

APPENDIX C: FLORA SPECIES LIST

Flora Species List

The following list includes all species of vascular plants observed on site during fieldwork. It should be noted that such a list cannot be considered comprehensive, but rather indicative of the flora present on the site. It can take many years of flora surveys to record all of the plant species occurring within any area, especially plant species that are only apparent in some seasons such as Orchids.

A number of species cannot always be accurately identified during a brief survey, generally due to a lack of suitable flowering and/or fruiting material. Any such species are identified as accurately as possible, and are indicated in the list as indicated:

- specimens that could only be identified to genus level are indicated by the generic name followed by the abbreviation "sp.", indicating an unidentified species of that genus;
- specimens for which identification of the genus was uncertain are indicated by a question mark ("?",) placed in front of the generic, which is followed by the abbreviation "sp." and;
- specimens that could be accurately identified to genus level, but could be identified to species level with only a degree of certainty are indicated by a ("?",) placed in front of the epithet.

Authorities for the scientific names are not provided in the list. These follow the references outlined below.

Harden, G. (ed) (2000). *Flora of New South Wales, Volume 1*. Revised edition. UNSW, Kensington, NSW.

Harden, G. (ed) (2002). *Flora of New South Wales, Volume 2*. Revised edition. UNSW, Kensington, NSW.

Harden, G. (ed) (1992). *Flora of New South Wales, Volume 3*. UNSW, Kensington, NSW.

Harden, G. (ed) (1993). *Flora of New South Wales, Volume 4*. UNSW, Kensington, NSW. Names of families and higher taxa follow a modified Cronquist System (1981).

Introduced species are indicated by an asterisk "*".

Threatened species listed under the *Threatened Species Conservation Act 1995* (TSC Act) or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and / or Rare or Threatened Australian Plant (ROTAP) listed species are indicated in **bold font** and marked as:

(V) = Vulnerable Species listed under the TSC Act

(E) = Endangered Species listed under the TSC Act

(EE) = Species listed under the Commonwealth EPBC Act as Endangered

(EV) = Species listed under the Commonwealth EPBC Act as Vulnerable

(R) = ROTAP as per Briggs and Leigh (1996)

The following standard abbreviations are used to indicate subspecific taxa:

ssp. - subspecies

var.- variety

agg. aggregate

× - hybrid between the two indicated species

	Community Represented
1	Munmorah Palm-Apple Dry Drainage Line Forest
2	Coastal Plains Smooth-barked Apple Woodland
3	Coastal Sand Wallum Heath-Scrub
4	Narrabeen Foreshore Redgum-Ironbark Forest
5	Narrabeen Wallarah Sheltered Grassy Forest
6	Narrabeen Doyalson Coastal Woodland
7	Coastal Headland Complex (Grassland & Shrubland)
8	Coastal Holocene Banksia Scrub
9	Coastal Sand Mahogany-Paperbark Swamp Forest (EEC Swamp Scerlophyll Forest)
10	Estuarine Swamp Oak Forest (EEC Swamp Oak Floodplain Forest)
11	Estuarine Mangrove-Saltmarsh Complex
12	Freshwater Wetlands (EEC – Freshwater Wetlands on Coastal Floodplains)
13	Regenerating Vegetation
14	Weeds and Cleared Areas
15	Dams

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<u>CLASS LYCOPSIDA</u> <u>(CLUB MOSSES)</u>																
SELLAGINELLACEAE																
<i>Selaginella uliginosa</i>	Club Moss					X							X			
<u>CLASS FILICOPSIDA (FERNS)</u>																
ADIANTACEAE																
<i>Adiantum aethiopicum</i>	Common Maidenhair Fern	X				X				X						
<i>Adiantum hispidulum</i>	Rough Maidenhair Fern	X				X				X						
<i>Adiantum formosum</i>	Giant Maidenhair Fern	X								X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BLECHNACEAE																
<i>Blechnum nudum</i>	-	X				X				X						
<i>Doodia aspera</i>	Rasp Fern	X				X				X						
DENNSTAEDTIACEAE																
<i>Pteridium esculentum</i>	Bracken Fern			X	X	X	X			X						
DICKSONIACEAE																
<i>Calochlaena dubia</i>	False Bracken Fern									X			X			
GLEICHENIACEAE																
<i>Gleichenia dicarpa</i>	Pouched Coral Fern	X								X			X			
LINDSAEACEAE																
<i>Lindsaea linearis</i>	Screw Fern					X		X		X			X			
<i>Lindsaea microphylla</i>	Lacy Wedge-fern									X			X			
POLYPODIACEAE																
<i>Platyserium bifurcatum</i> ssp. <i>bifurcatum</i>	Elk Horn									X						
SCHIZACEAE																
<i>Schizaea dichotoma</i>	Branched Comb Fern						X									
SINOPTERIDACEAE																
<i>Pellaea falcata</i>	Sickle Fern	X				X				X						
<i>Pellaea paradoxa</i>		X								X						
<u>CLASS CYCADOPSIDA (CYCADS)</u>																
ZAMIACEAE																
<i>Macrozamia communis</i>	Burrawang						X									

