
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Red-necked Wallaby	<i>Macropus rufogriseus</i>				5	0
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Swamp Wallaby	<i>Wallabia bicolor</i>		3			
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MURIDAE

Black Rat*	<i>Rattus rattus</i>					0?
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CANIDAE

Fox*	<i>Vulpes vulpes</i>	1	3		5	0
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LEPORIDAE

Rabbit*	<i>Oryctolagus cuniculus</i>	1	2	3	4	5	0
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Brown Hare*	<i>Lepus capensis</i>	1		3		5	6	0
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EQUIDAE

Domestic Horse*	<i>Equus caballus</i>			3			6	0
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BOVIDAE

Domestic Cattle*	<i>Bos taurus</i>					5	6	0
Domestic Sheep*	<i>Ovis aries</i>	1	2	3	4	5	6	0

CERVIDAE

Sambar Deer*	<i>Cervus unicolor</i>	1				5		0
Fallow Deer*	<i>Dama dama</i>	1						0

3.2 BIRDS

Family, order and nomenclature of scientific names and common names are based on *The Taxonomy and Species of Birds of Australia and its Territories* (Christidis & Boles 1994).

CASUARIIDAE

Emu	<i>Dromaius novaehollandiae</i>							0
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PHASIANIDAE

Stubble Quail	<i>Coturnix pectoralis</i>					5		0
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ANATIDAE

Blue-billed Duck	<i>Oxyura australis</i>							0
*Greylag Goose	<i>Anser</i> sp.							0
Musk Duck	<i>Biziura lobata</i>							0
Black Swan	<i>Cygnus atratus</i>							0
Australian Shelduck	<i>Tadorna tadornoides</i>			3		5	6	0
Australian Wood Duck	<i>Chenonetta jubata</i>	1		3	4	5	6	0
Freckled Duck	<i>Stictonetta naevosa</i>							0
Pacific Black Duck	<i>Anas superciliosa</i>		2			5		0
Magpie-Goose	<i>Anseranas semipalmata</i>							0
Pink-eared Duck	<i>Malacorhynchus membranaceus</i>							0
Australian Shoveler	<i>Anas rhynchotis</i>							0
Grey Teal	<i>Anas gracilis</i>			3	4	5	6	0
Chestnut Teal	<i>Anas castanea</i>						6	0
Hardhead	<i>Aythya australis</i>							0

PODICIPEDIDAE

Australasian Grebe (br)	<i>Tachybaptus novaehollandiae</i>			3		5		0
Hoary-headed Grebe	<i>Poliiocephalus poliocephalus</i>							0

PHALACROCORACIDAE

Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>						5	0
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ARDEIDAE

White-faced Heron	<i>Egretta novaehollandiae</i>							0
White-necked Heron	<i>Ardea pacifica</i>							0
Intermediate Egret	<i>Ardea intermedia</i>							0

THRESKIORNITHIDAE

Australian White Ibis	<i>Threskiornis molucca</i>			5		0
Straw-necked Ibis	<i>Threskiornis spinicollis</i>					0

ACCIPITRIDAE

White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>					0
Brown Goshawk	<i>Accipiter fasciatus</i>			5		
Collared Sparrowhawk	<i>Accipiter cirrhocephalus</i>					0
Wedge-tailed Eagle	<i>Aquila audax</i>	1		5		0
Little Eagle	<i>Hieraaetus morphnoides</i>		2			

FALCONIDAE

Brown Falcon (br?)	<i>Falco berigora</i>			5	6	0
Peregrine Falcon	<i>Falco peregrinus</i>					0
Nankeen Kestrel	<i>Falco cenchroides</i>		2	5		

RALLIDAE

Spotted Crake	<i>Porzana tabuensis</i>					0
Purple Swamphen	<i>Porphyrio porphyrio</i>					0
Eurasian Coot	<i>Fulica atra</i>					0

SCOLOPACIDAE

Marsh Sandpiper	<i>Tringa stagnatilis</i>					0
Pectoral Sandpiper	<i>Calidris melanotos</i>					0
Common Greenshank	<i>Tringa nebularia</i>					0
Ruddy Turnstone	<i>Arenaria interpres</i>					0
Curlew Sandpiper	<i>Calidris ferruginea</i>					0

RECURVIROSTRIDAE

Banded Stilt	<i>Cladorhynchus leucocephalus</i>					0
Red-necked Avocet	<i>Recurvirostra novaehollandiae</i>					0

CHARADRIIDAE

Red-capped Plover	<i>Charadrius ruficapillus</i>					0
Double-banded Plover	<i>Charadrius bicinctus</i>					0
Grey Plover	<i>Pluvialis squatarola</i>					0
Pacific Golden Plover	<i>Pluvialis fulva</i>					0
Red-kneed Dotterel	<i>Erythrogonys cinctus</i>					0
Masked Lapwing	<i>Vanellus miles</i>			5		0
Banded Lapwing	<i>Vanellus tricolor</i>					0

LARIDAE

Silver Gull	<i>Larus novaehollandiae</i>					0
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COLUMBIDAE

