



Rehabilitation Plan for Fish Creek Corridor

Hilder Road State School

By the Environment Sub-committee of the P&C for
Hilder Road State School May 2013

1. GENERAL

1.1 INTRODUCTION

This rehabilitation and maintenance action plan has been prepared to provide technical support and practical aid for riparian works proposed along the northern banks of Fish Creek, on state-owned land described as RP GLR6099 and forming part of the grounds of Hilder Road State School, The Gap. In consultation with Brisbane City Council, this study focuses on the extent of works which are defined, for the purposes of this report, as Stage 1; extending 60 m on an east-west alignment from the Hilder Road culverts, from the top of bank to the waterline and totaling an area of approximately 600 square metres (as illustrated in **Figure 1**).

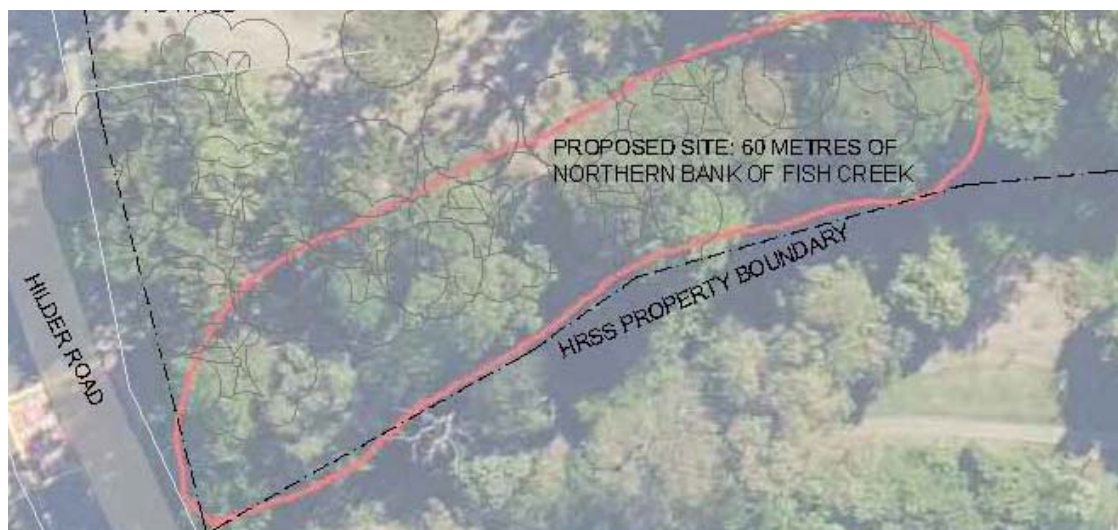


Figure 1– Location Plan (Google Earth, 20013) & Site Plan excerpt (see Attachment end of report)

The primary objective of the proposed works is to conserve and enhance existing native vegetation and habitat values along the creek, and help restore the ecological value of this part of the Fish Creek corridor. As a result of storm damage (from The Gap storms in 2008), weed invasion and a history of little or no ongoing bushcare programs on this part of Fish Creek, the proposed rehabilitation strategy will help clean up storm damage, remove weeds and revegetate and provide ongoing management programs to achieve the primary objective.

A secondary objective is to engage the Hilder Road State school community. As environmental sustainability is an identified area of importance in the Australian National Curriculum, the project is also aimed to provide HRSS children opportunities to connect with nature through the syllabus, or as part of the pre-existing Environment Committee; comprised of children who are passionate about the environment and creating a sustainable future.

Notwithstanding this, the northern banks are not designed for informal school use (ie. At playtimes, and nor is it publicly used) however it will be accessible for initial site preparation and selective clearing, weed sweeps, regenerative planting and follow up maintenance

programs by a core group of volunteers, contractors and particular students and teachers as part of school curricular or Committee activities (subject to relevant HRSS and Principal approvals, at the time).

1.2 CONTEXT AND BACKGROUND

Fish Creek begins in the ranges of Brisbane Forest Park and forms part of the Enoggera Catchment. Stormwater runoff and overland flow from the urbanised foothills of The Gap near Belclare Street channelize the flows where it forms an open stream at Wittonga Park. From here, it meanders through The Gap and then feeds into Enoggera Creek in Ashgrove (**Figure 2**).



Figure 2– Location Plan & Surrounding Context (Google Earth, 2013)

The northern banks of Fish Creek forms part of the southern boundary of the School and at present is fenced off at the top of the bank, separating the creekbank and the gravel entry road. A number of mature trees and conifers planted either side of the access road form a boulevard effect, and provide shade for the informal carpark along this road. The creek bank includes areas that contain integral native vegetation as well as areas that are degraded by weeds and require restoration. Dead and fallen trees are reminders of the extent of storm damage from the 2008 ‘Gap Storms’.

1.3 RESPONSIBILITIES AND TIMING

All tree removal to be undertaken by qualified and experienced tree loppers. Initial site preparation works are to be undertaken by experienced bush regenerators with voluntary support, including student help where appropriate and as approved by the HRSS Principal.

Description	Timing
Tree removal (5 mature trees)	By 31 st October 2013

First 'weed sweep' and preliminary site clearing	By 31 st January 2014
Revegetation Planting undertaken by children & general school community as part of National Tree Planting Day	End March 2014 (National Tree Planting Day – August 2014)
Revegetation and remediation works by children, staff and volunteers	Various activities including school curricula, or as part of ongoing remediation works

Plant species will be selected in accordance with S.O.W.N, and as recommended by Brisbane City Council. Any major proposed changes to the plant schedule are to be approved by Brisbane City Council's Habitat Officer.

HRSS P&C has committed \$2,000 funding annually to contribute in maintaining the site and potentially expand on the scale of the project as funding becomes available.

2.1 INTENT

The specific intent of the proposed rehabilitation plans include:

Aims

- To protect and enhance the existing habitat and ecological corridor values of Fish Creek
- To engage the school community in Restoration works and ongoing remediation (where required) as an outdoor learning centre
- To assist Natural Regeneration and emerging native species where areas of riparian vegetation are disturbed
- To undertake Restoration of emerging canopy layer (lost through storms) and understorey following weed/vegetation removal

Generally this rehabilitation plan aims to:

- Provide a description of rehabilitation works to assist site works and inform funding and future management and maintenance programs, including potential for school community input;
- Identify plant species, stock size, quantities (dependent on S.O.W.N availability) and general locations;
- Identify the protection and enhancement of natural physical processes in collaboration with teaching staff for incorporation into the school curriculum;
- Identify weed and noxious plant management strategies, site preparation and planting methods; and
- Identify the management and monitoring protocols to ensure rehabilitation is successful.

1.4 NATIVE VEGETATION

Although a variety of native flora species were recorded in the area from preliminary site surveys, a number of database searches were also undertaken to identify the Regional Ecosystem (RE) mapping and Essential Habitat under the Vegetation Management Act. These searches identified the site as 'Non remnant' and there were no targeted species recorded on site that were classified under both the Nature Conservation Act (1992), the Environment

Protection and Biodiversity Conservation Act (1992) nor under the State priority ranking system 'Back on Track' (BOT: Queensland Government) (**Appendix A**).

The riparian corridor located on the northern banks of the waterway is well vegetated, with a combination of exotic and native vegetation, and includes a sparse but mixed eucalypt/exotic pine canopy over a variety of understorey species both exotic and native. Generally the ground layer includes a mixture of native and exotic elements such as Molasses Grass (*Melinis multiflorus*), Blady Grass (*Imperata cylindrica*), Sprenger's Asparagus (*Asparagus densiflorus*) as well as Bracken Fern, Barbwire Grass (*Cymbopogon refractus*) and Mat Rush (*Lomandra longifolia*). Most noticeably, areas within the delineation area of Stage 1 have an infestation of the ground layer by the weed Singapore Daisy (*Sphagneticola trilobata*) and Sprenger's Asparagus fern. A site survey in May 2013 identified a range of native flora species along Fish Creek (see Table 1 below), and although all were classified as of 'Least Concern', they are proposed to be retained and protected for their contribution to biodiversity and habitat values.