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CLASS CONIFEROPSIDA (CONIFERS)																
PINACEAE																
* <i>Pinus radiata</i>	Radiata Pine														X	
CLASS MAGNOLIOPSIDA (FLOWERING PLANTS)																
SUBCLASS MAGNOLIIDAE (Dicotyledons)																
ACANTHACEAE																
<i>Brunoniella australis</i>	Blue Trumpet				X	X		X		X						
<i>Pseuderanthemum variabile</i>	Pastel Flower					X										
AIZOACEAE																
<i>Tetragonia tetragonioides</i>	Warrigal Cabbage										X					
APIACEAE																
<i>Centella asiatica</i>	Swamp Pennywort	X			X	X				X						X
* <i>Ciclospermum leptophyllum</i>	Slender Celery													X		
* <i>Hydrocotyle bonariensis</i>	Kurnell Curse								X		X					X
<i>Hydrocotyle peduncularis</i>					X	X				X						X
<i>Xanthosia pilosa</i>	Wooly Xanthosia			X			X									
APOCYNACEAE																
<i>Parsonsia straminea</i> var. <i>straminea</i>	Monkey Rope	X			X	X				X	X					
ARALIACEAE																
<i>Polyscias sambucifolia</i>	Elderberry Panax					X										

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ASCLEPIADACEAE																
* <i>Gomphocarpus fruticosus</i>	Narrow-leaf Cotton Bush													X	X	
<i>Marsdenia rostrata</i>	Common Milk Vine	X								X						
<i>Marsdenia suaveolens</i>	Sweet-scented Doubah	X			X											
ASTERACEAE																
* <i>Ageratina adenophora</i>	Crofton Weed	X												X	X	
* <i>Aster subulatus</i>	Wild Aster													X	X	
* <i>Bidens pilosa</i>	Cobbler's Pegs								X					X	X	
<i>Brachycome angustifolia</i> ssp. <i>angustifolia</i>						X		X								
* <i>Chrysanthemoides monilifera</i> ssp. <i>rotundata</i>	Bitou Bush	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
* <i>Cirsium vulgare</i>	Spear Thistle								X					X	X	
* <i>Conyza albida</i>	Tall Fleabane				X									X	X	
* <i>Conyza bonariensis</i>	Flaxleaf Fleabane													X	X	
* <i>Coreopsis lanceolata</i>														X	X	
* <i>Gnaphalium americanum</i>	Cudweed													X	X	
* <i>Gnaphalium sphaericatum</i>	Cudweed													X	X	
* <i>Hypochoeris radicata</i>	Cat's Ear													X	X	
<i>Lagenifera stipitata</i>			X			X										
* <i>Senecio madagascariensis</i>	Fireweed													X	X	
* <i>Soliva sessilis</i>	Bindi													X	X	
* <i>Taraxacum officinale</i>	Dandelion													X	X	
<i>Vernonia cinerea</i>						X								X		
AVICENNIACEAE																
<i>Avicenia marina</i> var. <i>australasica</i>	Grey Mangrove										X	X				
BIGNONIACEAE																
<i>Pandorea pandorana</i>	Wonga Wonga Vine	X			X	X				X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CARYOPHYLLACEAE																
* <i>Cerastium holosteoides</i>	Mouse-ear Chickweed													X		
* <i>Stellaria media</i>	Chickweed													X		
CASUARINACEAE																
<i>Allocasuarina distyla</i>																
<i>Allocasuarina littoralis</i>	Black She-oak		X			X								X		
<i>Allocasuarina torulosa</i>	Forest Oak				X	X										
<i>Casuarina glauca</i>	Swamp She-oak				X					X	X					
CELASTRACEAE																
<i>Maytenus silvestris</i>					X											
CHENOPODIACEAE																
* <i>Atriplex hastata</i>	Orache										X					
<i>Suaeda australis</i>	Austral Seablite										X					
CLUSIACEAE																
<i>Hypericum gramineum</i>	St Johns Wort							X								
CONOLVULACEAE																
<i>Convolvulus erubescens</i>	Australian Bindweed	X			X											
<i>Dichondra repens</i>	Kidney Weed	X			X	X				X	X					
* <i>Ipomoea cairica</i>	Mile-a-minute													X	X	
CUNONIACEAE																
<i>Ceratopetalum gummiiferum</i>	NSW Christmas Bush												X			
DILLENIACEAE																
<i>Hibbertia aspera</i>	Rough Guinea Flower		X			X		X		X						
<i>Hibbertia dentata</i>	Twining Guinea Flower					X										
<i>Hibbertia empertifolia</i>			X	X												

