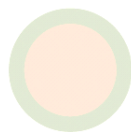


total earth care

Revised Flora and Fauna Assessment

Warriewood STP Buffer Area 3
Proposed Residential Development

Total Earth Care Pty Ltd
August 2010



total earth care

Revised Flora and Fauna Assessment

Warriewood STP Buffer Area 3 Proposed Residential Development

Date of Issue: August 16th 2010

Quality Control	© Total Earth Care Pty Ltd 2010		
Revision/Version No.	Draft Rev D	Date of revision	13/08/2010
Prepared by:	R Blackall & L Laurie		
Prepared for:	Meriton Pty Ltd		
TEC Job No.	C1569-MER		

Revised Flora and Fauna Assessment

Warriewood STP Buffer Area 3 - Proposed Residential Development

Table of Contents

		Page
1	INTRODUCTION	Error! Bookmark not defined.
	1.1 Proposed Development Description	Error! Bookmark not defined.
2	AIMS	Error! Bookmark not defined.
3	METHODS	Error! Bookmark not defined.
	3.1 Desktop Research	Error! Bookmark not defined.
	3.2 Previous Survey and Assessments	Error! Bookmark not defined.
	3.3 Limitations	Error! Bookmark not defined.
4	LANDSCAPE	Error! Bookmark not defined.
	4.1 Site Description	Error! Bookmark not defined.
5	FLORA	Error! Bookmark not defined.
	5.1 Plant Species	Error! Bookmark not defined.
	5.2 Vegetation Communities	Error! Bookmark not defined.
	5.3 Threatened Plant Species	Error! Bookmark not defined.
	5.4 Endangered Ecological Communities	Error! Bookmark not defined.
6	FAUNA	Error! Bookmark not defined.
	6.1 Fauna Species	Error! Bookmark not defined.
	6.2 Fauna Habitats	Error! Bookmark not defined.
	6.3 Threatened Fauna Species	Error! Bookmark not defined.
	6.4 Endangered Populations	Error! Bookmark not defined.
7	HABITAT POTENTIAL FOR THREATENED SPECIES	Error! Bookmark not defined.
	7.1 Flora	Error! Bookmark not defined.
	7.2 Fauna	Error! Bookmark not defined.
8	LEGISLATION	Error! Bookmark not defined.
	8.1 <i>Environment Protection and Biodiversity Conservation Act 1999</i>	Error! Bookmark not defined.
	8.2 <i>Environmental Planning and Assessment Act 1979 (EP&A Act) and Threatened Species Conservation Act 1995 (TSC Act)</i>	Error! Bookmark not defined.
	8.3 Water Management Act 2000	Error! Bookmark not defined.
	8.4 SEPP 19 – Bushland in Urban Areas	Error! Bookmark not defined.
	8.5 SEPP 44 – Koala Habitat Protection	Error! Bookmark not defined.
	8.6 Pittwater LEP 1993	Error! Bookmark not defined.

9	IMPACT ASSESSMENT	Error! Bookmark not defined.
10	ENVIRONMENTAL MANAGEMENT AND RECOMMENDATIONS	Error! Bookmark not defined.
	10.1 Buffer Zones and Landscaping	Error! Bookmark not defined.
	10.2 Mitigation Measures	Error! Bookmark not defined.
11	CONCLUSION	Error! Bookmark not defined.
12	BILBIOGRAPHY	Error! Bookmark not defined.

APPENDICES

A	Flora and Fauna species Inventories
B	Figures
C	Assessment of Significance State Listed Threatened Species
D	Significance Impact Assessment Nationally Listed Threatened Species

Appendix A

Flora and Fauna Species Inventory

Warriewood STP Buffer Area 3
Proposed Residential Development

General Status

*	Exotic (not native to Australia)
N	Noxious weeds as listed on the <i>NSW Noxious Weeds Act 1993</i> for the Pittwater LGA
ni	Non - indigenous native species (does not naturally occur at this locality)
(?)	Uncertain identification

Conservation Status

CE	Critically Endangered - listed under Schedule 1A of the TSC Act
E	Endangered - listed under Schedule 1 of the TSC Act
V	Vulnerable - listed under Schedule 2 of the TSC Act
LOC	Locally Significant

Abundance

c	Common, species occur all over the site
o	Occasional, species occur over the survey area but not in large numbers at any occurrence
uc	Uncommon, species occur only once or twice during the survey
p	Present

Community

2004 Survey	P Present in 2004 Survey
2006 Survey	Abundance Code as above
PF	Poplar Forest
CD	Cleared and Disturbed
SOF	'Swamp Oak Forest'
March 2010	P Present in March 2010 Survey
August 2010	X = Characteristic EEC Species as listed within Scientific Committee Final Determinations
SOF	Swamp Oak Forest'
SSF	Swamp Sclerophyll Forest
BSF	Bangalay Sand Forest
FW	Freshwater Wetlands

Cover Abundance Modified Braun-Blanquet

1	Uncommon and cover <5%	4	Up to 50%
2	Common and cover <5%	5	Up to 75%
3	5% ≤ cover 20%	6	Over 75%

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
		Fabaceae - Mimosoideae	<i>Acacia</i>	<i>longifolia</i>	<i>longifolia</i>	Sydney Golden Wattle	p	o				X	X		p		1	1
		Fabaceae - Mimosoideae	<i>Acacia</i>	<i>myrtifolia</i>		Red-stemmed Wattle	p											
	*	Fabaceae - Mimosoideae	<i>Acacia</i>	<i>podalyriifolia</i>		Queensland Silver Wattle	p											
	*	Fabaceae - Mimosoideae	<i>Acacia</i>	<i>saligna</i>		Golden Wreath Wattle	p											
		Fabaceae- Mimosoideae	<i>Acacia</i>	<i>stricta</i>		Narrow Wattle									p	2		
		Fabaceae - Mimosoideae	<i>Acacia</i>	<i>suaveolens</i>		Sweet Wattle	p											
	N (4)	Polygonaceae	<i>Acetosa</i>	<i>sagittata</i>		Rambling Dock	p											
	*	Asteraceae	<i>Ageratina</i>	<i>adenophora</i>		Crofton Weed	p	uc										
		Casuarinaceae	<i>Allocasuarina</i>	<i>littoralis</i>		Black She-oak	p					X	X					
		Amaranthaceae	<i>Alternanthera</i>	<i>denticulata</i>		Lesser Joyweed				uc	X							
	*	Poaceae	<i>Andropogon</i>	<i>virginicus</i>		Whisky Grass	p	c		c					p	2		
		Myrtaceae	<i>Angophora</i>	<i>costata</i>		Sydney Red Gum	p	o		o								
	*	Apocynaceae	<i>Araujia</i>	<i>sericifera</i>		Moth Vine				uc								
	*	Ericaceae	<i>Arbutus</i>	<i>unedo</i>		Irish Strawberry Tree	p			uc								
	N (4)	Asparagaceae	<i>Asparagus</i>	<i>aethiopicus</i>		Asparagus Fern	p	o		c					p	1	1	
		Aspleniaceae	<i>Asplenium</i>	<i>australasicum</i>		Birds Nest Fern	p								p		1	
	*	Asteraceae	<i>Aster</i>	<i>subulatus</i>		Wild Aster				o								
		Proteaceae	<i>Banksia</i>	<i>integrifolia</i>	<i>integrifolia</i>	Coast Banksia	p			uc			X					
		Cyperaceae	<i>Baumea</i>	<i>juncea</i>			p				X	X						
	*	Asteraceae	<i>Bidens</i>	<i>pilosa</i>		Cobblers Pegs	p	c	c	c					p	1	1	
		Pittosporaceae	<i>Billardiera</i>	<i>scandens</i>		Hairy Apple Berry				o								