Rock Dove*	<i>Columba livia</i>					0
Common Bronzewing	<i>Phaps chalcoptera</i>	1				0
Crested Pigeon	<i>Ocyphaps lophotes</i>		2	3	5	6

CACATUIDAE

Glossy Black-Cockatoo	<i>Calyptorhynchus lathamii</i>				3				0
Yellow-tailed Black-Cockatoo	<i>Calyptorhynchus funereus</i>				3	4			0
Galah (br)	<i>Cacatua roseicapilla</i>			2	3	4	5	6	0
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	1	2	3	4	5	6		0

PSITTACIDAE

Crimson Rosella	<i>Platycercus elegans</i>	1	2	3	4	5	6		0
Eastern Rosella	<i>Platycercus eximius</i>			3		5			0
Red-rumped Parrot	<i>Psephotus haematonotus</i>							6	0

CUCULIDAE

Pallid Cuckoo	<i>Cuculus pallidus</i>	1		3		5			
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PODARGIDAE

Tawny Frogmouth	<i>Podargus strigoides</i>								0
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HALCYONIDAE

Laughing Kookaburra	<i>Dacelo novaeguineae</i>	1		3	4	5			0
Sacred Kingfisher	<i>Todiramphus sanctus</i>			3		5			

MEROPIDAE

Rainbow Bee-eater	<i>Merops ornatus</i>				3				
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CLIMACTERIDAE

White-throated Treecreeper	<i>Cormobates leucophaeus</i>	1		3	4	5			0
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MALURIDAE

Superb Fairy-wren	<i>Malurus cyaneus</i>					5			0
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PARDALOTIDAE

Spotted Pardalote	<i>Pardalotus punctatus</i>					4	5		0
Striated Pardalote	<i>Pardalotus striatus</i>				3		5		0
White-browed Scrubwren	<i>Sericornis frontalis</i>					4			0
Weebill	<i>Smicrornis brevirostris</i>								0
White-throated Gerygone	<i>Gerygone olivacea</i>				3		5		
Brown Thornbill	<i>Acanthiza pusilla</i>	1		3			5		0
Buff-rumped Thornbill	<i>Acanthiza reguloides</i>	1		3	4	5			0
Yellow-rumped Thornbill	<i>Acanthiza chrysorrhoa</i>	1		3		5	6		0
Yellow Thornbill	<i>Acanthiza nana</i>								0
Striated Thornbill	<i>Acanthiza lineata</i>					4	5		0
Southern Whiteface	<i>Aphelocephala leucopsis</i>						5		

MELIPHAGIDAE

Red Wattlebird	<i>Anthochaera carunculata</i>	1		3		5			0
Noisy Friarbird	<i>Philemon corniculatus</i>	1		3		5			
Noisy Miner	<i>Manorina melanocephala</i>			3		5			0
Yellow-faced Honeyeater	<i>Lichenostomus chrysops</i>		2						0

White-eared Honeyeater	<i>Lichenostomus leucotis</i>							0
White-plumed Honeyeater	<i>Lichenostomus penicillatus</i>							0
Brown-headed Honeyeater	<i>Melithreptus brevirostris</i>					5		
White-naped Honeyeater	<i>Melithreptus lunatus</i>							0
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>					5		0
White-fronted Chat	<i>Epthianura albifrons</i>							0

PETROICIDAE

Scarlet Robin	<i>Petroica multicolor</i>							0
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NEOSITTIDAE

Varied Sittella (br)	<i>Daphoenositta chrysoptera</i>			3		5		
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PACHYCEPHALIDAE

Golden Whistler	<i>Pachycephala pectoralis</i>					5		0
Rufous Whistler	<i>Pachycephala rufiventris</i>	1		3	4	5		
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	1	2	3	4	5		0

DICRURIDAE

Satin Flycatcher	<i>Myiagra cyanoleuca</i>			3		5		
Restless Flycatcher	<i>Myiagra inquieta</i>							0
Magpie-lark	<i>Grallina cyanoleuca</i>	1	2	3		5	6	0
Grey Fantail	<i>Rhipidura fuliginosa</i>			3		5		0
Willie Wagtail	<i>Rhipidura leucophrys</i>	1		3		5	6	0
Spangled Drongo	<i>Dicrurus bracteatus</i>							

CAMPEPHAGIDAE

Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	1		3		5		0
White-winged Triller	<i>Lalage sueurii</i>		2	3				

ORIOOLIDAE

Olive-backed Oriole	<i>Oriolus sagittatus</i>	1				5		
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ARTAMIDAE

Dusky Woodswallow	<i>Artamus cyanopterus</i>			3				
Grey Butcherbird	<i>Cracticus torquatus</i>	1	2	3		5		0
Australian Magpie (br)	<i>Gymnorhina tibicen</i>	1	2	3	4	5	6	0
Pied Currawong	<i>Strepera graculina</i>	1		3	4	5		0
Grey Currawong	<i>Strepera versicolor</i>	1		3	4	5	6	0

CORVIDAE

Australian Raven	<i>Corvus coronoides</i>	1	2	3	4	5	6	0
Little Raven (br?)	<i>Corvus mellori</i>					5		0