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Hibbertia pedunculata</i>				X												
<i>Hibbertia scandens</i>	Golden Guinea Flower									X						
DROSERACEAE																
<i>Drosera peltata</i>	Sundew						X						X			
ELAEOCARPACEAE																
<i>Elaeocarpus reticulatus</i>	Blueberry Ash					X				X						
EPACRIDACEAE																
<i>Acrotriche divaricata</i>								X						X		
<i>Astroloma humifusum</i>	Cranberry Heath													X		
<i>Epacris microphylla</i>	Coral Heath							X								
<i>Epacris pulchella</i>	NSW Coral Heath		X											X		
<i>Leucopogon ericoides</i>	Bearded Heath			X												
<i>Leucopogon juniperinus</i>	Bearded Heath			X												
<i>Leucopogon lanceolatus</i>	Lance Beard-heath					X				X						
EUPHORBIACEAE																
<i>Breynia oblongifolia</i>	Breynia	X			X	X				X						
<i>Glochidion ferdinandi</i>	Cheese Tree	X			X					X				X		
<i>Omalanthus populifolius</i>	Bleeding Heart															
<i>Phyllanthus hirtellus</i>	Thyme Spurge	X	X													
<i>Poranthera microphylla</i>	Small Poranthera			X	X		X									
<i>Ricinocarpus pinifolius</i>	Wedding Bush			X			X									
FABOIDEAE																
<i>Bossiaea heterophylla</i>	Variable Bossiaea						X									
<i>Bossiaea stephensonii</i>							X	X								
<i>Daviesia ulicifolia</i>	Gorse Bitter-pea					X										
<i>Desmodium rhytidophyllum</i>						X	X									
<i>Desmodium varians</i>						X	X									

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Dillwynia retorta</i>	Heathy Parrot Pea		X	X			X									
<i>Glycine clandestina</i>	Love Creeper	X	X		X	X										
<i>Glycine microphylla</i>	Love Creeper					X										
<i>Glycine tabacina</i>	Love Creeper					X										
<i>Gompholobium latifolium</i>	Broad-leaf Wedge-pea						X									
<i>Gompholobium pinnatum</i>	Pinnate Wedge Pea						X									
<i>Hardenbergia violacea</i>	False Sarsaparilla						X							X		
<i>Jacksonia scoparia</i>	Dogwood					X										
<i>Mirbelia rubifolia</i>																
<i>Podolobium ilicifolium</i>	Native Holly		X			X										
<i>Pultenaea daphnoides</i>						X		X								
<i>Pultenaea elliptica</i>								X								
<i>Pultenaea paleacea</i>			X					X		X						
<i>Pultenaea retusa</i>			X							X						
<i>Pultenea villosa</i>		X				X				X						
* <i>Trifolium repens</i>	White Clover															
* <i>Trifolium dubium</i>	Yellow Suckling Clover															
* <i>Vicia sativa</i>	Common Vetch															
GENTIANACEAE																
* <i>Centaurium tenuiflorum</i>	Common Centaury							X								
GERANIACEAE																
<i>Geranium homeanum</i>	Cranesbill															
GOODENIACEAE																
<i>Dampiera stricta</i>							X	X		X			X			
<i>Goodenia heterophylla</i>	Variable-leaved Goodenia		X	X		X				X						
<i>Goodenia ovata</i>	Hop Goodenia									X	X					
<i>Goodenia paniculata</i>	Swamp Goodenia									X						
<i>Goodenia rotundifolia</i>																