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
		Blechnaceae	<i>Blechnum</i>	<i>cartilagineum</i>		Gristle Fern	p											
		Euphorbiaceae	<i>Breynia</i>	<i>oblongifolia</i>		Coffee Bush				o			X					
		Myrtaceae	<i>Callistemon</i>	<i>citrinus</i>		Crimson Bottlebrush	p		c									
		Myrtaceae	<i>Callistemon</i>	<i>viminalis</i>		Weeping Bottlebrush	p											
		Dicksoniaceae	<i>Calochlaena</i>	<i>dubia</i>		Soft Bracken	p	c		c		X						
	*	Theaceae	<i>Camelia</i>	<i>sp</i>		Camelia	p											
	*	Cannaceae	<i>Canna</i>	<i>x generalis</i>		Canna Lily			o									
		Cyperaceae	<i>Carex</i>	<i>appressa</i>		Tall Sedge	p				X	X		X	p		1	3
		Lauraceae	<i>Cassytha</i>	<i>glabella</i>			p											
		Lauraceae	<i>Cassytha</i>	<i>pubescens</i>						o			X		p	1		
		Casuarinaceae	<i>Casuarina</i>	<i>glauca</i>		Swamp Oak	p			c	X	X	X		p	5	6	1
		Apiaceae	<i>Centella</i>	<i>asiatica</i>		Indian Pennywort		c		c	X	X			p	1		
	N (3)	Solanaceae	<i>Cestrum</i>	<i>parqui</i>		Green Poisonberry	p											
	*	Lauraceae	<i>Cinnamomum</i>	<i>camphora</i>		Camphor Laurel	p	uc										
	*	Rutaceae	<i>Citrus</i>	<i>sp</i>		Citrus	p		uc									
		Gyrostemonaceae	<i>Codonocarpus</i>	<i>cotinifolius</i>		Native Poplar		c										
		Commelinaceae	<i>Commelina</i>	<i>cyanea</i>		Scurvey Weed	p	o		o	X		X		p		1	2
	*	Asteraceae	<i>Conyza</i>	<i>bonariensis</i>		Flaxleaf Fleabane	p	c	c	c								
	N (3)	Poaceae	<i>Cortaderia</i>	<i>selloana</i>		Pampas Grass	p		uc									
	*	Iridaceae	<i>Crocasmia</i>	<i>x</i>	<i>crocosmiiflora</i>	Montbretia		c		c					p	1	2	
	*	Cupressaceae	<i>Cupressus</i>	<i>lusitanica</i>		Mexican Cypress				uc								
		Poaceae	<i>Cynodon</i>	<i>dactylon</i>		Couch	p	c	c		X				p	2		
	*	Cyperaceae	<i>Cyperus</i>	<i>brevifolius</i>			p											
		Cyperaceae	<i>Cyperus</i>	<i>sp</i>			p	o							p		1	

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
		Phormiaceae	<i>Dianella</i>	<i>caerulea</i>		Blue Flax-lily	p	o		o	X	X	X		p	1		
	*	Iridaceae	<i>Dietes</i>	<i>grandiflora</i>					o									
	*	Poaceae	<i>Digitaria</i>	<i>ciliaris</i>		Summer Grass		o	o	o								
	*	Poaceae	<i>Echinochloa</i>	<i>crusgalli</i>		Barnyard Grass				uc								
	*	Poaceae	<i>Ehrharta</i>	<i>erecta</i>		Panic Veldtgrass	p											
		Cyperaceae	<i>Eleocharis</i>	<i>sphacelata</i>		Tall Spike Rush								X				1
	*	Poaceae	<i>Eleusine</i>	<i>indica</i>		Crowsfoot Grass				uc								
		Poaceae	<i>Entolasia</i>	<i>marginata</i>		Bordered Panic	p				X	X	X		p	1		4
		Poaceae	<i>Entolasia</i>	<i>stricta</i>		Wiry Panic	p			uc		X						
	*	Asteraceae	<i>Erechtites</i>	<i>valerianifolia</i>		Brazilian Fireweed	p											
	*	Fabaceae Faboideae	<i>Erythrina</i>	<i>sykesii</i>		Coral Tree	p											
		Myrtaceae	<i>Eucalyptus</i>	<i>bicostata</i>		Southern Blue Gum	p											
		Myrtaceae	<i>Eucalyptus</i>	<i>botryoides</i>		Bangalay				uc		X	X					
LOC		Myrtaceae	<i>Eucalyptus</i>	<i>robusta</i>		Swamp Mahogany	p					X						
E		Myrtaceae	<i>Eucalyptus</i>	<i>scoparia</i>		Wallangarra White Gum	p											
	*	Euphorbiaceae	<i>Euphorbia</i>	<i>peplus</i>		Petty Spurge	p											
	*	Moraceae	<i>Ficus</i>	<i>elastica</i>		Rubber Tree	p											
		Cyperaceae	<i>Gahnia</i>	<i>clarkei</i>		Tall Saw-sedge				uc	X	X			p		1	1
		Cyperaceae	<i>Gahnia</i>	<i>sieberiana</i>		Red-fruit Saw-sedge	p											
		Euphorbiaceae	<i>Glochidion</i>	<i>ferdinandi</i>	var <i>ferdinandi</i>	Cheese Tree	p	uc			X	X			p	1		
		Fabaceae Faboideae	<i>Glycine</i>	<i>clandestina</i>				o				X	X		p	1		
		Fabaceae Faboideae	<i>Hardenbergia</i>	<i>violacea</i>		Native Sarsparilla							X		p	1		

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
	*	Araliaceae	<i>Hedera</i>	<i>helix</i>		English Ivy	p											
		Malvaceae	<i>Hibiscus</i>	<i>sp</i>		Hibiscus	p		uc									
		Euphorbiaceae	<i>Homalanthus</i>	<i>populifolius</i>		Bleeding Heart	p			uc					p	1		
	*	Apiaceae	<i>Hydrocotyle</i>	<i>bonariensis</i>			p	c		c					p	1	3	4
	*	Asteraceae	<i>Hypochaeris</i>	<i>radicata</i>		Catsear	p								p	1		
		Dennstaedtiaceae	<i>Hypolepis</i>	<i>muelleri</i>		Batwing Fern									p		4	3
		Poaceae	<i>Imperata</i>	<i>cylindrica</i>		Blady Grass	p	c		c		X	X		p	1		
	N (4)	Convolvulaceae	<i>Ipomoea</i>	<i>indica</i>		Morning Glory	p	o	uc	o					p		3	
	*	Cyperaceae	<i>Isolepis</i>	<i>prolifera</i>				uc										
	*	Bignoniaceae	<i>Jacaranda</i>	<i>mimosifolia</i>		Jacaranda	p											
LOC		Fabaceae - Faboideae	<i>Jacksonia</i>	<i>scoparia</i>		Winged Broom- pea									p			
		Juncaceae	<i>Juncus</i>	<i>sp</i>				uc	uc						p		3	
		Fabaceae - Faboideae	<i>Kennedia</i>	<i>rubicunda</i>		Dusky Coral Pea	p	o		o			X		p	1		
		Myrtaceae	<i>Kunzea</i>	<i>ambigua</i>		Tick Bush	p											
	*	Lythraceae	<i>Lagerstroemia</i>	<i>indica</i>		Crepe Myrtle	p			uc								
	N (5)	Verbenaceae	<i>Lantana</i>	<i>camara</i>			p	c		C					p	6	5	
		Cyperaceae	<i>Lepidosperma</i>	<i>laterale</i>			p											
	N (4)	Oleaceae	<i>Ligustrum</i>	<i>lucidum</i>		Large Leaved Privet	p	uc										
	N (4)	Oleaceae	<i>Ligustrum</i>	<i>sinense</i>		Small Leaved Privet	p	c		o					p	3	3	1
	*	Liliaceae	<i>Lilium</i>	<i>formosanum</i>		Formosan Lily	p	c		o					p	1	1	
LOC		Arecaceae	<i>Livistona</i>	<i>australis</i>		Cabbage Fan- palm	p	uc				X			p		1	
		Lomandraceae	<i>Lomandra</i>	<i>longifolia</i>		Spiny-headed Mat-rush	p	o		o	X	X	X		p	2		
	*	Caprifoliaceae	<i>Lonicera</i>	<i>japonica</i>		Japanese Honeysuckle	p			uc					p		3	2
	N (3)	Onagraceae	<i>Ludwigia</i>	<i>peruviana</i>			p											