The upstream section of the waterway through Wittonga Park becomes a series of dams in the drier months and is vegetated with a variety of water plants including frogmouth (*Philydrum lanuginosum*) and Tall flat sedge (*Cyperus exaltatus*) amongst a mix of aquatic weed species *Cyperus papyrus* (*Nile Grass*). The canopy elements of this area include a combination of fig trees and riparian vegetation, including the Weeping lilly pilly (*Waterhousia floribunda*) and broad leafed paper bark (*Melaleuca quinquenervia*) and black she oaks (*Allocasuarina littoralis*) and mature weed trees such as the Strawberry guavas. The waterway is directed under Hilder Road via a series of large, open culverts.

The existing site conditions upstream at Wittonga Park is fairly disturbed, with evidence of streambank erosion and weed invasion (due in part to high use by children) and loss of mature riparian vegetation due to floods and/or storm damage. Downstream, on the subject land, although there is some weed infestation, the area is fenced off and there is evidence of streambank erosion attributable to particular major flood events (ie. 2008, and 2011).

TABLE 1 – SURVEYED NATIVE VEGETATION & EMERGING VEGETATION TO BE RETAINED

Species name	Common name
<i>Acacia disparrima</i>	Hickory Wattle
<i>Acacia fimbriata</i>	Brisbane Wattle
<i>Adiantum hispidulum</i>	Rough Maidenhair Fern
<i>Allocasuarina littoralis</i>	Black She Oak
<i>Cyathea cooperi</i>	Tree fern
<i>Cyperus exaltatus</i>	Tall Flat Sedge
<i>Eleocarpus grandis</i>	Quandong
<i>Eucalyptus crebra</i>	Narrow-Leaved Ironbark
<i>Ficus benamina</i>	Weeping Fig
<i>Ficus coronata</i>	Sandpaper Fig
<i>Gahnia clarkei</i>	Tall Sawsedge
<i>Goodenia rotundifolia</i>	Star Goodenia

<i>Grevillea banksii</i> (p)	Red Silky Oak
<i>Harpulia pendula</i>	Tulipwood
<i>Lomandra longifolia</i>	Long-Leaf Matrush
<i>Lomandra hystrix</i>	Green Matrush
<i>Macaranga tanarius</i>	Macaranga
<i>Mallotus philippensis</i>	Red Kamala
<i>Melaleuca quinquenervia</i>	Paperbark
<i>Pandorea jasminoides</i>	Bower Vine
<i>Parsonsia straminea</i>	Monkey Rope
<i>Pittosporum revolutum</i>	Forest Pittosporum
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Waterhousia floribunda</i>	Weeping lilly pilly

Note: While considerable effort has been made to document all species encountered by utilising best practice techniques for plant survey, there are a number of caveats that should be considered when reviewing this list including:

- *Some plant species may be dormant at the time of survey or had insufficient fertile material to allow a positive identification;*
- *Time constraints associated with any survey inevitably means that some species are overlooked; and*
- *There are rare occasions where specimens may be misidentified for a variety of reasons.*

1.5 FAUNA

Although a detailed fauna survey of the site was not undertaken a desktop review was undertaken at <http://www.ehp.qld.gov.au/wildlife/wildlife-online/>. The full results are presented in the Appendix. A variety of species were recorded in the area including a number of species of significance:

Recordings of Grey Goshawk and the Turquoise Parrot in the area - listed as 'Near Threatened' species under the *Nature Conservation Act 1992*;

The Common Death Adder and rare Elf Skink also classified as 'Near Threatened' under the *Act*;





The presence of the Grey Headed Flying Fox whose conservation status under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC)* is 'Vulnerable' and identified under the State priority ranking system ('BOT') as 'Critical' (see **Appendix A**).




1.6 WEEDS



Assessment of the area on 20th May 2013 recorded the following exotic species in the 60m transect that forms the Stage 1 area (approximately 600 sqm) of the revegetation program, and is fairly typical of the northern banks of Fish Creek overall.

TABLE 2– WEED SPECIES

Species name	Common name	State/Council Declared Plants	
<i>Ageratina riparia</i> *	Mist Flower	X	
<i>Ambrosia artemisiifolia</i>	Annual Ragweed	X	

Species name	Common name	State/Council Declared Plants	
<i>Arecastrum romanzoffianum</i>	Cocos Palm	X	
<i>Asparagus densiflorum</i> *	Sprenger's Asparagus		
<i>Asparagus africanus</i>	Asparagus fern spp.		
<i>Asparagus aethiopicus</i>			
<i>Cassia fistula</i>	Golden Raintree		
<i>Celtis sinensis</i>	Chinese Elm	X	
<i>Cinnamomum camphora</i>	Camphor Laurel	X	
<i>Coprosma repens</i>	New Zealand Umbrella	X	
<i>Cyperus eragrostis</i>	Umbrella Sedge	X	
<i>Eugenia uniflora</i>	Brazilian Cherry	X	
<i>Gomphocarpus fruticosus</i>	Balloon Cotton Bush	X	

Species name	Common name	State/Council Declared Plants	
<i>Ipomoea cairica</i>	Mile-a-minute	X	
<i>Jacaranda mimosifolia</i>	Jacaranda	X	
<i>Lantana spp.</i>	Lantana	X	
<i>Megathyrsus maximus</i>	Guinea Grass	X	
<i>Melinis minutiflora</i>	Molasses Grass	X	
<i>Murraya paniculata</i>	Mock Orange	X	
<i>Ochna serrulata</i>	Ochna	X	
<i>Psidium guajava</i>	Strawberry Guava	X	
<i>Schefflera actinophylla</i>	Umbrella Tree	X Miniature version (spp. Arboricola)	
<i>Schinus terebinthifolius</i>	Broad-leafed Pepper	X	
<i>Senna penduala</i> var. <i>glabrata</i>	Easter cassia	X	
<i>Solanum hispidulum</i>	Devil's Fig	X	
<i>Solanum chrysotrichum</i>	Giant Devil's Fig	X	
<i>Spathodea campanulata</i>	African Tulip tree	X	

Species name	Common name	State/Council Declared Plants	
<i>Sphagneticola trilobata</i>	Singapore Daisy	X	
<i>Thevetia peruviana</i>	Yellow Oleander	X	
<i>Tradescantia fluminensis</i>	Wandering Jew	X	
<i>Wisteria sinensis</i>	Chinese Wisteria		

Of the above species, some are identified as State-Declared pest-species, with others declared by Brisbane City Council as “Environmental Weeds”. These species include Asparagus ferns (*Asparagus spp.*), Camphor Laurel (*Cinnamomum camphora*), Lantana (*Lantana camara*), Creeping Lantana (*Lantana montevidensis*), Molasses Grass (*Melinis multiflora*), Ochna (*Ochna serrulata*), Umbrella Tree (*Schefflera actinophylla*), Broad-leaved Pepper Tree (*Schinus terebinthifolius*), Mile-a-minute (*Ipomoea cairica*) and Singapore Daisy (*Sphagneticola trilobata*) to name a few.

Of the species recorded in Table 2 Camphor Laurel, Lantana, Creeping Lantana, Broad-leaved Pepper Tree and Singapore Daisy are listed as Class 3 under the *Land Protection (Pest & Stock Route Management) Act 2002* (LPA). The School must take reasonable steps to keep land free of Class 2 and 3 pests

2. SITE WORKS

Although it is envisaged that the northern banks of Fish Creek on School property will form future stages for rehabilitation, Stage 1 relates to an area of approximately 600 square metres running alongside the creek, and forms a template for future works. This includes the following treatments in both the terrestrial zone and along the creek edges:

- Removal of dead or unstable trees and vegetation;
- Removal of weeds;
- Assisted natural regeneration, and
- Planting and revegetation.

2.2 VEGETATION STRATEGY

Rehabilitation strategies have been developed based on site conditions, weed presence and existing vegetation.