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HALORAGACEAE																
<i>Gonocarpus micranthus</i> ssp. <i>ramosissimus</i>										X						
<i>Gonocarpus tetragynus</i>	Poverty Raspwort							X		X						
<i>Gonocarpus teucrioides</i>	Germander Raspwort	X		X			X			X						
HAMAMELIDACEAE																
* <i>Liquidambar formosana</i>	Chinese Liquidambar														X	
LAMIACEAE																
<i>Plectranthus parviflorus</i>					X					X						
LAURACEAE																
<i>Cassytha glabella</i> forma <i>glabella</i>	Slender Devil's Twine							X								
<i>Cassytha pubescens</i>	Common Devil's Twine				X			X		X	X					
* <i>Cinnamomum camphora</i>	Camphor Laurel														X	
<i>Cryptocarya microneura</i>	Murrogun	X								X						
LOBELIACEAE																
<i>Pratia purpurascens</i>	White Root	X	X		X	X				X						
<i>Lobelia alata</i>	Angled Lobelia										X					
<i>Lobelia gibbosa</i>								X								
LORANTHACEAE																
<i>Muellerina eucalyptoides</i>	Mistletoe					X										
MALVACEAE																
* <i>Modiola caroliniana</i>	Red-flowered Mallow													X		
* <i>Sida rhombifolia</i>	Paddy's Lucerne													X		
MELIACEAE																
<i>Synoum glandulosum</i>	Scentless Rosewood					X				X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MENISPERMACEAE																
<i>Sarcopetalum harveyanum</i>	Pearl Vine				X	X				X						
<i>Stephania japonica</i> var. <i>discolor</i>	Snake Vine				X	X				X						
MIMOSOIDEAE																
<i>Acacia decurrens</i>	Sydney Green Wattle													X		
<i>Acacia falcata</i>	Falcate Wattle													X		
<i>Acacia fimbriata</i>	Fringed Wattle					X										
<i>Acacia irrorata</i> ssp. <i>irrorata</i>		X				X				X						
<i>Acacia linifolia</i>	Flax-leafed Wattle		X													
<i>Acacia longifolia</i> var. <i>longifolia</i>	Sydney Golden Wattle	X		X		X		X					X	X		
<i>Acacia longifolia</i> var. <i>sophorae</i>	Coastal Wattle								X				X	X		
<i>Acacia myrtifolia</i>	Myrtle Wattle					X										
<i>Acacia schinoides</i>	Green Cedar Wattle															
<i>Acacia suaveolens</i>	Sweet-scented Wattle									X						
<i>Acacia terminalis</i>	Sunshine Wattle					X										
<i>Acacia ulicifolia</i>	Prickly Moses						X									
MORACEAE																
<i>Ficus coronata</i>	Sandpaper Fig	X								X						
MYRSINACEAE																
<i>Rapanea variabilis</i>	Mutton Wood	X			X					X						
MYRTACEAE																
<i>Acmena smithii</i>	Lilly Pilly	X				X				X						
<i>Angophora costata</i>	Smooth-barked Apple	X	X			X				X				X		
<i>Backhousia myrtifolia</i>	Grey Myrtle									X						
<i>Callistemon citrinus</i>	Crimson Bottlebrush									X			X			
<i>Callistemon rigidus</i>	Stiff Bottlebrush												X	X		
<i>Callistemon salignus</i>	Willow Bottlebrush	X				X				X						
<i>Corymbia gummiifera</i>	Red Bloodwood		X	X		X	X	X								

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Eucalyptus acmenoides</i>	White Mahogany					X				X						
<i>Eucalyptus capitellata</i>	Brown Stringybark		X				X	X						X		
<i>Eucalyptus globoidea</i>	White Stringybark					X										
<i>Eucalyptus haemastoma</i>	Scribbly Gum					X	X									
<i>Eucalyptus paniculata</i> ssp. <i>paniculata</i>	Grey Ironbark				X	X										
<i>Eucalyptus piperita</i>	Sydney Peppermint		X			X				X						
<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum					X										
<i>Eucalyptus punctata</i>	Grey Gum				X	X					X					
<i>Eucalyptus resinifera</i> ssp. <i>resinifera</i>	Red Mahogany					X				X			X			
<i>Eucalyptus robusta</i>	Swamp Mahogany	X								X			X			
<i>Eucalyptus signata</i>	Scribbly Gum					X	X									
<i>Eucalyptus tereticornis</i>	Forest Red Gum				X					X	X					
<i>Eucalyptus umbra</i> ssp. <i>umbra</i>	Broad-leaved White Mahogany					X		X								
<i>Kunzea ambigua</i>	Tick Bush							X	X					X		
<i>Leptospermum juniperinum</i>	Prickly Tea-tree									X				X		
<i>Leptospermum laevigatum</i>	Coastal Tea-tree			X			X		X					X		
<i>Leptospermum polygalifolium</i>	Lemon-scented Tea-Tree	X		X		X	X			X			X			
<i>Leptospermum trinervium</i>	Paperbark Tea-tree			X			X		X	X						
<i>Melaleuca ericifolia</i>	Swamp Paperbark												X	X		
<i>Melaleuca linearifolia</i>	Snow-in-summer									X						
<i>Melaleuca nodosa</i>	Ball Honeymyrtle							X		X						
<i>Melaleuca quinquenervia</i>	Broad-leafed Paperbark									X			X			
<i>Melaleuca sieberi</i>	Sieber's Paperbark									X						
<i>Melaleuca styphelioides</i>	Prickly-leaved Paperbark					X				X						
<i>Melaleuca thymifolia</i>	Thyme Honey-myrtle												X			
<i>Syncarpia glomulifera</i>	Turpentine	X				X										
OCHNACEAE																
* <i>Ochna serrulata</i>	Ochna				X	X				X						
OLEACEAE																
* <i>Ligustrum sinense</i>	Small-leaved Privet									X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Notelaea longifolia</i>	Mock Olive				X	X				X						
<i>Notelaea ovata</i>	Mock Olive				X					X						
OXALIDACEAE																
* <i>Oxalis corniculata</i>	Yellow Wood Sorrel													X		
* <i>Oxalis latifolia</i>	Pink Shamrock													X		
<i>Oxalis perennans</i>					X											
PASSIFLORACEAE																
<i>Passiflora herbertiana</i>														X		
PITTOSPORACEAE																
<i>Billardiera scandens</i>	Apple Berry			X		X	X									
<i>Bursaria spinosa</i>	Blackthorn				X	X										
<i>Citriobatus pauciflorus</i>	Orange Thorn									X						
<i>Pittosporum undulatum</i>	Sweet Pittosporum									X						
PLANTAGINACEAE																
* <i>Plantago lanceolata</i>	Lamb's Tongues													X	X	
POLYGALACEAE																
<i>Comesperma ericinum</i>	Matchheads			X			X									
POLYGONACEAE																
<i>Persicaria hydropiper</i>	Water Pepper									X						
PRIMULACEAE																
* <i>Anagallis arvensis</i>	Scarlet Pimpernel													X		
* <i>Anagallis arvensis</i> var. <i>caerulea</i>	Blue Pimpernel													X		
<i>Samolus repens</i>	Creeping Brookweed										X					