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
		Myrtaceae	<i>Melaleuca</i>	<i>armillaris</i>		Bracelet Honey-myrtle	p											
		Myrtaceae	<i>Melaleuca</i>	<i>ericifolia</i>		Swamp Paperbark	p				x	x						
		Myrtaceae	<i>Melaleuca</i>	<i>quinquenervia</i>		Broad-leaved Paperbark	p				x	x						
	ni	Myrtaceae	<i>Metrosideros</i>	<i>excelsa</i>		Pohutukawa, NZ Christmas Tree	p											
		Poaceae	<i>Microlaena</i>	<i>stipoides</i>	<i>var stipoides</i>	Weeping Grass	p						x		p	2		
	*	Araceae	<i>Monstera</i>	<i>deliciosa</i>		Fruit Salad Plant	p											
	*	Rutaceae	<i>Murraya</i>	<i>paniculata</i>			p											
	*	Musaceae	<i>Musa</i>	<i>sp</i>		Banana	p											
	ni	Davalliaceae	<i>Nephrolepis</i>	<i>cordifolia</i>		Fishbone Fern	p											
	*	Apocynaceae	<i>Nerium</i>	<i>oleander</i>		Oleander	p											
	*	Alliaceae	<i>Nothoscordum</i>	<i>borbonicum</i>		Onion Weed	p											
	*	Ochnaceae	<i>Ochna</i>	<i>serrulata</i>		Mickey Mouse Plant		o		uc								
		Oleaceae	<i>Olea</i>	<i>europaea</i>	<i>cuspidata</i>	Olive	p											
		Asteraceae	<i>Ozothamnus</i>	<i>diosmifolius</i>		Rice Flower				uc								
	N (4)	Urticaceae	<i>Parietaria</i>	<i>judaica</i>		Asthma Weed	p											
		Apocynaceae	<i>Parsonsia</i>	<i>straminea</i>		Common Silkpod	p				x	x	x		p		1	
	*	Poaceae	<i>Paspalum</i>	<i>dilatatum</i>		Paspalum	p		c	c					p		1	2
	*	Poaceae	<i>Pennisetum</i>	<i>clandestinum</i>		Kikuyu Grass	p	c	c						p		4	6
		Polygonaceae	<i>Persicaria</i>	<i>decipiens</i>		Slender knotweed	p	uc			x							
		Polygonaceae	<i>Persicaria</i>	<i>strigosa</i>				o		o	x			x	p		1	
	*	Arecaceae	<i>Phoenix</i>	<i>canariensis</i>		Canary Island Date Palm	p											
		Hemerocallidaceae	<i>Phormium</i>	<i>tenax</i>		New Zealand Flax	p											

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
		Poaceae	<i>Phragmites</i>	<i>australis</i>		Common Reed	p	o		o	X	X		X	p			5
	*	Poaceae	<i>Phyllostachys</i>	<i>sp</i>		Bamboo sp	p											
	*	Pinaceae	<i>Pinus</i>	<i>radiata</i>		Radiata Pine	p		uc									
		Pittosporaceae	<i>Pittosporum</i>	<i>undulatum</i>		Sweet Pittosporum	p		o				X					
	*	Plantaginaceae	<i>Plantago</i>	<i>lanceolata</i>		Lamb's Tongues	p			uc					p		1	
		Araliaceae	<i>Polyscias</i>	<i>sambucifolia</i>		Elderberry Panax				uc								
	*	Salicaceae	<i>Populus</i>	<i>alba</i>		White Poplar	p		c						p		3	5
		Lobeliaceae	<i>Pratia</i>	<i>purpurascens</i>		Whiteroot		o		o		X	X		p	1		
		Dennstaedtiaceae	<i>Pteridium</i>	<i>esculentum</i>		Common Bracken	p	c		c		X	X					
		Ranunculaceae	<i>Ranunculus</i>	<i>inundatus</i>		River Buttercup	p			uc								
	N (4)	Rosaceae	<i>Rubus</i>	<i>fruticosus</i>	<i>agg sp</i>	Blackberry	p	c	o						p			1
	ni	Araliaceae	<i>Schefflera</i>	<i>actinophylla</i>		Umbrella Tree	p		uc									
	*	Asteraceae	<i>Senecio</i>	<i>madagascariensis</i>		Fireweed	p			uc								
	*	Fabaceae Caesalpinioideae	<i>Senna</i>	<i>pendula</i>	<i>var glabrata</i>		p	c		c					p	2	3	1
	*	Poaceae	<i>Setaria</i>	<i>pumila</i>		Pale Pigeon Grass	p			o								
	*	Malvaceae	<i>Sida</i>	<i>rhombifolia</i>		Paddy's Lucerne	p	c	c									
	*	Solanaceae	<i>Solanum</i>	<i>mauritianum</i>						uc								
	*	Solanaceae	<i>Solanum</i>	<i>nigrum</i>		Black-berry Nightshade	p			o								
	*	Asteraceae	<i>Sonchus</i>	<i>oleraceus</i>		Common Sowthistle	p											
	*	Poaceae	<i>Stenotaphrum</i>	<i>secundatum</i>		Buffalo Grass	p		o									
	*	Strelitziaceae	<i>Strelitzia</i>	<i>reginae</i>		Bird of Paradise		uc										
	*	Arecaceae	<i>Syagrus</i>	<i>romanzoffiana</i>		Cocos Palm			uc									
		Myrtaceae	<i>Syncarpia</i>	<i>glomulifera</i>		Turpentine	p											
	*	Asteraceae	<i>Taraxacum</i>	<i>officinale</i>		Dandelion		o		uc								

Cons Status	Weed	Family	Genus	species	sub.sp/ variety	Common Name	2004 Survey	2006 PF	2006 CD	2006 SOF	SOF	SSF	BSF	FW	March 2010 Survey	Aug 2010 Quadrat 1	Aug 2010 Quadrat 2	Aug 2010 Quadrat 3
		Poaceae	<i>Themeda</i>	<i>australis</i>		Kangaroo Grass				uc		X	X		p	1		
	*	Commelinaceae	<i>Tradescantia</i>	<i>fluminensis</i>		Wandering Jew	p											
	*	Fabaceae Faboideae	<i>Trifolium</i>	<i>repens</i>		White Clover	p		c									
		Myrtaceae	<i>Tristania</i>	<i>laurina</i>		Water Gum	p											
		Typhaceae	<i>Typha</i>	<i>orientalis</i>		Broadleaf Cumbungi	p											
	*	Verbenaceae	<i>Verbena</i>	<i>bonariensis</i>			p	o	c	c								
	*	Fabaceae Faboideae	<i>Vicia</i>	<i>sativa</i>		Vetch	p	o							p		1	
	*	Araceae	<i>Zantedeschia</i>	<i>aethiopica</i>		Arum Lily	p			uc					p		1	

General Status	
*	Exotic/introduced species
(?)	Uncertain identification
Conservation Status	
CE	Critically Endangered - listed under Schedule 1A of the TSC Act
E	Endangered - listed under Schedule 1 of the TSC Act
V	Vulnerable - listed under Schedule 2 of the TSC Act
Record Type	
FI	Flying over the site
Vi	Visual observation
Au	Aural (call recognition)
UI	Ultrasonic call recognition (Anabat)
Sc	Scat or scent
T	Tracks
Scr	Scratch marks on tree trunks or other
D	Diggings
N	Nest
B	Burrow
H	Hollows (in trees, trunks or other)
F	Fur or feathers
E	Eggs or juvenile morphs
A	Anecdotal