Prior to the rehabilitation works, the existing weed species identified in **Table 2** must be eradicated (Refer to section 2.3 Weed Management). It is anticipated that existing native species in the integral parts of the corridor will colonise further with the removal of competition from weed species. The creation of ideal habitat for these species during rehabilitation works will facilitate their proliferation.



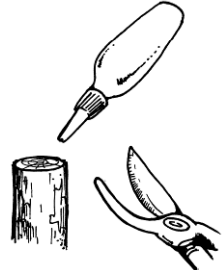
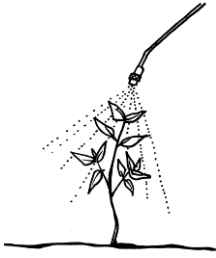

The general structure of the naturally regenerating plant stock is similar to the surrounding reference community, and includes species which are representative of a riparian zone. It is characterised by an understorey of sedges with a combination of *Casuarina* spp., *Eleocharis* and/or *Eucalypts* dominating the middle and upper storeys. The appropriate rehabilitation in this instance relates to a combination of approaches, including a) natural regeneration (and assisted natural regeneration) and c) Revegetation. The strategy will be staged as follows:

- Remove selected trees nominated for removal (and approved by BCC) (by contractors)
- Commence weed 'sweeps' to remove weeds (planting not required at this stage) in accordance with Timing (section 1.3)
- Planting where required is to be undertaken in accordance with Table 6.

2.3 WEED MANAGEMENT

All weed species throughout all areas are to be removed according to the methods set out in Table 3.

TABLE 3 – WEED CONTROL METHODS

	<p>i.</p> <p>Hand Removal Removal of small weeds by hand. To be employed for weeds where the entire root system can be easily removed by hand whilst minimising soil disturbance. Care is necessary to ensure seed is not disbursed. Plants likely to restrike (eg Singapore Daisy) or set propagules must be removed from site.</p>
	<p>ii.</p> <p>Crown or underground stem removal Employed for plants growing from a solid central crown below ground level such as <i>Protasparagus aethiopicus</i>:</p> <ul style="list-style-type: none"> ▪ a blade is used to sever the roots from the central crown; ▪ severing the attached roots and removing the crown or underground stem with the plant; ▪ seed heads must be removed prior to crowning. <p>Cut material and seeds are to be removed from site.</p>
	<p>iii.</p> <p>Cut stump method This method is ideal for woody plants and vines without aerial tubers:</p> <ul style="list-style-type: none"> ▪ cut the stem close to the ground, if possible below the lowest branch; ▪ immediately (within 30 seconds) apply herbicide using a small squeeze bottle to the cut surface; ▪ Generally 1 part Glyphosate (or similar product) to 1.5 parts of water is suitable to achieve a kill with most species <p>Cut material will be left on site to enhance fauna habitat, except where, in the judgement of the Contractor the material is likely to restrike (e.g. Singapore Daisy) or set propagules. In this case material is to be transported as waste from the site and not utilised onsite.</p>
	<p>iv.</p> <p>Spraying Council has advised not to spray within the riparian zone</p>
	<p>v.</p> <p>Scraping the stem method This method is used for plants with aerial tubers, such as Madeira Vine.</p> <ul style="list-style-type: none"> ▪ a sharp knife is employed to lightly scrape a section of stem (approximately 10cm) removing bark and exposing the living tissue; ▪ apply herbicide immediately (within 30 seconds) to the exposed section with a small squeeze bottle; ▪ Generally 1 part Glyphosate (or similar product) to 1.5 parts of water is suitable to achieve a kill with most species

Weed control techniques for individual species are tabulated below.

TABLE 4 – WEED SPECIES AND SPECIFIC REMOVAL TECHNIQUES

Family Name	Species Name	Common Name	Removal Technique				
			i	ii	iii	iv	v
ASTERACEAE	<i>Ageratina riparia</i>	Mist Flower	x				
ASPARAGACEAE	<i>Asparagus densiflorum</i>	Sprenger's Asparagus	x				
LAURACEAE	<i>Cinnamomum camphora</i>	Camphor Laurel	x		x		
RUBIACEAE	<i>Coprosma repens</i>	New Zealand Umbrella	x				
CYPERACEAE	<i>Cyperus ubsp. tis</i>	Umbrella Sedge	x				
	<i>Eugenia</i>	Brazilian cherry tree					
FABACEAE	<i>Erythrina sp.</i>	Coral Tree	x		x		
ASCLEPIADACEAE	<i>Gomphocarpus fruticosus</i>	Balloon Cotton Bush	x				
POLYGONACEAE	<i>Ipomoea cairica</i>	Mile-A-Minute	x				
CONVOLVULACEAE	<i>Ipomoea indica</i>	Morning Glory	x				
	<i>Jacaranda mimosifolia</i>	Jacaranda	x		x		
VERBENACEAE	<i>Lantana camara</i>	Lantana	x				
VERBENACEAE	<i>Lantana montevidensis</i>	Creeping Lantana	x				
POACEAE	<i>Megathyrsus maximus</i>	Guinea Grass	x				
POACEAE	<i>Melinis minutiflora</i>	Molasses Grass	x				
RUTACEAE	<i>Murraya paniculata</i>	Mock Orange			x		
OCHNACEAE	<i>Ochna serrulata</i>	Ochna	x				
	<i>Psidium guajava</i>	Strawberry Guava	x		x		
ARALIACEAE	<i>Schefflera actinophylla</i>	Umbrella Tree			x		
ANACARDIACEAE	<i>Schinus terebinthifolius</i>	Broad-Leafed Pepper			x		
	<i>Senna penduala var. glabrata</i>	Easter cassia					
SOLANACEAE	<i>Solanum hispidulum</i>	Devil's Fig	x				
	<i>Spathodea campanulata</i>	African Tulip tree	x		x		
ASTERACEAE	<i>Sphagneticola trilobata</i>	Singapore Daisy	x				
	<i>Thevetia peruviana</i>	Yellow Oleander	x				
	<i>Wisteria sinensis</i>	Chinese Wisteria	x				

Note: Hand removal is the preferred method of herbaceous weed control near creeks and waterways. Where this is ineffective contact Council to inquire about use of RoundUp Bioactive, or a similar product suitable for use in waterways.

If Brazilian Fireweed (*Erechtites valerianifolius*) and Groundsel (*Baccharis halimifolia*) are located on site and seed heads are present these are to be 'bagged' and manually removed from site prior to treating the specimen *in situ*. Umbrella Tree (*Schefflera actinophylla*) is not to be removed while in flower.

2.4 PLANTING METHODS

Plant species, densities and quantities for the area have been broadly based on achieving suitable plant cover according to Council requirements, soil stabilisation and availability of local native species.

Recommendations regarding the size of planting stock, mulch specifications and any other necessary treatments for all areas, such as weed control, are detailed below, and should be adhered to for any future site remediation or revegetation, or works undertaken by children and teachers as part of the school curriculum.

TABLE 5 – VEGETATION ESTABLISHMENT METHODOLOGY

Task	Recommendations
Weed Control	<p>Table 3 illustrates the recommended methods of weed control.</p> <p>Hand removal is the preferred method of herbaceous weed control near creeks and waterways, however, where this is ineffective it is advised to contact Council.</p> <p>In the case of spraying (subject to Council approval), particular care must be taken to avoid poisoning native species, particularly young saplings, native grasses and herbaceous species.</p> <p>Where spraying exotic grasses has been approved – particular care must be taken to avoid spraying native grasses.</p> <p>Two weeks following spraying of rank exotic grasses these are to be knocked down by brushcutting – particular care must be taken to avoid slashing native species.</p>
Mulch	No mulching is required
Plant Supply	<p>Seedlings shall be sourced from local provenance stock through S.O.W.N.</p> <p>Final species and numbers are market-dependant but will be endemic species, where possible.</p>
Planting	<p>Planting technique is illustrated below:</p> <div data-bbox="571 1541 805 1818"> </div> <p>Tubestock Planting Plant in a slight shallow twice the size of the tube container, ensuring rootball is just below soil surface.</p> <p>Fertiliser tablet to be placed adjacent to, but not touching, the rootball</p> <p>Soil to be backfilled to the same level as when the plant was in the container</p> <p>Seedlings must be moist at time of planting, if necessary water stock prior to planting.</p>
Watering	Seedlings are to be watered with a minimum of 5 – 10 litres of water each at the time of planting and then watered as part of general maintenance requirements.