CORCORACIDAE

White-winged Chough (br)	<i>Corcorax melanorhamphos</i>	1		3	4	5		0
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ALAUDIDAE

Skylark*	<i>Alauda arvensis</i>							0
MOTACILLIDAE								
Richard's Pipit (br)	<i>Anthus novaeseelandiae</i>		3	4	5	6		0
PASSERIDAE								
House Sparrow*	<i>Passer domesticus</i>	2	3			6		
Red-browed Finch	<i>Neochmia temporalis</i>							0
FRINGILLIDAE								
European Goldfinch*	<i>Carduelis carduelis</i>	2		4	5	6		0
HIRUNDINIDAE								
Welcome Swallow	<i>Hirundo neoxena</i>		3	4		6		0
Tree Martin	<i>Hirundo nigricans</i>	2			5			
ZOSTEROPIDAE								
Silvereye	<i>Zosterops lateralis</i>							0
MUSCICAPIDAE								
Common Blackbird*	<i>Turdus merula</i>	2						
STURNIDAE								
Common Starling* (br)	<i>Sturnus vulgaris</i>	1	2	3	4	5	6	0

3.3 FROGS

Nomenclature follows Cogger (1992).

MYOBATRACHIDAE

Common Eastern Froglet	<i>Crinia signifera</i>	2	4	5	0
Eastern Banjo Frog	<i>Limnodynastes dumerilii</i>	2		5	
Spotted Grass Frog	<i>Limnodynastes tasmaniensis</i>	1	3	4	5
Smooth Toadlet	<i>Uperoleia laevis</i>		3		

HYLIDAE

Green and Golden Bell Frog	<i>Litoria aurea</i>				0
Verreaux's Tree Frog	<i>Litoria verreauxii</i>				0

3.4 REPTILES

Nomenclature follows Cogger (1992).

CHELIDAE

Long-necked Tortoise	<i>Chelodina longicollis</i>			5	0
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AGAMIDAE

Jacky Lizard	<i>Amphibolurus muricatus</i>			5	
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SCINCIDAE

Copper-tailed Skink	<i>Ctenotus taeniolatus</i>			5	
Cunningham's Skink	<i>Egernia cunninghami</i>				0
Three-toed Skink	<i>Hemiergis decresiensis</i>		3	5	0
Eastern Blue-tongued Lizard	<i>Tiliqua scincoides</i>	2		5	0
Blotched Blue-tongued Lizard	<i>Tiliqua nigrolutea</i>		3	5	

ELAPIDAE

Eastern Tiger Snake	<i>Notechis scutatus</i>				0		
Eastern Brown Snake	<i>Pseudonaja textilis</i>	1	2	3	5	6	0
Little Whip Snake	<i>Suta flagellum</i>						0

APPENDIX 4 BIRD SURVEY SHEETS

BIRD SURVEY SHEET Capital Wind Farm Project, Southern Tablelands

Site: Hammond Hill.

Location: Hammond Hill ridge, Osborne property.

Date: 26 October 2004

Time: 09.15 - 10.15 EST

Tree Canopy Depth: 2 to 8 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

Australian Raven	1
Wedge-tailed Eagle	2

20-50m

Australian Raven	1
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10-20m

Australian Raven	3
Galah	2

5-10m

Australian Magpie	2
Brown Thornbill	2
Crimson Rosella	3
Grey Shrike-thrush	1
Laughing Kookaburra	1
Sacred Kingfisher	1
Striated Pardalote	2
White-throated Treecreeper	1

<5m

Australian Magpie	1
Black-faced Cuckoo-shrike	1
Brown Thornbill	2

BIRD SURVEY SHEET
Capital Wind Farm Project, Southern Tablelands

Site: Ellenden.

Location: Governors Hill ridge (west side)

Date: 26 October 2004

Time: 15.15 - 16.15 EST

Tree Canopy Depth: 2 to 10 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

Australian Raven	1
Brown Falcon	1

10-20m

Australian Magpie	2
Common Starling*	2

5-10m

Australian Magpie	3
Brown Falcon	1
Common Starling*	3
Crimson rosella	2
Rufous Whistler	1
Striated Pardalote	2

<5m

Crimson Rosella	2
Southern Whiteface	5
Yellow-rumped Thornbill	2

BIRD SURVEY SHEET
Capital Wind Farm Project, Southern Tablelands

Site: Broader project area.

Location: South of Woolowolar Trig

Date: 9 November 2004

Time: 09.30 - 10.20 Eastern Summer Time

Tree Canopy Depth: 4 to 15 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

Australian Magpie 2

10-20m

Crimson Rosella 3

Sulphur-crested cockatoo 1

5-10m

Australian Magpie 1

Brown Thornbill 2

Crimson Rosella 2

Spotted Pardalote 1

Striated Thornbill 2

White-browed Scrubwren 1

White-throated Treecreeper 1

<5m

Buff-rumped Thornbill 3

White-browed Scrubwren 2

Site: Broader project area.