Status	Group	Family	Genus	species	Common Name	Obs Type	Year
P	Amphibian	Hylidae	<i>Litoria</i>	<i>fallax</i>	Eastern Dwarf Tree Frog	Au	2006
P	Aves	Accipitridae	<i>Haliastur</i>	<i>sphenurus</i>	Whistling Kite	Vi	2006
P	Aves	Anatidae	<i>Anas</i>	<i>superciliosa</i>	Pacific Black Duck	Vi	2006
P	Aves	Anatidae	<i>Chenonetta</i>	<i>jubata</i>	Australian Wood Duck	Vi	2008
P	Aves	Artamidae	<i>Cracticus</i>	<i>torquatus</i>	Grey Butcherbird	Vi	2008
P	Aves	Artamidae	<i>Gymnorhina</i>	<i>tibicen</i>	Australian Magpie	Vi	2008
P	Aves	Artamidae	<i>Strepera</i>	<i>graculina</i>	Pied Currawong	Vi, Au	2006
P	Aves	Cacatuidae	<i>Cacatua</i>	<i>galerita</i>	Sulphur-crested Cockatoo	Vi	2008, 2010
P	Aves	Cacatuidae	<i>Eolophus</i>	<i>roseicapillus</i>	Galah	Vi	2008
P	Aves	Charadriidae	<i>Vanellus</i>	<i>miles</i>	Masked Lapwing	Vi	2006, 2008, 2010
U	Aves	Columbidae	<i>Columba</i>	<i>livia</i>	Rock Dove	Vi	2008
U	Aves	Columbidae	<i>Streptopelia</i>	<i>chinensis</i>	Spotted Turtle-Dove	Vi	2006, 2008
P	Aves	Corvidae	<i>Corvus</i>	<i>coronoides</i>	Australian Raven	Vi	2008
P	Aves	Dicruridae	<i>Grallina</i>	<i>cyano-leuca</i>	Magpie-lark	Au	2006
P	Aves	Dicruridae	<i>Rhipidura</i>	<i>albiscapa</i>	Grey Fantail	Vi	2006
P	Aves	Dicruridae	<i>Rhipidura</i>	<i>leucophrys</i>	Willie Wagtail	Vi	2008
P	Aves	Eupetidae	<i>Psophodes</i>	<i>olivaceus</i>	Eastern Whipbird	Au	2006, 2010
P	Aves	Halcyonidae	<i>Dacelo</i>	<i>novaeguineae</i>	Laughing Kookaburra	Au	2006, 2008, 2010
P	Aves	Hirundinidae	<i>Hirundo</i>	<i>neoxena</i>	Welcome Swallow	Vi	2008
P	Aves	Maluridae	<i>Malurus</i>	<i>cyaneus</i>	Superb Fairy-wren	Vi	2006
P	Aves	Meliphagidae	<i>Anthochaera</i>	<i>carunculata</i>	Red Wattlebird	Au	2008, 2010
P	Aves	Meliphagidae	<i>Manorina</i>	<i>melanocephala</i>	Noisy Miner	Au	2008
P	Aves	Meliphagidae	<i>Meliphaga</i>	<i>lewinii</i>	Lewin's Honeyeater	Au	2008
P	Aves	Meliphagidae	<i>Phylidonyris</i>	<i>nigra</i>	White-cheeked Honeyeater	Vi	2006
P	Aves	Meliphagidae	<i>Phylidonyris</i>	<i>novaehollandiae</i>	New Holland Honeyeater	Vi	2006
P	Aves	Psittacidae	<i>Trichoglossus</i>	<i>haematodus</i>	Rainbow Lorikeet	Vi	2006, 2008, 2010
P	Aves	Rallidae	<i>Gallinula</i>	<i>tenebrosa</i>	Dusky Moorhen	Vi, Au	2006
U	Aves	Pycnonotidae	<i>Pycnonotus</i>	<i>jocosus</i>	Red-whiskered Bulbul	Vi	2010
P	Aves	Rallidae	<i>Porphyrio</i>	<i>porphyrio</i>	Purple Swampphen	Vi	2008, 2010

Status	Group	Family	Genus	species	Common Name	Obs Type	Year
V	Aves	Strigidae	<i>Ninox</i>	<i>strenua</i>	Powerful Owl	Vi, Au	2008
P	Aves	Zosteropidae	<i>Zosterops</i>	<i>lateralis</i>	Silvereye	Vi	2006
U	Mammalia	Equidae	<i>Equus</i>	<i>caballus</i>	Horse	Vi	2006, 2008
U	Mammalia	Leporidae	<i>Oryctolagus</i>	<i>cuniculus</i>	Rabbit	Sc, D	2006, 2008
P	Mammalia	Macropodidae	<i>Wallabia</i>	<i>bicolor</i>	Swamp Wallaby	Vi	2010
P	Mammalia	Peramelidae	<i>Perameles</i>	<i>sp.</i>	unidentified Bandicoot	D	2008
P	Mammalia	Peramelidae	<i>Perameles</i>	<i>nasuta</i>	Long-nosed Bandicoot	Vi, Au, D	2006, 2010
P	Mammalia	Phalangeridae	<i>Trichosurus</i>	<i>vulpecula</i>	Common Brushtail Possum	Vi	2006, 2008
P	Mammalia	Pseudocheiridae	<i>Pseudocheirus</i>	<i>peregrinus</i>	Common Ringtail Possum	Vi	2006
P	Reptilia	Elapidae	<i>Pseudechis</i>	<i>porphyriacus</i>	Red-bellied Black Snake	Vi	2010