Maintenance and Monitoring	Plantings should be maintained for a minimum period of 12 weeks.
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RECOMMENDED SPECIES FOR PLANTING

Plants are specified in Table 6 below.

Table 6 – Recommended Species (based on SOWN recommendations & availability)

Species	Common Name	Planting Density*	Planting size	Canopy	Mid storey	Ground cover	Growing region**
<i>Acmena smithii</i>	Lilly Pilly	1	Tubestock		25		DRT
<i>Acacia fimbriata</i>	Brisbane Wattle	1.5	Tubestock		10		DPS
<i>Aleocasia brisbanensis</i>	Conjevoi	1	Tubestock			25	CKINU
<i>Angophora subvelutina</i>	Red Apple	1	Tubestock	5			DRS
<i>Backhousia myrtifolia</i>	Grey Myrtle	1	Tubestock		10		DRT
<i>Brachychiton discolor</i>	Lacebark	1	Tubestock	10			DRT
<i>Breynia oblongifolia</i>	Breynia	1	Tubestock		10		DRS
<i>Carissa ovata</i>	Currant Bush	1	Tubestock		10		DRS
<i>Castanospermum austral</i>	Black Bean	1	Tubestock	5			CKINU
<i>Casaurina cuuningahamiana</i>	River She Oak	1	Tubestock	10			CKINU
<i>Christella dentata</i>	Binung Fern	3	Tubestock			25	CKBK
<i>Cordyline petiolaris</i>	Palm Lily	2	Tubestock		10		DRT
<i>Crinum pendunculatum</i>	Brisbane Lily	2	Tubestock			30	CKINU
<i>Doodia aspera</i>	Rasp Fern	3	Tubestock			25	CKBK
<i>Diospyros geminate</i>	Queensland Ebony	1	Tubestock		15		DPS
<i>Elaeocarpus grandis</i>	Blue Quandong	1	Tubestock	10			DRT
<i>Elaeocarpus obovatus</i>	Hard Quandong	1	Tubestock	10			DRT
<i>Elatostachys xylocarpa</i>	White Tamarind	1	Tubestock	10			DRT
<i>Eustrephus latifolius</i>	Wombat Berry	1	Tubestock			25	V
<i>Geitonoplesium cymosum</i>	Scrambling Lily	1	Tubestock			15	V
<i>Hardenbergia violacea</i>	Hardenbergia	1	Tubestock			25	V
<i>Hibiscus beterophyllus</i>	Native Hibiscus	1	Tubestock		15		DRS
<i>Hymenospermum flavum</i>	Native Frangipani	1	Tubestock	5			DRS
<i>Jagera pseudorhus</i>	Foam bark	1	Tubestock	10			CKBK

<i>Juncus usitatus</i>	Common Rush	3	Tubestock			60	CKINU
<i>Kennedia rubicunda</i>	Runing Postman	1	Tubestock			25	V
<i>Leptospermum polygalifolium</i>	Wild May	1	Tubestock		10		DPS
<i>Lomandra longifolia</i>	Matrush	2	Tubestock			60	CKINU
<i>Lomandra hystrix</i>	Green Matrush	2	Tubestock			60	CKINU
<i>Lophostemon confertus</i>	Brush Box	1	Tubestock	5			DPS
<i>Myallotus claoxloides</i>	Smell of the Bush	1	Tubestock		25		CKBK
<i>Pipturus argenteus</i>	Native Mulberry	1	Tubestock		20		DRS
<i>Pittosporum revolutum</i>	Brisbane Laurel	1	Tubestock	5			DRT
TOTAL				85	160	375	

* Density provided in metre centres

** **Growing regions:** CKINU – Creekbank inundation, CKBK – Creekbank no inundation, DRS – Dry Rainforest Shrubs, DRT – Dry Rainforest Trees, V- Vines, DPS – Dryer, higher areas with poor Soil.

PROTECTION OF PLANTING

It is recommended that individual tree guards protect newly planted stock from scrub turkeys and other fauna, however, as there is an existing fence along most of the northern bank, this is sufficient to delineate a 'no go' zone to protect plants from children or pedestrian access.

3. MAINTENANCE, MONITORING AND PERFORMANCE

INDICATORS

3.1 TIMEFRAMES

The initiation of work will begin as soon as funding becomes available. Once the initial tree removal, site clearing and weed sweeps have been undertaken, planting will be undertaken in partnership with the students and teachers of Hilder Road State School, parents and bushcare volunteers and will be completed as part of (and in association with) Planet Ark's National Tree Planting Day on the 14th March 2013.

3.2 MAINTENANCE/MANAGEMENT

All areas are to be maintained periodically, at least every 12 weeks with scheduled maintenance to include:

- Weed control and 'weed sweeps';
- Watered on an as needs basis. It is anticipated that following planting approximately 2 waterings will be required before the end of the establishment period (depending on rainfall);
- Replace dead or dying plant species with equivalent species and vigour; and
- Repair fencing as necessary.

HRSS P&C has committed \$2,000 funding annually to maintain the site, and have also committing to storing maintenance equipment on school grounds.

TREE MANAGEMENT

Trees are to be retained and protected unless tagged and nominated for removal, as per advice from BCC (May 2013)

BUSHFIRE HAZARD MANAGEMENT

The environmental corridor is to be managed by the removal and/or control of nonendemic grass and weed growth, and management of low ground fuel levels to minimise the risk of damage from a localised bushfire event.

3.3 PERFORMANCE INDICATORS

Maintenance and monitoring of the areas is to continue for a minimum of 24 months. During this time the indicators outlined in Table ** must be monitored.

TABLE 8 – PERFORMANCE INDICATORS, MONITORING AND REPORTING REQUIREMENTS.

Criteria	Monitoring	Performance Indicators	Corrective Action and Reporting
Survival of planting	Every 6 weeks during establishment, or after a significant storm or rainfall event	95% planting at the end of the maintenance period.	Replace dead or dying plants
Weed occurrence	Every 12 weeks during establishment	No Class 1 or 2 species present. No weed inhibiting the growth of vegetation. 95% of the site shall be weed free, and no significant infestations of any weeds shall be present.	Remove weeds as soon as possible to avoid reinfestation
Fencing (during establishment)	During routine plant surveys	No breaches	Repair fence to reduce access into site during plant establishment