Location: North of Woolowolar Trig

Date: 9 November 2004

Time: 10.30 - 11.10 Eastern Summer Time

Tree Canopy Depth: from 2 to 10 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

nil

10-20m

nil

5-10m

Grey Shrike-thrush 1

Striated Thornbill 5

<5m

Australian Magpie 1

Brown Thornbill 2

Buff-rumped Thornbill 3

Crimson Rosella 4

White-throated Treecreeper 1

White-winged Chough 7

Site: Hammond Hill.

Location: Southeast of Osborne Trig

Date: 9 November 2004

Time: 15.15 - 15.45 Eastern Summer Time

Tree Canopy Depth: 3 to 20 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

Australian Raven 3

20-50m

nil

10-20m

Noisy Miner 2

5-10m

Common Starling* 2

Crimson Rosella 1

Magpie-lark 1

<5m

Brown Thornbill 3

Crimson Rosella 2

Southern Whiteface 2

Yellow-rumped Thornbill 5

Site: Broader project area.

Location: Ridge east of Woodlawn Mine.

Date: 11 November 2004

Time: 14.30 - 15.30 Eastern Summer Time

Tree Canopy Depth: 2 to 10 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

Sulphur-crested Cockatoo 2

10-20m

Black-faced Cuckoo-shrike 2

5-10m

Australian Magpie 2

Crimson Rosella 1

Grey Shrike-thrush 1

<5m

Australian Magpie 1

Brown Thornbill 1

Buff-rumped Thornbill 1

Crimson Rosella 3

Grey Currawong 1

Noisy Friarbird 1

White-throated Treecreeper 1

White-winged Chough 5

Site: Kalbilli.

Location: Ridge east of Mount Fairy.

Date: 11 November 2004

Time: 11.15 - 12.00 Eastern Summer Time

Tree Canopy Depth: 2 to 15 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

Black-faced Cuckoo-shrike 1

10-20m

Black-faced Cuckoo-shrike 1

Striated Pardalote 2

5-10m

Australian Raven 1

Crimson Rosella 2

Noisy Friarbird 1

Pied Currawong 1

Rufous Whistler 1

White-throated Gerygone 1

<5m

Australian Magpie 3

Grey Currawong 1

Grey Fantail 1

Richard's Pipit 1

Site: Kalbilli

Location: Ridge south of Mount Fairy Road.

Date: 11 November 2004

Time: 09.00 - 09.30 Eastern Summer Time

Tree Canopy Depth: 2 to 10 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

Sulphur-crested Cockatoo 1

10-20m

Black-faced Cuckoo-shrike 1

Australian Raven 1

5-10m

Australian Magpie 1

Crimson Rosella 2

Grey Shriek-thrush 1

Rufous Whistler 1

<5m

Brown Thornbill 1

Varied Sittella 2

White-throated Treecreeper 1

White-winged Chough 5

Yellow-rumped thornbill 2

Site: Kalbilli

Location: Ridge north of Sandhills Creek

Date: 11 November 2004

Time: 09.45 - 10.45 Eastern Summer Time

Tree Canopy Depth: 2 to 15 metres.

Note: Birds and their numbers are recorded within estimated height intervals when they are first observed.

>50m

nil

20-50m

Australian Magpie	1
Common starling*	5

10-20m

Black-faced Cuckoo-shrike	1
Striated Thornbill	2

5-10m

Australian Wood Duck	2
Crimson Rosella	7
Grey Shrike-thrush	1
Laughing kookaburra	1
Rufous Whistler	2
Sacred Kingfisher	1
Satin Flycatcher	3
White-throated Gerygone	1
White-throated treecreeper	1

<5m

Australian Magpie	2
Buff-rumped Thornbill	1
Eastern Rosella	1
Grey Currawong	1
White-winged Chough	4
Yellow-rumped Thornbill	2

BIRD SURVEY SHEET

Capital Wind Farm Project, Southern Tablelands

Site: Hammond Hill.

Location: Eastern edge of Osborne property, adjacent to Tarago to Bungendore Road.

GPS: 55 0730797 6102837

Habitat: Yellow Box *Eucalyptus melliodora* woodland, with *E. pauciflora*, *E. viminalis*, *E. dives*, *Allocasuarina littoralis*, *Acacia mearnsii* and *Acacia implexa*. Saplings present but virtually no shrub cover. Native grassy ground cover with few weeds.

Date: 27 October 2004.

Time: 06.00 – 07.00 Eastern Standard Time.

Altitude: 760 metres.

Search Area: Approx. 20 hectares.

Weather: Mild, patchy cloud, mostly sunny.

Australian Magpie	2
Australian Raven	3
Black-faced Cuckoo-shrike	1
Brown-headed Honeyeater	2
Crimson Rosella	2
Galah	2
Golden Whistler	1
Grey Butcherbird	1
Grey Fantail	2
Magpie-lark	1
Noisy Friarbird	2
Noisy Minor	4
Olive-backed Oriole	1
Pied Currawong	2
Red Wattlebird	5
Spotted Pardalote	2
Striated Pardalote	2
Striated Thornbill	5
Sulphur-crested Cockatoo	1
Varied Sittella	2
White-throated Gerygone	1
White-winged Chough	5 (nest)
No. of Species	22
No. of Birds	49

BIRD SURVEY SHEET

Capital Wind Farm Project, Southern Tablelands

Site: Hammond Hill.