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PROTEACEAE																
<i>Banksia aemula</i>	Wallum Banksia			X			X									
<i>Banksia integrifolia</i>	Coastal Banksia															
<i>Banksia oblongifolia</i>				X				X					x	X		
<i>Banksia robur</i>	Swamp Banksia												X			
<i>Banksia serrata</i>	Old Man Banksia			X		X	X									
<i>Banksia spinulosa</i> var. <i>collina</i>	Hair-pin Banksia		X	X				X		X						
<i>Grevillea sericea</i>			X					X								
<i>Hakea bakeriana</i>							X									
<i>Hakea dactyloides</i>	Broad-leaved Hakea						X									
<i>Hakea teretifolia</i>	Dagger Hakea			X												
<i>Isopogon anemonifolius</i>	Drumsticks						X									
<i>Lambertia formosa</i>	Mountain Devil						X	X								
<i>Persoonia lanceolata</i> ssp. <i>lanceolata</i>	Lance-leaved Geebung													X		
<i>Persoonia levis</i>	Smooth Geebung			X		X	X									
<i>Persoonia linearis</i>	Narrow-leaved Geebung					X										
<i>Xylomelum pyrifforme</i>	Woody Pear						X									
RANUNCULACEAE																
<i>Clematis aristata</i>	Old Man's Beard			X		X										
<i>Clematis glycinoides</i>	Forest Clematis					X										
RHAMNACEAE																
<i>Alphitonia excelsa</i>	Red Ash	X														
<i>Pomaderris ferruginea</i>	Rusty Pomaderris													X		
ROSACEAE																
<i>Rubus hillii</i>	Broad-leaved Bramble	X				X				X						
<i>Rubus parvifolius</i>	Native Raspberry									X						
* <i>Rubus ulmifolius</i>	Blackberry													X	X	