APPENDIX A

Wildnet Search & Vegetation Mapping



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point

Species: All

Type: All

Status: All

Records: All

Date: All

Latitude: 27.4372

Longitude: 152.9367

Distance: 1

Email: tmetcher@chenoweth.com.au

Date submitted: Sunday 26 May 2013 09:45:45

Date extracted: Sunday 26 May 2013 09:50:03

The number of records retrieved = 155

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Accipitridae	<i>Aviceda subcristata</i>	Pacific baza		C		1
animals	birds	Accipitridae	<i>Accipiter novaehollandiae</i>	grey goshawk		NT		1
animals	birds	Anatidae	<i>Biziura lobata</i>	musk duck		C		1
animals	birds	Anatidae	<i>Aythya australis</i>	hardhead		C		1
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		2
animals	birds	Anhingidae	<i>Anhinga novaehollandiae</i>	Australasian darter		C		2
animals	birds	Ardeidae	<i>Ardea modesta</i>	eastern great egret		C		1
animals	birds	Ardeidae	<i>Egretta novaehollandiae</i>	white-faced heron		C		1
animals	birds	Artamidae	<i>Cracticus tibicen</i>	Australian magpie		C		4
animals	birds	Artamidae	<i>Strepera graculina</i>	pieb currawong		C		1
animals	birds	Artamidae	<i>Cracticus torquatus</i>	grey butcherbird		C		4
animals	birds	Burhinidae	<i>Burhinus grallarius</i>	bush stone-curlew		C		2
animals	birds	Cacatuidae	<i>Cacatua galerita</i>	sulphur-crested cockatoo		C		1
animals	birds	Campephagidae	<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike		C		1
animals	birds	Campephagidae	<i>Lalage leucomela</i>	varied triller		C		1
animals	birds	Campephagidae	<i>Coracina tenuirostris</i>	cicadabird		C		1
animals	birds	Charadriidae	<i>Elseya melanops</i>	black-fronted dotterel		C		1
animals	birds	Climacteridae	<i>Cormobates leucophaea metastasis</i>	white-throated treecreeper (southern)		C		1
animals	birds	Columbidae	<i>Geopelia striata</i>	peaceful dove		C		1
animals	birds	Columbidae	<i>Geopelia humeralis</i>	bar-shouldered dove		C		3
animals	birds	Columbidae	<i>Macropygia amboinensis</i>	brown cuckoo-dove		C		1
animals	birds	Columbidae	<i>Streptopelia chinensis</i>	spotted dove	Y			1
animals	birds	Columbidae	<i>Leucosarcia picata</i>	wonga pigeon		C		1
animals	birds	Columbidae	<i>Chalcophaps indica</i>	emerald dove		C		1
animals	birds	Coraciidae	<i>Eurystomus orientalis</i>	dollarbird		C		1
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		1
animals	birds	Cuculidae	<i>Cacomantis variolosus</i>	brush cuckoo		C		1
animals	birds	Cuculidae	<i>Scythrops novaehollandiae</i>	channel-billed cuckoo		C		1
animals	birds	Cuculidae	<i>Cuculus optatus</i>	oriental cuckoo		C		1
animals	birds	Cuculidae	<i>Eudynamys orientalis</i>	eastern koel		C		2
animals	birds	Dicruridae	<i>Dicrurus bracteatus</i>	spangled drongo		C		1
animals	birds	Halcyonidae	<i>Dacelo novaeguineae</i>	laughing kookaburra		C		3
animals	birds	Halcyonidae	<i>Todiramphus sanctus</i>	sacred kingfisher		C		1
animals	birds	Halcyonidae	<i>Todiramphus macleayii</i>	forest kingfisher		C		1
animals	birds	Hirundinidae	<i>Hirundo neoxena</i>	welcome swallow		C		1
animals	birds	Jacanidae	<i>Irediparra gallinacea</i>	comb-crested jacana		C		2
animals	birds	Maluridae	<i>Malurus lamberti</i>	variegated fairy-wren		C		1
animals	birds	Maluridae	<i>Malurus melanocephalus</i>	red-backed fairy-wren		C		2
animals	birds	Megapodiidae	<i>Alectura lathami</i>	Australian brush-turkey		C		3
animals	birds	Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater		C		3
animals	birds	Meliphagidae	<i>Myzomela sanguinolenta</i>	scarlet honeyeater		C		1
animals	birds	Meliphagidae	<i>Caligavis chrysops</i>	yellow-faced honeyeater		C		3
animals	birds	Meliphagidae	<i>Manorina melanocephala</i>	noisy miner		C		3
animals	birds	Meliphagidae	<i>Myzomela erythrocephala</i>	red-headed honeyeater		C		1
animals	birds	Meropidae	<i>Merops ornatus</i>	rainbow bee-eater		C		1
animals	birds	Monarchidae	<i>Myiagra rubecula</i>	leaden flycatcher		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		1
animals	birds	Oriolidae	<i>Sphecotheres vieilloti</i>	Australasian figbird		C		1
animals	birds	Oriolidae	<i>Oriolus sagittatus</i>	olive-backed oriole		C		1
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		2
animals	birds	Pachycephalidae	<i>Pachycephala pectoralis</i>	golden whistler		C		1
animals	birds	Pachycephalidae	<i>Colluricincla harmonica</i>	grey shrike-thrush		C		2
animals	birds	Pachycephalidae	<i>Colluricincla megarhyncha</i>	little shrike-thrush		C		1
animals	birds	Pardalotidae	<i>Pardalotus striatus</i>	striated pardalote		C		2
animals	birds	Petroicidae	<i>Eopsaltria australis</i>	eastern yellow robin		C		2
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		1
animals	birds	Phalacrocoracidae	<i>Phalacrocorax sulcirostris</i>	little black cormorant		C		1
animals	birds	Pittidae	<i>Pitta versicolor</i>	noisy pitta		C		1
animals	birds	Podargidae	<i>Podargus strigoides</i>	tawny frogmouth		C		1
animals	birds	Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian grebe		C		2
animals	birds	Psittacidae	<i>Neophema pulchella</i>	turquoise parrot		NT		2
animals	birds	Psittacidae	<i>Trichoglossus haematodus moluccanus</i>	rainbow lorikeet		C		3
animals	birds	Psittacidae	<i>Platycercus elegans</i>	crimson rosella		C		1
animals	birds	Psittacidae	<i>Alisterus scapularis</i>	Australian king-parrot		C		2
animals	birds	Psittacidae	<i>Platycercus adscitus</i>	pale-headed rosella		C		1
animals	birds	Psittacidae	<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet		C		2
animals	birds	Psophodidae	<i>Cinclosoma punctatum</i>	spotted quail-thrush		C		2
animals	birds	Psophodidae	<i>Psophodes olivaceus</i>	eastern whipbird		C		3
animals	birds	Rallidae	<i>Gallinula tenebrosa</i>	dusky moorhen		C		2
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail		C		2
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys</i>	willie wagtail		C		1
animals	birds	Timaliidae	<i>Zosterops lateralis</i>	silveryeye		C		1
animals	birds	Tytonidae	<i>Tyto novaehollandiae novaehollandiae</i>	masked owl (southern subspecies)		C		1