Location: Eastern edge of Osborne property, adjacent to Tarago to Bungendore Road.

GPS: 55 0730797 6102837

Habitat: Yellow Box *Eucalyptus melliodora* woodland, with *E. pauciflora*, *E. viminalis*, *E. dives*, *Allocasuarina littoralis*, *Acacia mearnsii* and *Acacia implexa*. Saplings present but virtually no shrub cover. Native grassy ground cover with few weeds.

Date: 8 November 2004.

Time: 17.15 – 18.15 Eastern Summer Time

Altitude: 760 metres.

Search Area: approx. 20 hectares.

Weather: Cool, sunny, breezes.

Australian Magpie	2
Australian Raven	1
Black-faced Cuckoo-shrike	1
Crimson Rosella	1
Grey Butcherbird	1
Grey Currawong	1
Little Raven (nest?)	2
Noisy Miner	2
Olive-backed Oriole	1
Pied Currawong	1
Red wattlebird	1
Striated Pardalote	1
Stubble Quail	1
Sulphur-crested Cockatoo	1
White-throated Gerygone	1
No. of Species	15
No. of Birds	18

BIRD SURVEY SHEET

Capital Wind Farm Project, Southern Tablelands

Site: Hammond Hill.

Location: Eastern edge of Osborne property, adjacent to Tarago to Bungendore Road.

GPS: 55 0730797 6102837

Habitat: Yellow Box *Eucalyptus melliodora* woodland, with *E. pauciflora*, *E. viminalis*, *E. dives*, *Allocasuarina littoralis*, *Acacia mearnsii* and *Acacia implexa*. Saplings present but virtually no shrub cover. Native grassy ground cover with few weeds.

Date: 9 November 2004.

Time: 16.00 – 17.00 Eastern Summer Time

Altitude: 760 metres.

Search Area: approx. 20 hectares.

Weather: Cool, mostly sunny.

Australian Magpie (young)	2
Australian Raven	3
Black-faced Cuckoo-shrike	2
Brown-headed Honeyeater	1
Buff-rumped Thornbill	2
Crimson Rosella	2
Grey Currawong	1
Grey Shrike-thrush	1
Laughing Kookaburra	1
Magpie-lark	2
Noisy Friarbird	1
Noisy Miner	1
Red Wattlebird	1
Striated Pardalote	1
Varied Sittella (young)	4
White-throated Gerygone	1
No. of Species	16
No. of Birds	26

BIRD SURVEY SHEET

Capital Wind Farm Project, Southern Tablelands

Site: Hammond Hill.

Location: Northeastern corner of Osborne property, adjacent to Tarago to Bungendore Rd.

GPS: 55 07

Habitat: *Eucalyptus dives* and *E. rossii* woodland, with some adjacent Yellow Box *Eucalyptus melliodora* open woodland. Virtually no shrub cover; understorey mainly of natives, but heavily grazed. Ground timber abundant.

Date: 9 November 2004.

Time: 05.50 – 06.50 Eastern Summer Time

Altitude: 760 metres.

Search Area: approx. 20 hectares.

Weather: Cool, overcast.

Australia Raven	2
Australian Magpie	6
Brown Goshawk	1
Common Starling*	8
Crimson Rosella	1
Galah	6
Grey Butcherbird	1
Magpie-lark	1
Noisy Miner	4
Olive-backed oriole	1
Pied Currawong	2
Red Wattlebird	1
Rufous Whistler	1
Satin Flycatcher	1
Striated Pardalote	2
Sulphur-crested cockatoo	1
White-winged Chough (young)	4
No. of Species	17
No. of Birds	43

BIRD SURVEY SHEET

Capital Wind Farm Project, Southern Tablelands

Site: Hammond Hill.

Location: Northeastern corner of Osborne property, adjacent to Tarago to Bungendore Rd.

GPS: 55 07

Habitat: *Eucalyptus dives* and *E. rossii* woodland, with some adjacent Yellow Box *Eucalyptus melliodora* open woodland. Virtually no shrub cover; understorey mainly of natives, but heavily grazed. Ground timber abundant.

Date: 10 November 2004.

Time: 06.40 – 07.40 Eastern Summer Time

Altitude: 760 metres.

Search Area: approx. 20 hectares.

Weather: Cool and overcast.

Australian Magpie	3
Australian Raven	1
Common Starling*	5
Crimson Rosella	2
Eastern Rosella	2
Galah	4
Grey Butcherbird	1
Grey Shrike-thrush	1
Laughing Kookaburra	1
Magpie-lark	1
Noisy Miner	4
Olive-backed Oriole	1
Pied Currawong	1
Red Wattlebird	1
Striated Pardalote	2
Sulphur-crested Cockatoo	1
Superb Fairy-wren	2
White-winged Chough	4
No. of Species	18
No. of Birds	37

APPENDIX 5

FINAL DETERMINATION FOR WHITE BOX-YELLOW BOX-BLAKELY'S RED GUM WOODLAND

NSW Scientific Committee Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the White Box Yellow Box Blakely's Red Gum Woodland as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. The listing of Endangered Ecological Communities is provided for by Part 2 of the Act.