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RUBIACEAE																
<i>Galium binifolium</i>						X										
<i>Galium propinquum</i>					X	X										
<i>Morinda jasminoides</i>	Jasmine Morinda	X														
<i>Pomax umbellata</i>	Pomax					X										
* <i>Richardia brasiliensis</i>	Mexican Clover													X	X	
RUTACEAE																
<i>Boronia ledifolia</i>	Sydney Boronia						X									
<i>Correa reflexa</i>	Common Correa			X			X									
<i>Melicope micrococca</i>										X						
<i>Philotheca salsolifolia</i>	Wax Flower			X			X									
<i>Zieria smithii</i>	Sandfly Zieria					X										
SANTALACEAE																
<i>Exocarpus cupressiformis</i>	Cherry Ballart				X	X										
SAPINDACEAE																
<i>Dodonaea triquetra</i>	Common Hop Bush	X			X	X								X		
<i>Guioa semiglauc</i>	Guioa									X						
SCROPHULARIACEAE																
<i>Veronica plebeia</i>	Speedwell					X										
SOLANACEAE																
* <i>Solanum mauritanum</i>	Wild Tobacco													X	X	
STACKHOUSIACEAE																
<i>Stackhousia viminea</i>							X									
STERCULIACEAE																
<i>Lasiopetalum parviflorum</i>										X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
STYLIDIACEAE																
<i>Stylidium graminifolium</i>	Trigger Plant															
THYMELAEACEAE																
<i>Pimelea linifolia</i> ssp. <i>linifolia</i>	Slender Rice Flower		X	X				X								
TREMANDRACEAE																
<i>Tetradlea juncea</i> (V) (EV)	Black-eyed Susan		X			X										
<i>Tetradlea thymifolia</i>				X			X									
VERBENACEAE																
<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum				X	X				X						
* <i>Lantana camara</i>	Lantana	X	X		X	X		X		X	X			X	X	
* <i>Verbena bonariensis</i>	Purple-Top													X		
* <i>Verbena rigida</i>														X		
VIOLACEAE																
<i>Hybanthus monopetalus</i>	Spade Flower							X		X						
<i>Viola betonicifolia</i>	Purple Violet									X			X			
<i>Viola hederacea</i>	Native Violet	X			X	X				X			X			
VITACEAE																
<i>Cayratia clematidea</i>	Slender Grape				X	X				X						
<i>Cissus antarctica</i>	Kangaroo Grape	X								X						
<i>Cissus hypoglauca</i>	Water Vine	X				X				X						
SUBCLASS LILIIDAE (Monocotyledons)																
ANTHERICACEAE																
<i>Thysanotus tuberosus</i>	Fringe Lily							X								
<i>Tricoryne elatior</i>	Yellow Rush-lily					X	X	X		X			X			

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ARACEAE																
<i>Gymnostachys anceps</i>	Settlers Flax					X				X						
ARECACEAE																
<i>Livistonia australis</i>	Cabbage-tree Palm	X				X				X						
ASPARAGACEAE																
<i>*Protasparagus aethiopicus</i>	Asparagus Fern									X						
COLCHICACEAE																
<i>Burchardia umbellata</i>	Milkmaids									X						
COMMELINACEAE																
<i>Commelina cyanea</i>	Hairy Wandering Jew															
CYPERACEAE																
<i>Baumea juncea</i>	Slender Twig Rush									X	X		X			
<i>Carex appressa</i>	Tall Sedge	X											X			
<i>Carex fascicularis</i>	Tassel Sedge	X														
<i>Carex longebrachiata</i>	Bergalia Tussock	X														
<i>Eleocharis sphacelata</i>	Tall Spike-rush															X
<i>Fimbristylis dichotoma</i>	Common Fringe-rush									X						X
<i>Gahnia aspera</i>	Saw Sedge				X											
<i>Gahnia clarkei</i>		X		X						X			X			
<i>Gahnia melanocarpa</i>		X								X			X			
<i>Isolepis cernua</i>											X					
<i>Lepidosperma laterale</i>	Variable Sword-sedge		X			X	X									
<i>Ptilothrix deusta</i>				X			X									
<i>Schoenoplectus validus</i>																X
<i>Schoenus melanostachys</i>		X				X				X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DIOSCORACEAE																
<i>Dioscoria transversa</i>	Pencil Yam	X				X				X						
HAEMODORACEAE																
<i>Haemodorum planifolium</i>	Blood Root						X									
IRIDACEAE																
<i>Patersonia glabrata</i>	Leafy Purple Flag							X								
<i>Patersonia sericea</i>	Silky Purple Flag															
JUNCACEAE																
<i>*Juncus cognatus</i>																X
<i>Juncus kraussii</i> ssp. <i>australiensis</i>	Sand Rush										X	X				
<i>Juncus mollis</i>																X
<i>Juncus subsecundus</i>	Finger Rush															X
<i>Juncus usitatus</i>	Common Rush															X
LOMANDRACEAE																
<i>Lomandra cylindrica</i>	Mat Rush						X									
<i>Lomandra longifolia</i>	Spiny Mat Rush			X	X	X				X						
<i>Lomandra multiflora</i>						X										
<i>Lomandra obliqua</i>	Fish Bones		X	X			X	X								
LUZURIAGACEAE																
<i>Eustrephus latifolius</i>	Wombat Berry					X				X						
<i>Geitonoplesium cymosum</i>	Scrambling Lily				X	X				X						
ORCHIDACEAE																
<i>Cryptostylis erecta</i>						X	X									
<i>Cryptostylis hunteriana</i> (V) (EV)							X									
<i>Cryptostylis subulata</i>							X									
<i>Dipodium punctatum</i>	Hyacinth Orchid					X										