animals	bony fish	Ambassidae	<i>Ambassis agassizii</i>	Agassiz's glassfish				2
animals	bony fish	Anguillidae	<i>Anguilla australis</i>	southern shortfin eel				1
animals	bony fish	Anguillidae	<i>Anguilla reinhardtii</i>	longfin eel				1
animals	bony fish	Atherinidae	<i>Craterocephalus stercusmuscarum</i>	flyspecked hardyhead				2
animals	bony fish	Eleotridae	<i>Hypseleotris galii</i>	firetail gudgeon				2
animals	bony fish	Melanotaeniidae	<i>Melanotaenia fluviatilis</i>	Murray River rainbowfish				1
animals	bony fish	Poeciliidae	<i>Xiphophorus helleri</i>	swordtail	Y			2
animals	bony fish	Poeciliidae	<i>Gambusia holbrooki</i>	mosquitofish	Y			3
animals	bony fish	Retropinnidae	<i>Retropinna semoni</i>	Australian smelt				1
animals	mammals	Dasyuridae	<i>Phascogale tapoatafa</i>	brush-tailed phascogale		C		1/1
animals	mammals	Molossidae	<i>Tadarida australis</i>	white-striped freetail bat		C		1
animals	mammals	Ornithorhynchidae	<i>Ornithorhynchus anatinus</i>	platypus		C		1
animals	mammals	Peramelidae	<i>Isoodon macrourus</i>	northern brown bandicoot		C		1
animals	mammals	Phalangeridae	<i>Trichosurus vulpecula</i>	common brushtail possum		C		1/1
animals	mammals	Pseudocheiridae	<i>Pseudocheirus peregrinus</i>	common ringtail possum		C		1/1
animals	mammals	Pteropodidae	<i>Pteropus alecto</i>	black flying-fox		C		4
animals	mammals	Pteropodidae	<i>Pteropus poliocephalus</i>	grey-headed flying-fox		C	V	9
animals	mammals	Vespertilionidae	<i>Miniopterus schreibersii oceanensis</i>	eastern bent-wing bat		C		1
animals	reptiles	Boidae	<i>Antaresia maculosa</i>	spotted python		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Boidae	<i>Morelia spilota</i>	carpet python		C		6
animals	reptiles	Colubridae	<i>Dendrelaphis punctulata</i>	common tree snake		C		3
animals	reptiles	Elapidae	<i>Acanthophis antarcticus</i>	common death adder		NT		1
animals	reptiles	Pygopodidae	<i>Lialis burtonis</i>	Burton's legless lizard		C		1
animals	reptiles	Scincidae	<i>Eroticoscincus graciloides</i>			NT		1
animals	reptiles	Scincidae	<i>Cyclodomorphus gerrardii</i>	pink-tongued lizard		C		1
fungi	club fungi	Basidiomycota	<i>Marasmius</i>			C		1/1
fungi	sac fungi	Candelariaceae	<i>Candelaria concolor</i>			C		2/2
fungi	sac fungi	Graphidaceae	<i>Graphis aperiens</i>			C		1/1
fungi	sac fungi	Lecanoraceae	<i>Lecanora arthothelinella</i>			C		1/1
fungi	sac fungi	Lecanoraceae	<i>Lecanora interjecta</i>			C		1/1
fungi	sac fungi	Lecanoraceae	<i>Lecanora helva</i>			C		1/1
fungi	sac fungi	Lecideaceae	<i>Lecidea russula</i>			C		1/1
fungi	sac fungi	Parmeliaceae	<i>Canoparmelia norsticticata</i>			C		1/1
fungi	sac fungi	Parmeliaceae	<i>Flavoparmelia rutidota</i>			C		1/1
fungi	sac fungi	Parmeliaceae	<i>Parmotrema tinctorum</i>			C		4/4
fungi	sac fungi	Parmeliaceae	<i>Parmotrema crinitum</i>			C		1/1
fungi	sac fungi	Parmeliaceae	<i>Canoparmelia texana</i>			C		2/2
fungi	sac fungi	Parmeliaceae	<i>Canoparmelia aptata</i>			C		1/1
fungi	sac fungi	Parmeliaceae	<i>Punctelia borreri</i>			C		1/1
fungi	sac fungi	Pertusariaceae	<i>Ochrolechia subpallescens</i>			C		1/1
fungi	sac fungi	Pertusariaceae	<i>Pertusaria leioplacella</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Pyxine subcinerea</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Dirinaria applanata</i>			C		2/2
fungi	sac fungi	Physciaceae	<i>Heterodermia speciosa</i>			C		2/2
fungi	sac fungi	Physciaceae	<i>Hyperphyscia pandani</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Dirinaria confluens</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Buellia dissa</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Dirinaria</i>			C		1/1
fungi	sac fungi	Usneaceae	<i>Usnea</i>			C		1/1
plants	ferns	Nephrolepidaceae	<i>Nephrolepis hirsutula</i>			C		1/1
plants	higher dicots	Asteraceae	<i>Bidens pilosa</i>		Y			1/1
plants	higher dicots	Asteraceae	<i>Carpesium cernuum</i>		Y			1/1
plants	higher dicots	Cactaceae	<i>Opuntia stricta</i>		Y			1/1
plants	higher dicots	Casuarinaceae	<i>Casuarina cunninghamiana</i> subsp. <i>cunninghamiana</i>			C		1/1
plants	higher dicots	Euphorbiaceae	<i>Manihot grahamii</i>		Y			1/1
plants	higher dicots	Lamiaceae	<i>Plectranthus verticillatus</i>		Y			1/1
plants	higher dicots	Malvaceae	<i>Abutilon pictum</i>		Y			1/1
plants	higher dicots	Mimosaceae	<i>Calliandra haematocephala</i>		Y			1/1
plants	higher dicots	Moraceae	<i>Ficus rubiginosa</i> forma <i>glabrescens</i>			C		1/1
plants	higher dicots	Moraceae	<i>Ficus obliqua</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Rhodomyrtus psidioides</i>	native guava		C		1/1
plants	higher dicots	Myrtaceae	<i>Waterhousea floribunda</i>	weeping lilly pilly		C		1/1
plants	higher dicots	Rubiaceae	<i>Pavetta australiensis</i> var. <i>australiensis</i>			C		1/1
plants	higher dicots	Rutaceae	<i>Zanthoxylum brachyacanthum</i>			C		2/2
plants	higher dicots	Rutaceae	<i>Murraya paniculata</i> cv. <i>Exotica</i>		Y			1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Solanaceae	<i>Brugmansia x candida</i>	Angel's trumper	Y			1/1
plants	higher dicots	Urticaceae	<i>Parietaria judaica</i>		Y			1/1
plants	higher dicots	Vitaceae	<i>Cissus hypoglauca</i>			C		1/1
plants	monocots	Araceae	<i>Syngonium podophyllum</i>		Y			1/1
plants	monocots	Araceae	<i>Syngonium</i>			C		2/2
plants	monocots	Araceae	<i>Monstera deliciosa</i>		Y			1/1
plants	monocots	Commelinaceae	<i>Dichorisandra thyrsiflora</i>		Y			1/1
plants	monocots	Convallariaceae	<i>Aspidistra elatior</i>		Y			1/1
plants	monocots	Cyperaceae	<i>Fimbristylis dichotoma</i>	common fringe-rush		C		1/1
plants	monocots	Hypoxidaceae	<i>Molineria capitulata</i>			C		1/1
plants	monocots	Poaceae	<i>Urochloa decumbens</i>		Y			1/1
plants	monocots	Poaceae	<i>Phyllostachys nigra</i>		Y			1/1
plants	monocots	Poaceae	<i>Cenchrus purpureus</i>		Y			1/1
plants	mosses	Ditrichaceae	<i>Eccremidium brisbanicum</i>				C	1/1
plants	mosses	Ephemeraceae	<i>Ephemerum fimbriatum</i>				C	1/1
plants	mosses	Fissidentaceae	<i>Fissidens</i>				C	3/3
plants	mosses	Funariaceae	<i>Physcomitrium</i>				C	2/2