The Scientific Committee previously made a Preliminary Determination to support the proposal to list the White Box-Yellow Box Woodland. The Scientific Committee considers that the White Box Yellow Box Blakely's Red Gum Woodland is a more appropriate name for this Community.

The Scientific Committee has found that:

1. White Box Yellow Box Blakely's Red Gum Woodland is the name given to the ecological community characterised by the assemblage of species listed in paragraph 3. White Box Yellow Box Blakely's Red Gum Woodland is found on relatively fertile soils on the tablelands and western slopes of NSW and generally occurs between the 400 and 800 mm isohyets extending from the western slopes, at an altitude of c. 170m to c. 1200 m, on the northern tablelands (Beadle 1981). The community occurs within the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands and NSW South Western Slopes Bioregions.

2. White Box Yellow Box Blakely's Red Gum Woodland includes those woodlands where the characteristic tree species include one or more of the following species in varying proportions and combinations - *Eucalyptus albens* (White Box), *Eucalyptus melliodora* (Yellow Box) or *Eucalyptus blakelyi* (Blakely's Red Gum). Grass and herbaceous species generally characterise the ground layer. In some locations, the tree overstorey may be absent as a result of past clearing or thinning and at these locations only an understorey may be present. Shrubs are generally sparse or absent, though they may be locally common.

3. White Box Yellow Box Blakely's Red Gum Woodland is characterised by the following assemblage of species.

Acacia buxifolia

Acacia paradoxa

Alectryon oleifolius

Aristida ramosa

Atalaya hemiglauca

Austrodanthonia bipartita

Austrodanthonia richardsonii

Austrostipa blackii

Acacia implexa

Allocasuarina verticillata

Aristida behriana

Asperula conferta

Austrodanthonia auriculata

Austrodanthonia racemosa

Austrostipa aristiglumis

Austrostipa nodosa

Austrostipa scabra
Brachychiton populneus
Bracteantha viscosa
Bulbine bulbosa
Callitris endlicheri
Capparis mitchellii
Cassinia quinquefaria
Chloris truncata
Chrysocephalum apiculatum
Dianella longifolia
Dichanthium sericeum
Dichelacne sciurea
Dodonaea viscosa
Ehretia membranifolia
Eremophila mitchellii
Eucalyptus albens
Eucalyptus bridgesiana
Eucalyptus goniocalyx
Eucalyptus microcarpa
Eulalia aurea
Geijera parviflora
Glycine clandestina
Glycine tomentella
Goodenia pinnatifida
Hibbertia obtusifolia
Jacksonia scoparia
Jasminum suavissimum
Lissanthe strigosa
Melichrus urceolatus
Notelaea microcarpa
Olearia viscidula
Pandorea pandorana
Parsonsia eucalyptophylla
Plantago debilis
Poa labillardieri
Rostellularia adscendens
Sida corrugata
Stackhousia monogyna
Swainsona galegifolia
Themeda australis
Bothriochla macra
Brachyloma daphnoides
Brunoniella australis
Bursaria spinosa
Callitris glaucophylla
Cassinia longifolia
Cheilanthes sieberi
Chloris ventricosa
Cymbopogon refractus
Dianella revoluta
Dichelachne micrantha
Diuris dendrobioides
Echinopogon caespitosus
Elymus scaber
Eucalyptus blakelyi
Eucalyptus conica
Eucalyptus melliodora
Eucalyptus nortonii
Exocarpos cupressiformis
Geranium solanderi
Glycine tabacina
Gonocarpus elatus
Hibbertia linearis
Hypericum gramineum
Jasminum lineare
Leptorhynchos squamatus
Lomandra filiformis
Microseris lanceolata
Olearia elliptica
Oxalis perennans
Panicum queenslandicum
Pimelea curviflora
Plantago gaudichaudii
Poa sieberiana
Rumex brownii
Sorghum leiocladum
Stackhousia viminea
Templetonia stenophylla
Wahlenbergia communis

The total flora and fauna species list for the community is considerably larger than that given above, with many species present in only some sites or in very small quantity. In any particular site not all of the assemblage listed above may be present. At any one time, seeds of some species may only be present in the soil seed bank with no above-ground individuals present. The species composition of the site will be influenced by the size of the site, recent rainfall or drought conditions, its disturbance history and geographic and topographic location. The community is an important habitat for a diverse fauna

(vertebrates and invertebrates), but detailed records are not available from most stands and the invertebrate fauna is poorly known.

4. Woodlands with *Eucalyptus albens* are most common on the undulating country of the slopes region while *Eucalyptus blakelyi* and *Eucalyptus melliodora* predominate in grassy woodlands on the tablelands. Drier woodland areas dominated by *Eucalyptus albens* often form mosaics with areas dominated by *Eucalyptus blakelyi* and *Eucalyptus melliodora* occurring in more moist situations, while areas subject to waterlogging may be treeless. *E. microcarpa* is often found in association with *E. melliodora* and *E. albens* on the south western slopes. Woodlands including *Eucalyptus crebra*, *Eucalyptus dawsonii* and *Eucalyptus moluccana* (and intergrades with *Eucalyptus albens*), for example in the Merriwa plateau, Goulburn River National Park and western Wollemi National Park, are also included. Intergrades between *Eucalyptus blakelyi* and *Eucalyptus tereticornis* may also occur here.