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PHILYDRACEAE																
<i>Philydrum lanuginosum</i>	Woolly Frogmouth															X
PHORMIACEAE																
<i>Dianella caerulea</i> var. <i>producta</i>	Blue Flax Lily			X		X				X						
<i>Dianella longifolia</i> var. <i>longifolia</i>			X													
POACEAE																
* <i>Andropogon virginicus</i>	Whisky Grass													X		
<i>Aristida vagans</i>	Three-awn Speargrass		X													
<i>Austrodanthonia linkii</i>														X		
<i>Austrodanthonia tenuior</i>	Wallaby Grass					X								X		
<i>Austrostipa ramosissima</i>	Stout Bamboo Grass					X	X	X								
* <i>Axonopus affinis</i>	Narrowleaf Carpet Grass													X		
* <i>Briza maxima</i>	Quaking Grass															
* <i>Briza minor</i>	Shivery Grass															
* <i>Bromus cartharticus</i>	Prairie Grass															
* <i>Chloris gayana</i>	Rhodes Grass													X		
* <i>Cortaderia selloana</i>	Pampas Grass					X							X	X		
<i>Cynodon dactylon</i>	Common Couch													X		
<i>Dicanthium sericeum</i> ssp. <i>sericeum</i>	Queensland Bluegrass													X		
<i>Dichelachne micrantha</i>	Plume Grass					X										
<i>Echinopogon caespitosus</i> var. <i>caespitosus</i>	Tufted Hedgehog Grass				X	X										
<i>Echinopogon ovatus</i>	Forest Hedgehog Grass				X	X										
* <i>Ehrharta erecta</i>	Panic Veldtgrass													X		
<i>Entolasia marginata</i>	Bordered Panic									X			X			
<i>Entolasia stricta</i>	Wiry Panic	X		X		X				X				X		
<i>Eragrostis brownii</i>	Brown's Love Grass					X								X		
* <i>Eragrostis tenuifolia</i>	Elastic Grass													X		
<i>Hemarthria uncinata</i>	Mat Grass									X						
* <i>Hyparrhenia hirta</i>	Coolatai Grass													X		

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass	X	X		X	X				X				X		
<i>Joycea pallida</i>	Silver-top Wallaby Grass		X			X										
<i>Lolium</i> sp.	Rye Grass															
<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass													X		
<i>Oplismenus aemulus</i>	Basket Grass	X		X	X	X				X						
<i>Oplismenus imbecillus</i>	Basket Grass	X			X	X				X						
<i>Panicum simile</i>	Two Colour Panic		X			X										
<i>Paspalum distans</i>						X										
* <i>Paspalum dilatatum</i>	Paspalum							X						X		
<i>Paspalum distichum</i>	Water Couch															
* <i>Paspalum urvillei</i>	Vasey Grass													X		
* <i>Pennisetum clandestinum</i>	Kikuyu													X		
<i>Phragmites australis</i>	Native Reed												X			X
<i>Poa affinis</i>		X				X				X						
<i>Poa labillardieri</i>	Tussock Grass					X										
* <i>Sporobolus africanus</i>	Parramatta Grass													X		
* <i>Sporobolus elongatus</i>	Slender Rat's-tail Grass													X		
<i>Sporobolus virginicus</i>	Salt Couch										X					
* <i>Stenotaphrum secundatum</i>	Buffalo Grass										X				X	
<i>Themeda australis</i>	Kangaroo Grass		X			X		X								
RESTIONACEAE																
<i>Baloskion tetraphyllum</i> ssp. <i>meiostachyum</i>	Tassel Cord Rush	X											X			
<i>Leptocarpus tenax</i>		X		X						X			X			
<i>Lepyrodia scariosa</i>		X								X			X			
SMILACACEAE																
<i>Smilax australis</i>	Smilax	X				X				X						
<i>Smilax glycyphylla</i>	Native Sarsaparilla									X						

Scientific Name	Common Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
TYPHACEAE																
<i>Typha orientalis</i>	Bull-rush															
XANTHORRHOEACEAE																
<i>Xanthorrhoea glauca</i> ssp <i>glauca</i>							X						X			
<i>Xanthorrhoea latifolia</i> ssp <i>latifolia</i>	Grass Tree						X	X								
<i>Xanthorrhoea macromena</i>	Grass Tree					X										
<i>Xanthorrhoea resinifera</i>			X													
XYRIDACEAE																
<i>Xyris operculata</i>	Tall Yellow-eye												X			

APPENDIX D: VEGETATION COMMUNITIES PHOTOGRAPHS



Plate 1. Munmorah Palm-Apple Dry Drainage Line Forest



Plate 2. Coastal Plains Smooth- barked Apple Woodland



Plate 3. Coastal Sand Wallum Heath Scrub



Plate 4. Narrabeen Foreshore Redgum-Ironbark Forest



Plate 5. Narabeen Wallarah Sheltered Grassy Woodland



Plate 6. Narabeen Doyalson Coastal Woodland



Plate 7. Coastal heathland Complex (Grassland & Shrubland)