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

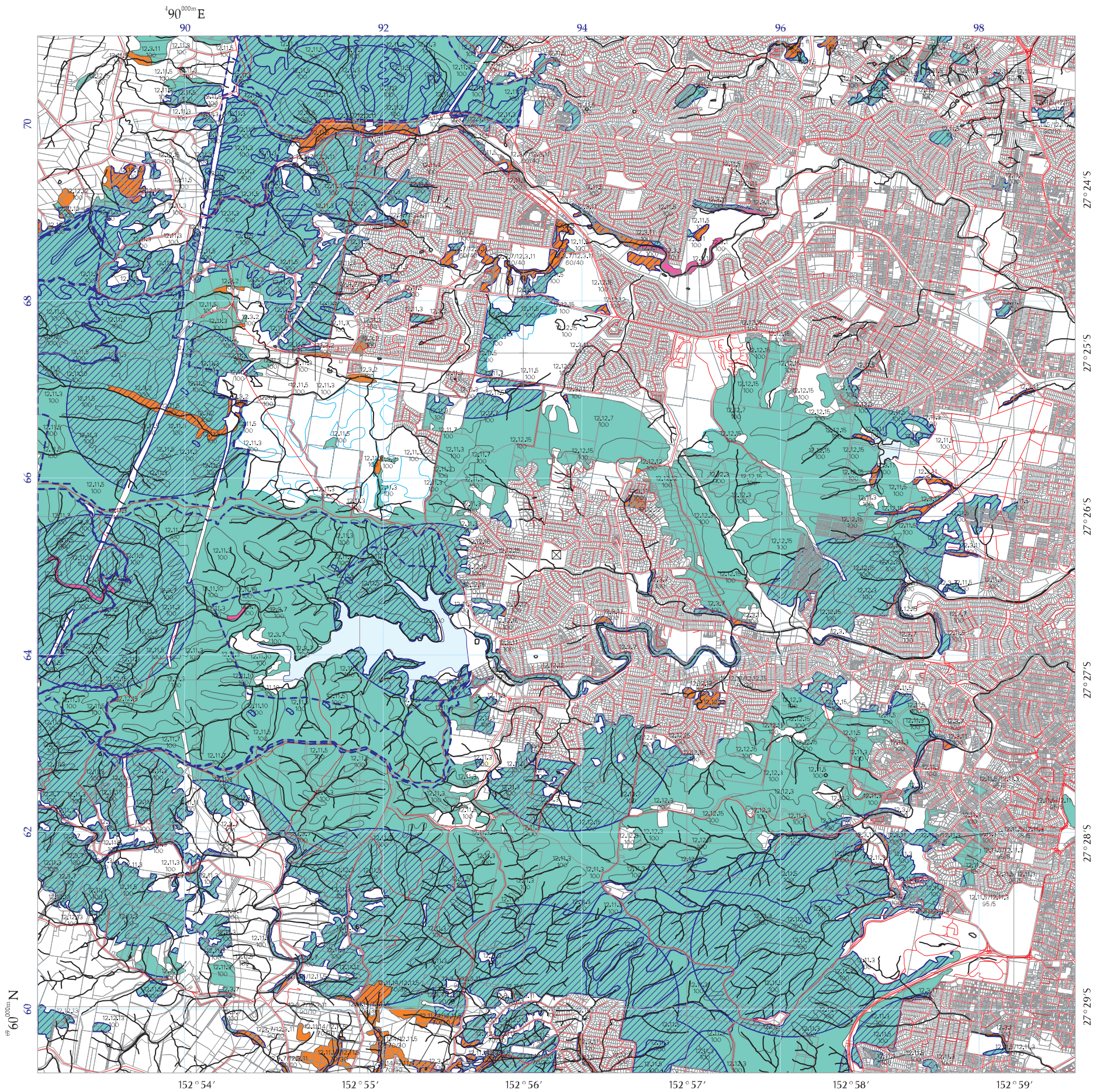
Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ().

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*. The values of EPBC are Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Extinct in the Wild (XW) and Vulnerable (V).

Records – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).

This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



Vegetation Management Act Regional Ecosystem and Remnant Map-Version 6.1

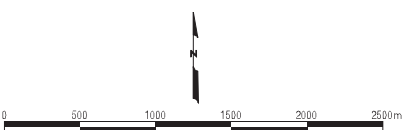
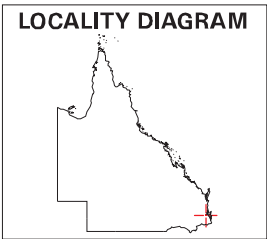
Based on 2006 Landsat TM imagery

Requested By: TMETCHER@CHENOWETH.COM.AU
Date: 28 May 13 Time: 11.33.25

Centered on Coordinate:

Latitude: -27.4372 Longitude: 152.9367 (decimal degrees)
Bioregion: Southeast Queensland

- Remnant vegetation containing endangered regional ecosystems
- Remnant vegetation containing of concern regional ecosystems
- Remnant vegetation that is a least concern regional ecosystem
- Remnant vegetation under Section 20AH of the VMA
- Non-remnant
- Plantation Forest
- Dam or Reservoir
- Remnant Vegetation
- PMAV Category X area
- Great Barrier Reef Wetlands
- Vegetation Management Act Essential Habitat
For further information on VMA Essential Habitat, please see the attached VMA Essential Habitat map.
- Subject Lot
- Watercourse (Stream order shown as black number against stream where available)
- Bioregion boundary
- Roads
- © Pitney Bowes Software 2012
- National Park, Conservation Area State Forest and other reserves
- Cadastral line
Property boundaries shown are provided as a locational aid only.
- Towns
- Coordinate entered



A remnant map covers areas not covered by a regional ecosystem map.

Defined map areas are labelled with the regional ecosystem (RE) code along with the percentage breakdown if more than one RE occurs within the area. Detailed definitions of regional ecosystems are available from www.ehp.qld.gov.au/REDD. Defined map areas smaller than 5ha may not be labelled.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/-100 metres. The extent of remnant regional ecosystems as of 2006, depicted on this map is based on rectified 2006 Landsat TM imagery (supplied by the Statewide Landcover and Trees Study (SLATS), Queensland Government).

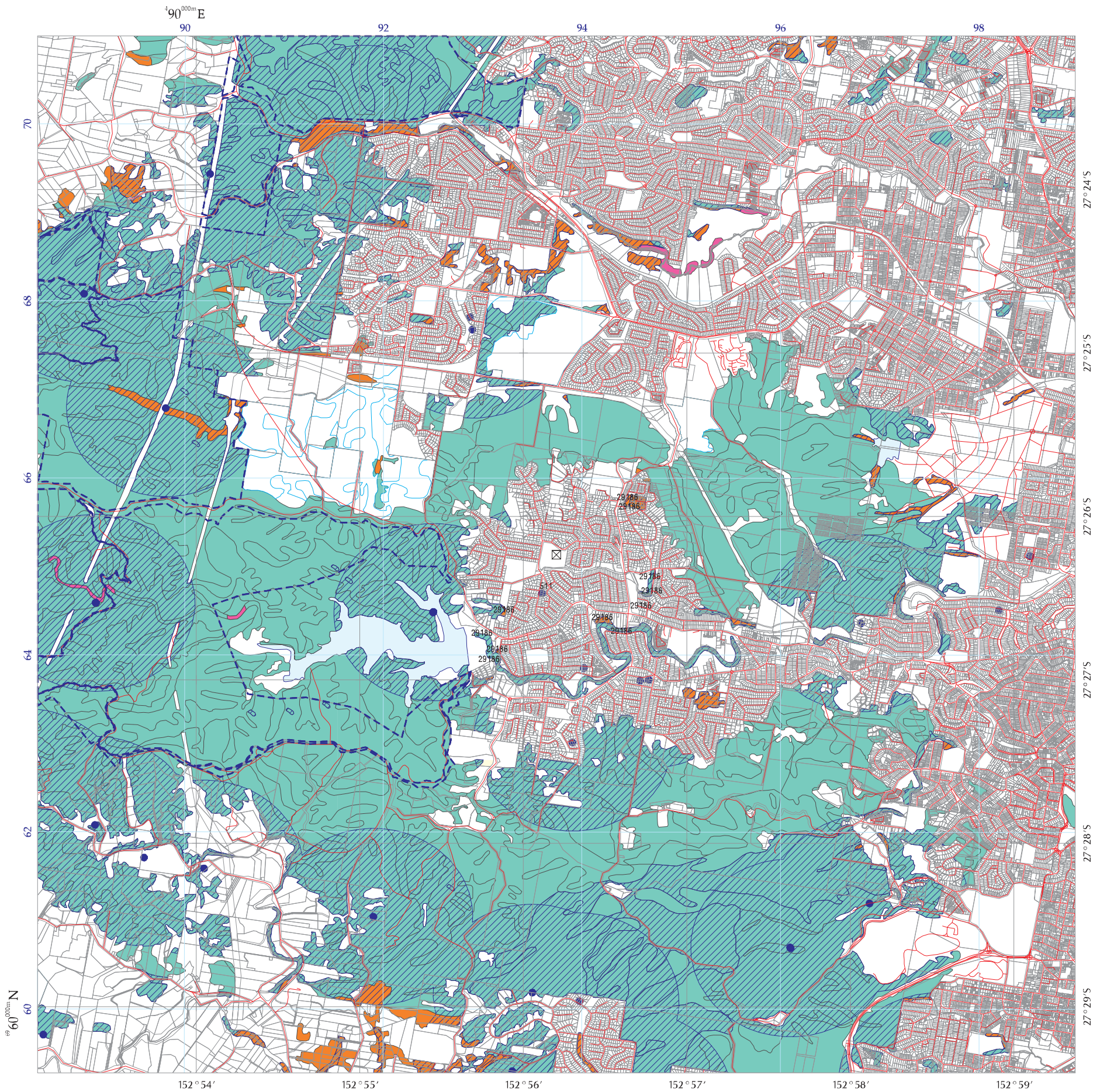
Some watercourse lines are derived from GeoScience Australia 1:250 000 mapping.