5. Latitudinal and climatic gradients in the patterns of species present are found across the range of the community (eg. see Prober 1996 for variation in White Box). This is reflected in a gradual change in herb and grass species from northern to southern NSW (eg. Prober 1996). Within White Box Yellow Box Blakely's Red Gum Woodland, species such as *Rostellularia adscendens*, *Chloris ventricosa*, *Austrodanthonia racemosa*, *Brunoniella australis*, *Cymbopogon refractus*, *Swainsona galegifolia*, *Notelaea microcarpa*, *Stackhousia viminea*, *Olearia elliptica*, *Jasminum suavoissimum*, *Plantago gaudichaudii*, *Dichanthium sericeum*, *Plantago debilis* and *Wahlenbergia communis* are generally more restricted to more northern areas (eg. Prober 1996). Some other species in White Box Yellow Box Blakely's Red Gum Woodland were generally restricted to southern areas. These include *Gonocarpus elatus*, *Austrostipa blackii*, *Aristida behriana*, *Bracteantha viscosa*, *Austrodanthonia auriculata* and *Austrostipa nodosa* (Prober 1996).

6. White Box Yellow Box Blakely's Red Gum Woodland includes vegetation described as *Eucalyptus albens* alliance and *E. melliodora* / *E. blakelyi* alliance in Beadle (1981), the *Eucalyptus albens* alliance in Moore (1953a,b), the grassy white box woodlands of Prober and Thiele (1993,1995) and Prober (1996) and the Grassy white box woodland of the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999. In the southern tablelands and parts of the southwest slopes, White Box Yellow Box Blakely's Red Gum Woodland are described in Thomas *et al.* (2000).

7. Related communities are the *Eucalyptus microcarpa*, *Eucalyptus pilligaensis* Grey Box/*Eucalyptus populnea* Poplar Box communities of the western slopes and plains and the *Eucalyptus moluccana*, Grey Box, communities of the Clarence, lower Hunter Valley and Western Sydney. These are not covered by this Determination. Similarly the natural temperate grasslands and the *Eucalyptus pauciflora* grassy woodlands of the cooler parts of the southern tablelands are not covered by this Determination.

8. White Box Yellow Box Blakely's Red Gum Woodland has been drastically reduced in area and highly fragmented because of clearance for cropping and pasture improvement. Austin *et al.* (2000) found the community had been reduced to less than 1% of its pre-European extent in the Central Lachlan region. Comparable degrees of reduction have been documented for NSW south western slopes and southern Tablelands (estimated <4% remaining, Thomas *et al.* 2000), and for the Holbrook area (estimated <7% remaining,

Gibbons and Boak (2000). Gibbons and Boak (2000) found remnants of woodlands dominated by *Eucalyptus albens*, *E. melliodora* and *E. blakelyi* were severely fragmented. Further remnants of the community are degraded as a consequence of their disturbance history. Some remnants of these communities survive with the trees partly or wholly removed by post European activities, and conversely, often remnants of these communities survive with these tree species largely intact but with the shrub or ground layers degraded to varying degrees through grazing or pasture modification. Remnants are subject to varying degrees of threat that jeopardise their viability. These threats include: further clearing (for cropping, pasture improvement or other development); deterioration of remnant condition (caused by firewood cutting, increased livestock grazing, weed invasion, inappropriate fire regimes, soil disturbance and increased nutrient loads); degradation of the landscape in which remnants occur (including soil acidification, salinity, and loss of connectivity between remnants).

9. The understorey may be highly modified by grazing history and disturbance. A number of native species appear not to tolerate grazing by domestic stock and are confined to the least disturbed remnants (*Dianella revoluta*, *Diuris dendrobioides*, *Microseris lanceolata*, *Pimelea curviflora*, *Templetonia stenophylla* (Prober & Thiele 1995). Dominant pasture species typically change from *Themeda australis*, *Austrostipa aristiglumis* and *Poa* spp. to *Austrostipa falcata*, *Austrodanthonia* spp. and *Bothriochla macra* as grazing intensity increases (Moore 1953a). This may reflect differences in palatability of these species and their ability to tolerate grazing pressure. Light grazing and burning may also be a problem and lead to *Aristida ramosa* dominance (Lodge & Whalley 1989).

10. The condition of remnants ranges from relatively good to highly degraded, such as paddock remnants with weedy understoreys and only a few hardy natives left. A number of less degraded remnants have survived in Travelling Stock Routes, cemeteries and reserves, although because of past and present management practices understorey species composition may differ between the two land uses. Some remnants of the community may consist of only an intact overstorey or an intact understorey, but may still have high conservation value due to the flora and fauna they support. Other sites may be important faunal habitat, have significant occurrences of particular species, form part of corridors or have the potential for recovery. The conservation value of remnants may be independent of remnant size.

11. Disturbed remnants are still considered to form part of the community including remnants where the vegetation, either understorey, overstorey or both, would, under appropriate management, respond to assisted natural regeneration, such as where the natural soil and associated seed bank are still at least partially intact.