Plate 8. Coastal Holocene Banksia Scrub



Plate 9. Coastal Sand Mahogany – Paperbark Swamp Forest (EEC – Swamp Sclerophyll Forest)



Plate 10. Estuarine Swamp Oak Forest (EEC Swamp Oak Floodplain Forest)



Plate 11. Estuarine Mangrove-Saltmarsh Complex



Plate 12. Freshwater Wetland Complex (EEC – Freshwater Wetland on Coastal Floodplains)



Plate 13. Regenerating Vegetation



Plate 14 Dams

APPENDIX E: QUALIFICATION OF PERSONNEL

Name: CRAIG ANDERSON

Office: RPS HARPER SOMERS O'SULLIVAN

Position in Company: Director - Environment

Qualifications / Memberships:

Bachelor Applied Science (Environmental Assessment & Management) University of Newcastle, NSW (1994)
Currently undertaking Graduate Diploma in Archaeological Heritage through University of New England

Ecological Consultants Association of NSW (ECA)
Planning Institute of Australia (PIA)
Frog and Tadpole Study Group (FATS)
Hunter Birds Observers Club (HBOC)
Bird Observers Club of Australia (BOCA)
Australasian Bat Society (ABS)
Hunter Heritage Network (HHN)

Waterways Authority Boating Licence
NSW Driver's Licence (Class C)
OH&S Induction Training (Green Card)
NPWS Scientific Investigation Licence
NSW Animal Ethics Research Authority

Areas of Expertise:

- Production of complex ecological impact assessment documents
- Detailed understanding of environmental legislation
- Conflict resolution and environmental impact mediation
- Land and Environment Court hearings
- Flora, habitat, and fauna surveys including threatened species
- Bushfire Threat Assessment & Management reporting
- Project Management (including areas outside environmental concern)

Experience Includes:

2001 – current	Director - Environment RPS Harper Somers O'Sullivan, Newcastle.
2000 – 2001	Senior Ecologist & NSW Projects Manager Wildthing Environmental Consultants, Salt Ash.
1996 – 1999	Ecologist Wildthing Environmental Consultants, Salt Ash.
1995 – 1996	Ecologist / Environmental Officer Pulver Cooper & Blackley, Newcastle.

Name: DEBORAH LANDENBERGER

Office: RPS HARPER SOMERS O'SULLIVAN

Position in Company: Ecologist/ Botanist

Qualifications / Memberships: B. Sc (Hons)

Australian Plant Society
Australian Ecological Society
Australasian Native Orchid Society
NSW Driver's Licence (Class C)
OH&S Induction Training (Green Card)
NPWS Scientific Investigation Licence
NSW Animal Ethics Research Authority

Areas of Expertise:

- Expert Botanist
 - o Flora identification and habitat assessment
 - o Targeted threatened flora surveys
 - o Delineation and mapping of vegetation communities
 - o Endangered Ecological Community (EEC) assessment
- Project Management and quote preparation
- Fauna habitat identification
- Experience with GPS/GIS for project design and mapping
- Environmental reporting and assessment
- Detailed understanding of environmental legislation

Experience Includes:

June 2006 – Current	Ecologist/ Botanist RPS Harper Somers O'Sullivan, Broadmeadow, NSW
Mar 2005 – Jun 2006	Botanist Conacher Travers, Gosford, NSW
Dec 2004 – Mar 2005	Research Assistant/Casual Demonstrator University of Newcastle, Newcastle, NSW

Name: ANNA MCCONVILLE

Office: RPS HARPER SOMERS O'SULLIVAN

Position in Company: Ecologist

Qualifications / Memberships: B. Env. Sc.

Member of the Australasian Bat Society
Member of the Royal Zoological Society
Member of the Ecological Society of Australia
Senior First Aid Certificate
NSW Driver's Licence (Class C)
OH&S Induction Training (Green Card)
NPWS Scientific Investigation Licence
NSW Animal Ethics Research Authority

Areas of Expertise:

- Terrestrial flora and fauna surveys
- Targeted threatened species survey
- Threatened species and endangered ecological community assessment and reporting
- Geographical Information Systems project design and mapping
- Detailed understanding of environmental legislation and threatened species issues
- Ecological monitoring surveys

Experience Includes:

September 2007 – Current Ecologist
RPS Harper Somers O'Sullivan, Broadmeadow, NSW

January 2005 - Sept 2007 Ecologist
Connell Wagner, Callaghan, NSW

July 2007 - current Casual academic - Applied Environmental Science
The University of Newcastle

July 2006 - Dec 2006 Casual academic - Applied Environmental Biology
The University of Newcastle

December 2004 Baseline flora collection
TUNRA consulting