Appendix B

Figures

Warriewood STP Buffer Area 3 Proposed Residential Development

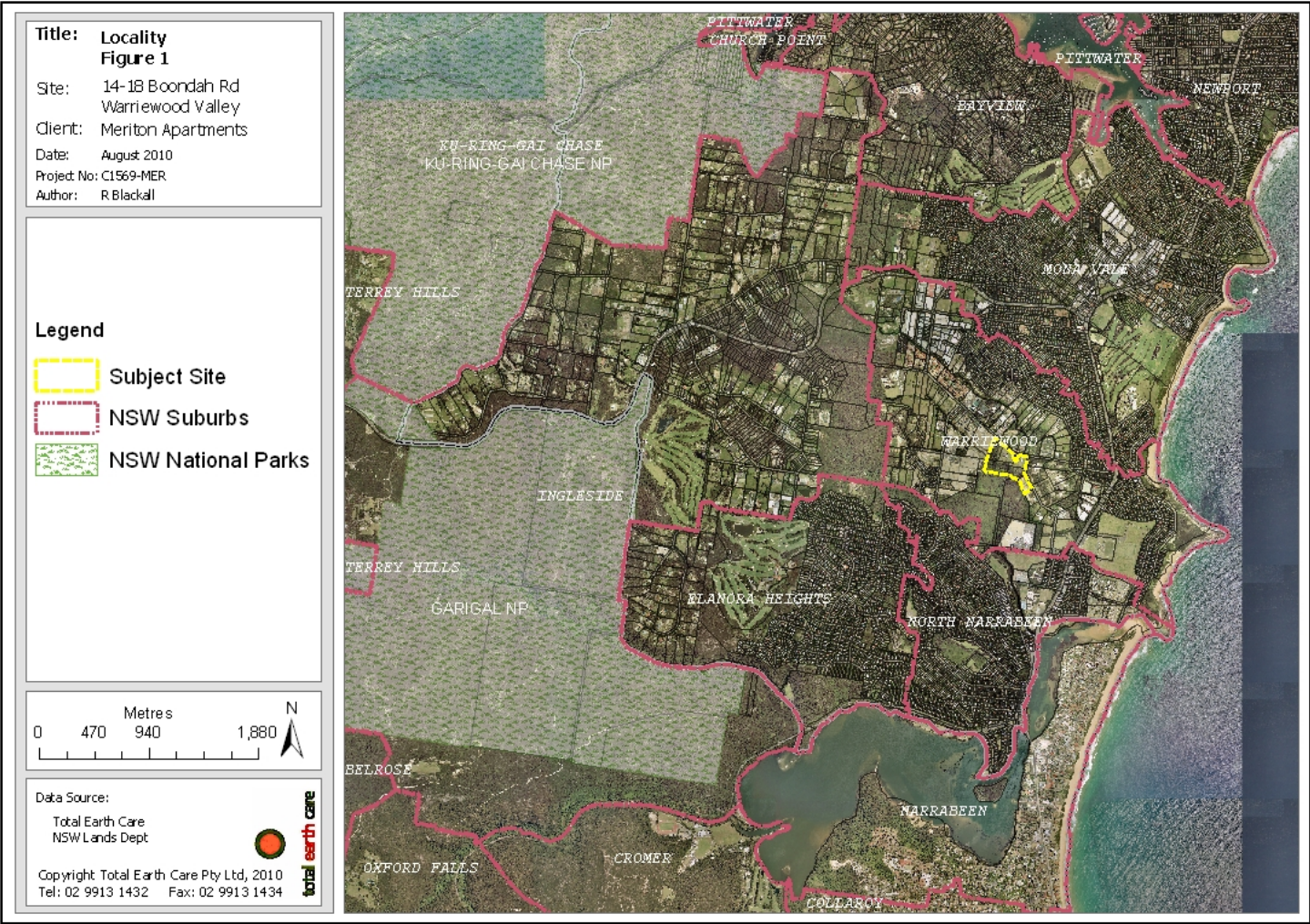


Figure 1: Site Locality

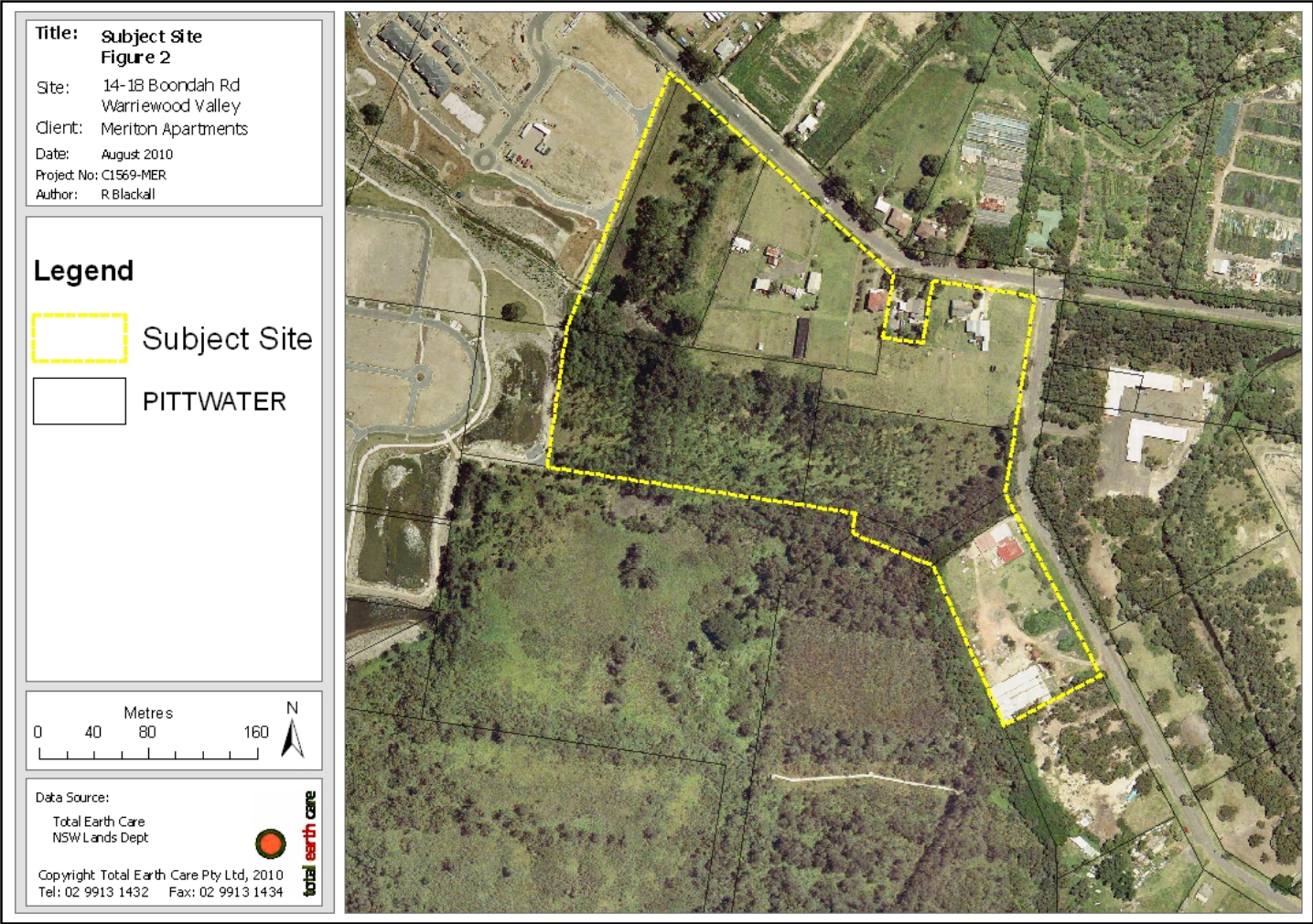


Figure 2: Subject site

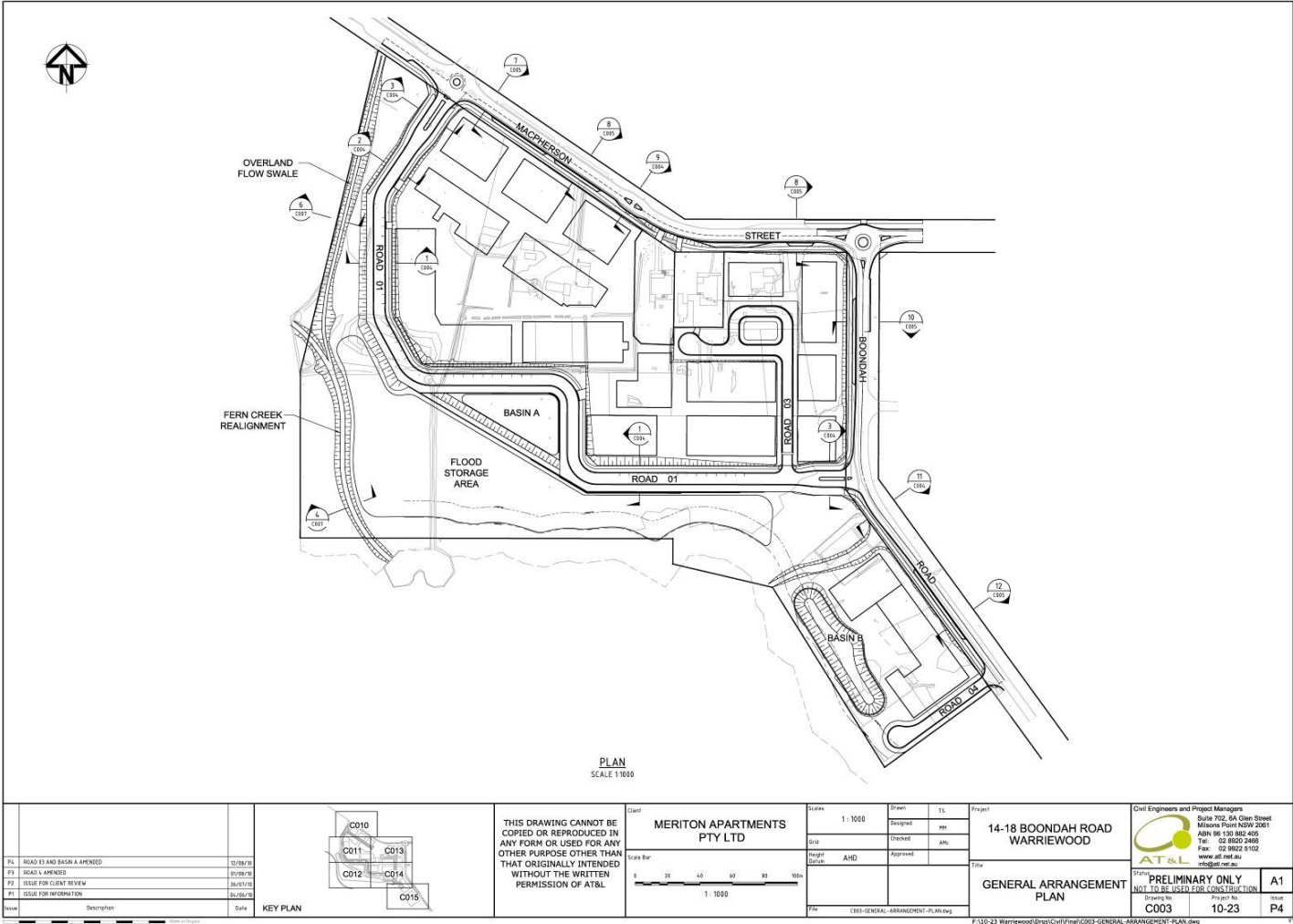
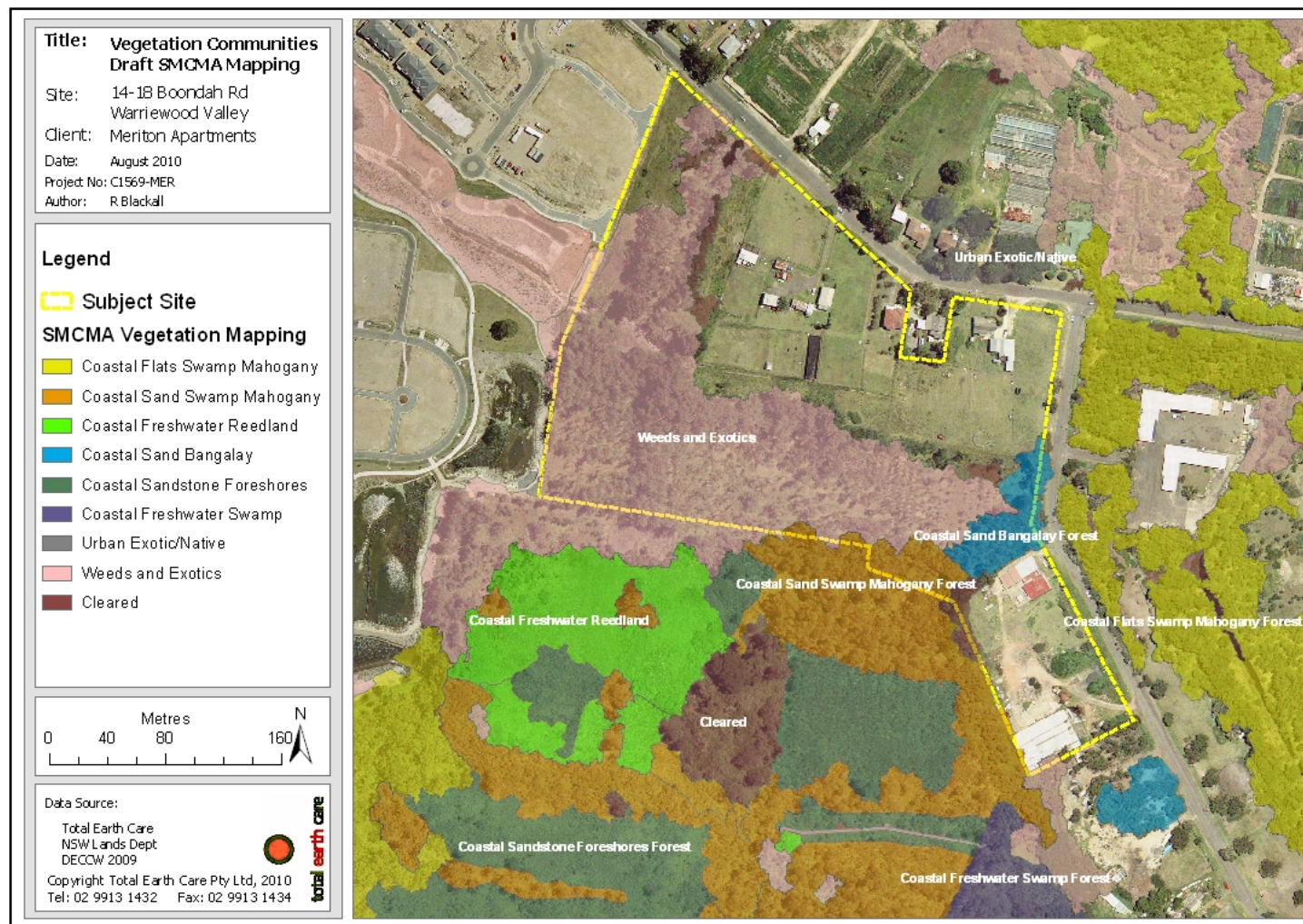