12. The community is poorly represented in conservation reserves. There are small occurrences of White Box Yellow Box Blakely's Red Gum Woodland in Border Ranges National Park, Goobang National Park, Goulburn River National Park, Manobalai Nature Reserve, Mt Kaputar National Park, Oxley Wild Rivers National Park, Queanbeyan Nature Reserve, Towari National Park, Warrumbungle National Park, Wingen Maid Nature Reserve and Wollemi National Park. The community also occurs in the following State Recreation Areas, Copeton State Recreation Area, Lake Glenbawn State Recreation Area and Lake Keepit State Recreation Area.

13. Fauna species of conservation significance found in some stands of White Box Yellow Box Blakely's Red Gum Woodland include,

<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard
<i>Burhinus grallarius</i>	Bush Stone-curlew
<i>Cacatua leadbeateri</i>	Major Mitchell's Cockatoo
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll
<i>Delma impar</i>	Striped Legless Lizard
<i>Grantiella picta</i>	Painted Honeyeater
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake
<i>Lathamus discolor</i>	Swift Parrot
<i>Lophoictinia isura</i>	Square-tailed Kite
<i>Melanodryas cucullata cucullata</i>	Hooded Robin
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater
<i>Neophema pulchella</i>	Turquoise Parrot
<i>Ninox connivens</i>	Barking Owl
<i>Petaurus norfolcensis</i>	Squirrel Glider
<i>Phascolarctos cinereus</i>	Koala
<i>Polytelis swainsonii</i>	Superb Parrot
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler
<i>Pyrrholaemus sagittata</i>	Speckled Warbler
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat
<i>Stagonopleura guttata</i>	Diamond Firetail
<i>Synemon plana</i>	Golden Sun Moth
<i>Tyto novaehollandiae</i>	Masked Owl
<i>Varanus rosenbergi</i>	Rosenberg's Goanna
<i>Xanthomyza phrygia</i>	Regent Honeyeater

A number of plant species of conservation significance are likely to occur in White Box Yellow Box Blakely's Red Gum Woodland

Ammobium craspedioides
Bothriochloa biloba
Dichanthium setosum
Discaria pubescens
Diuris spp.
Prasophyllum petilum
Pterostylis spp.
Rutidosia leptorhynchoides
Swainsona spp.

A number of key threatening processes also occur in White Box Yellow Box Blakely's Red Gum Woodland. These include: Clearing of native vegetation, Predation by the European Red Fox *Vulpes vulpes*, Predation by the Feral Cat, *Felis catus*.

14. In view of the small size of existing remnants, and the threat of further clearing, disturbance and degradation, the Scientific Committee is of the opinion that White Box

Yellow Box Blakely's Red Gum Woodland is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival or evolutionary development cease to operate and that listing as an endangered ecological community is warranted.

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Exhibition period: 15/03/02 – 19/04/02

References

- Austin, M.P., Cawsey, E.M., Baker, B.L., Yialeoglou, M.M., Grice, D.J. & Briggs, S.V. (2000) Predicted vegetation cover in the Central Lachlan Region. CSIRO Wildlife & Ecology Final Report for Natural Heritage Trust Project AA 1368.97.
- Beadle, N.C.W. (1981) *The Vegetation of Australia*. Cambridge University Press, Cambridge.
- Gibbons, P. & Boak, M. (2000) The importance of paddock trees for regional conservation in agricultural landscapes. A discussion paper for consideration by Riverina Highlands Regional Vegetation Committee. NSW National Parks and Wildlife Service, Southern Directorate unpublished report.
- Lodge, G.M. & Whalley, R.D.B. (1989) Native and natural pastures on the northern slopes and tablelands of New South Wales: a review and annotated bibliography. Technical Bulletin 35, NSW Agriculture.
- Moore, C.W.E. (1953a) The vegetation of the south-eastern Riverina, New South Wales. I. The climax communities. *Australian Journal of Botany* 1, 489-547.
- Moore, C.W.E. (1953b) The vegetation of the south-eastern Riverina, New South Wales. II. The disclimax communities. *Australian Journal of Botany* 1, 548-567.
- Prober, S.M. (1996) Conservation of the grassy white box woodlands: rangewide floristic variation and implications for reserve design. *Australian Journal of Botany* 44, 57-77.
- Prober, S.M. & Thiele, K.R. (1993) The ecology and genetics of remnant grassy white box woodlands in relation to their conservation. *Victorian Naturalist* 110, 30-36.
- Prober, S.M. & Thiele, K.R. (1995) Conservation of grassy white box woodlands: relative contributions of size and disturbance to floristic composition and diversity of remnants. *Australian Journal of Botany* 43, 349-366.
- Thomas, V., Gellie, N. & Harrison, T. (2000) *Forest ecosystem classification and mapping for the Southern CRA region, Volume II Appendices*. NSW National Parks & Wildlife Service, Southern Directorate. A report undertaken for the NSW CRA/RFA Steering Committee.
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APPENDIX 6
PHOTOGRAPHS OF THE PROJECT AREA