Figure 3: General Arrangement Preferred Option



Figure 4: Buffer zones from approved Council DA for the protection of Fern Creek, the Riparian Corridor and Warriewood Wetlands



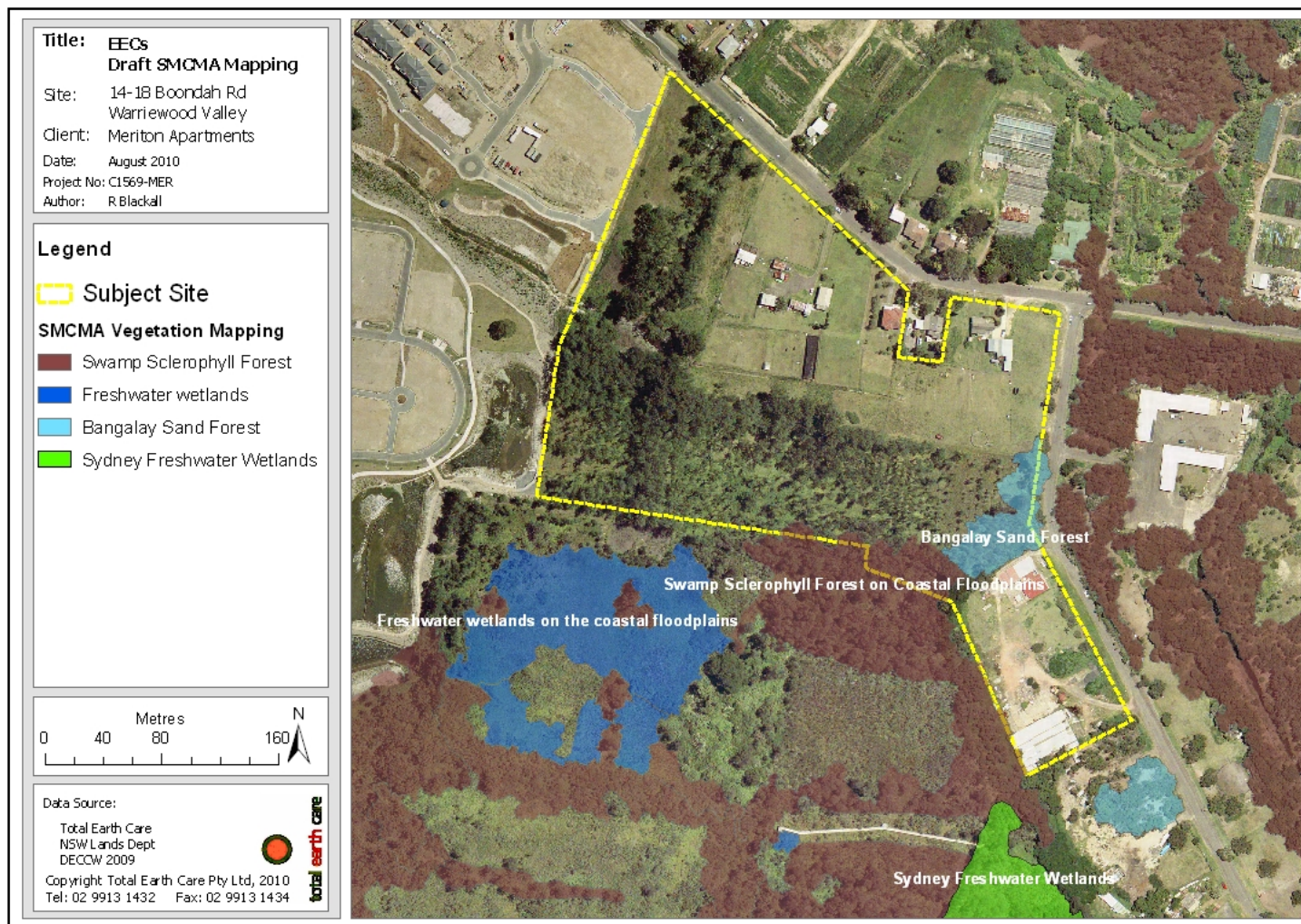


Figure 6: Mapping of Vegetation Communities within SMCMA by DECCW 2009 showing Endangered Ecological Communities

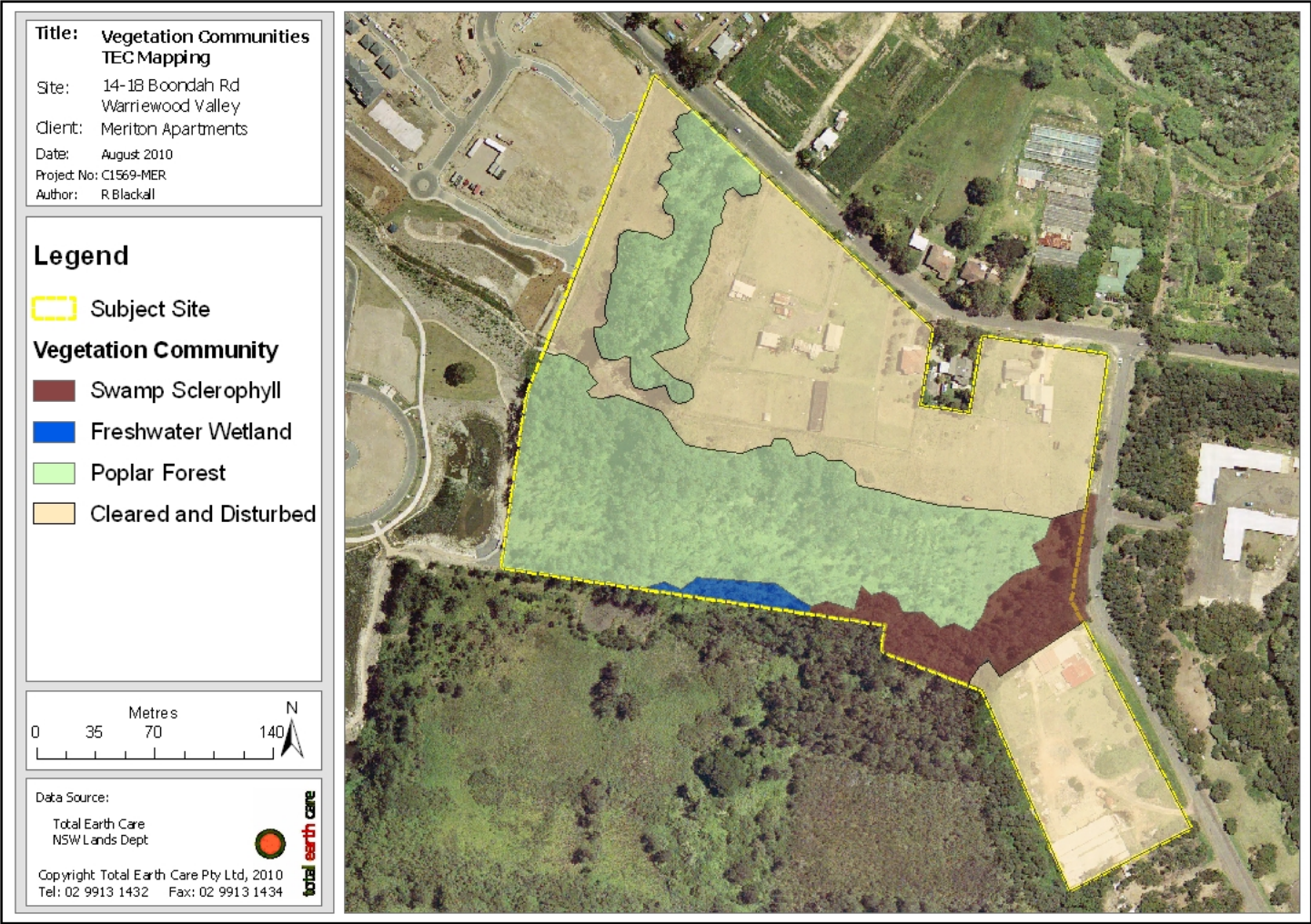


Figure 7: Vegetation Communities Total Earth Care 2010

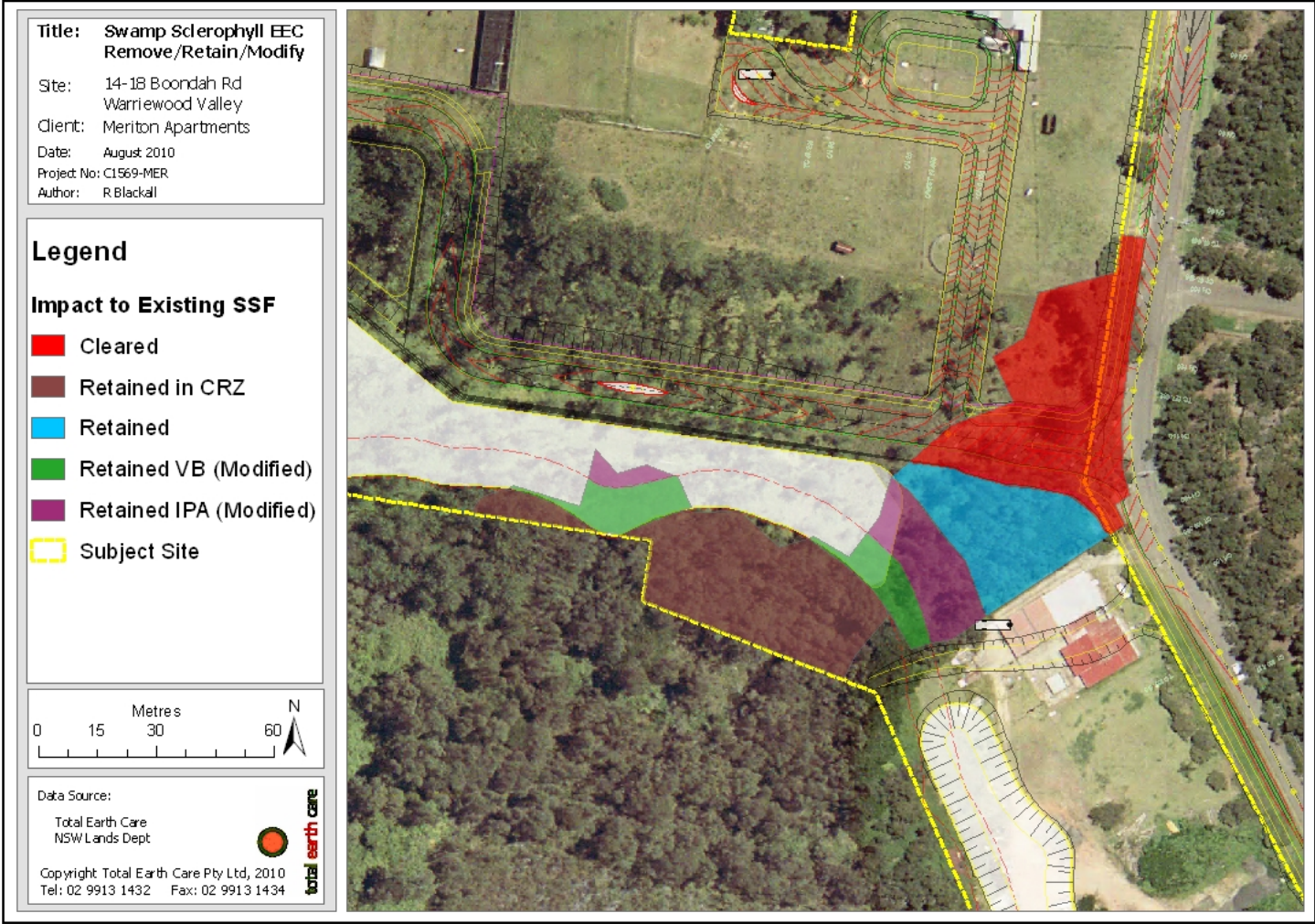


Figure 8: Removal, retention and modification of mapped SSF

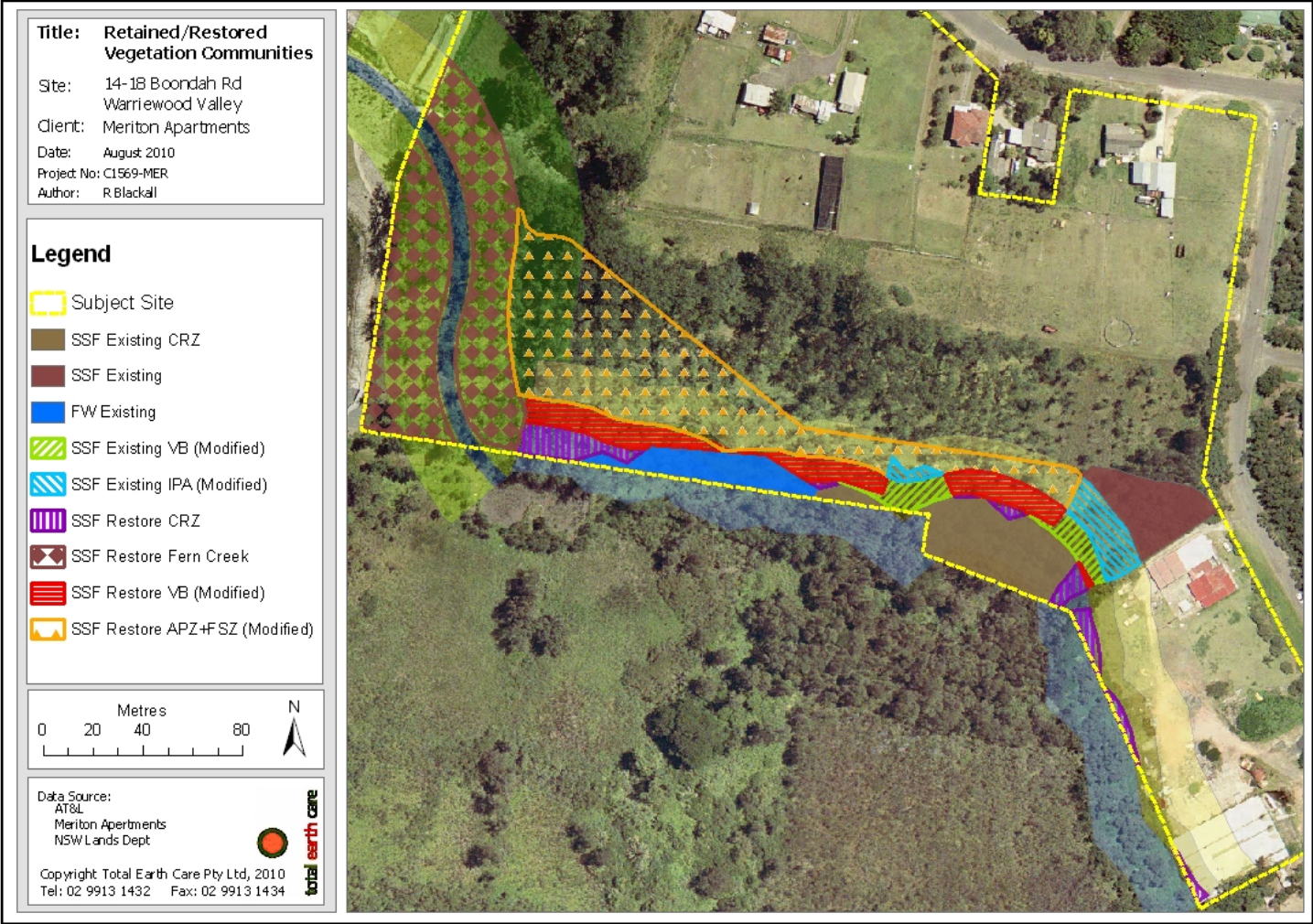


Figure 9: Vegetation management within riparian zones, retained SSF, APZ, Fern Creek and Flood Storage areas

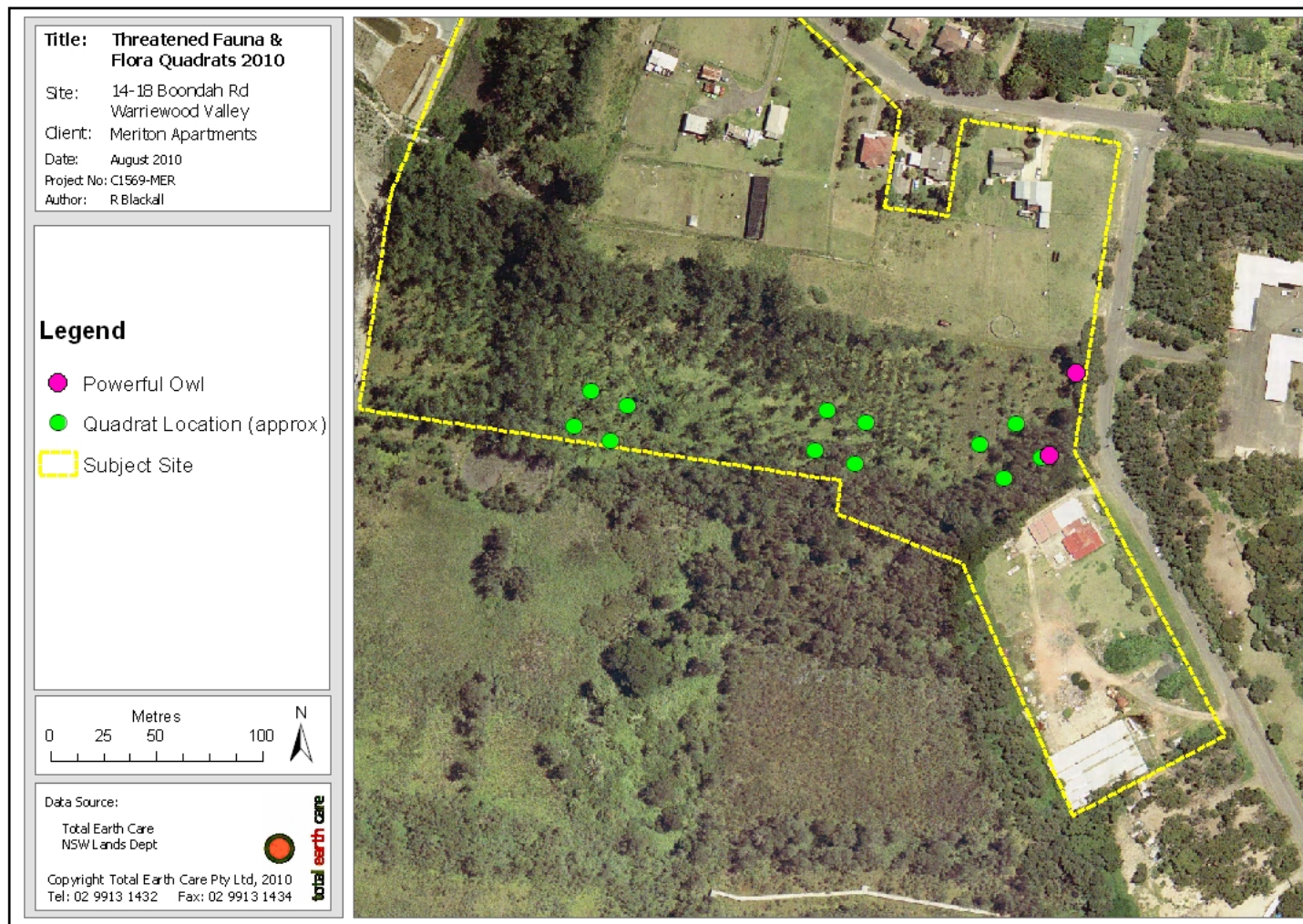


Figure 10: Threatened species identified from the subject site (March 2008) and approximate location of flora quadrats August 2010