Disclaimer:
While every care is taken to ensure the accuracy of this product, the Department of Natural Resources and Mines (DNRM) and Pitney Bowes Software, makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

All datasets are updated as they become available to provide the most current information as of the date shown on this map.

Additional information is required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.dnrm.qld.gov.au or contact the Department of Natural Resources and Mines.

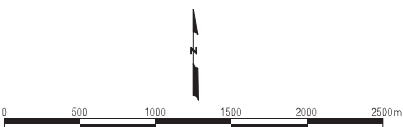
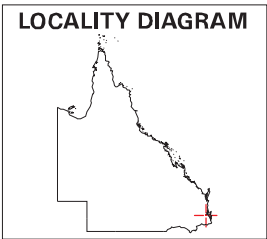
Digital regional ecosystem data is available in shapefile format, for Lot on Plans from www.ehp.qld.gov.au/REDATA or from DNRM for larger areas.



Vegetation Management Act Essential Habitat Map Version 3.1

- Remnant vegetation containing endangered regional ecosystems
- Remnant vegetation containing of concern regional ecosystems
- Remnant vegetation that is a least concern regional ecosystem
- Remnant vegetation under Section 20AH of the VMA
- Non-remnant
- Plantation Forest
- Dam or Reservoir
- Remnant Vegetation
- PMAV Category X area
- Vegetation Management Act Essential Habitat
- Vegetation Management Act Essential Habitat Species Records
- Subject Lot
- Roads
- © Pitney Bowes Software 2012
- National Park, Conservation Area State Forest and other reserves
- Cadastral line
- Property boundaries shown are provided as a locational aid only.
- Towns
- Coordinate entered

Requested By: TMETCHER@CHENOWETH.COM.AU
Date: 28 May 13 Time: 11.33.33
Centered on Coordinate:
Latitude: -27.4372 Longitude: 152.9367 (decimal degrees)



Labels for the Vegetation Management Act Essential Habitat are centred on the subject lot (1.1km surrounding and including a Lot on Plan). Labels correlate to the label field in the attached essential habitat database.

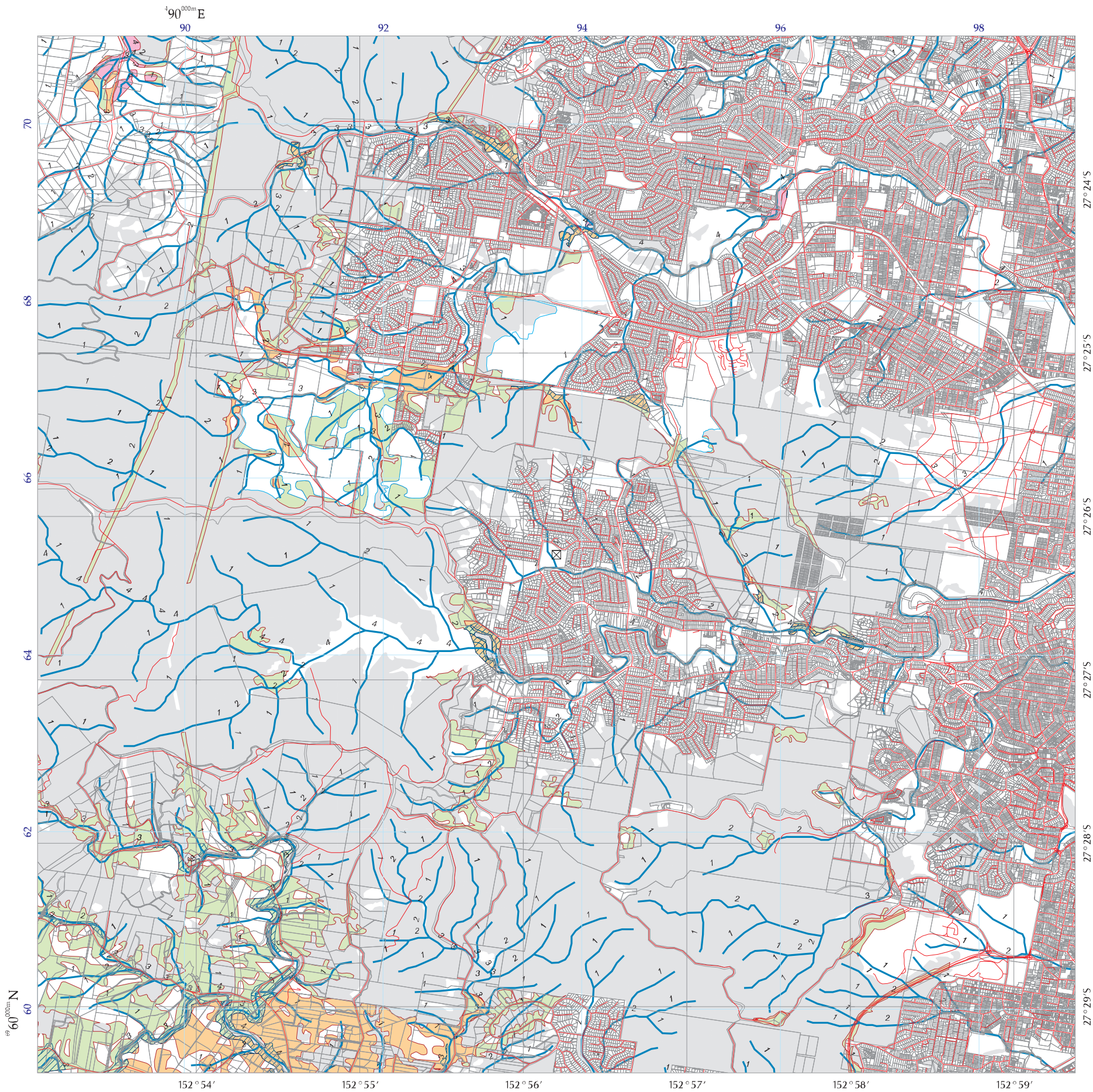
Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/-100 metres. The extent of remnant regional ecosystems as of 2006, depicted on this map is based on rectified 2006 Landsat TM imagery (supplied by SLATS, Queensland Government).

Disclaimer:
While every care is taken to ensure the accuracy of this product, the Department of Natural Resources and Mines (DNRM) and Pitney Bowes Software, makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.
















All datasets are updated as they become available to provide the most current information as of the date shown on this map.

Additional information is required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.dnrm.qld.gov.au or contact the Department of Natural Resources and Mines.

Digital regional ecosystem data is available in shapefile format, for Lot on Plans from www.ehp.qld.gov.au/REDATA or from DNRM for larger areas.



REGROWTH VEGETATION MAP - Version 2.1

-  Vegetation Management Act Essential Regrowth Habitat with example label number
-  Great Barrier Reef Wetland Protection Area
-  High value regrowth vegetation containing Endangered regional ecosystems
-  High value regrowth vegetation containing Of Concern regional ecosystems
-  High value regrowth vegetation that is a Least Concern regional ecosystem
-  Remnant Vegetation (Refer to the Vegetation Management Act Regional Ecosystem and Remnant Map also available from the Department of Environment and Resource Management website for further information on these areas)
-  Non-remnant
-  PMAV Category X area
-  Regrowth watercourse (Stream order shown as black number against stream)
-  Other watercourse (Stream order shown as black number against stream where available)
-  Subject Lot
-  Roads
-  Cadastral line
-  Towns
-  Coordinate entered

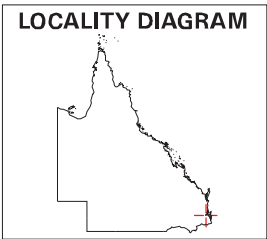
Requested By: TMETCHER@CHENOWETH.COM.AU
Date: 28 May 13 Time: 11.33.34
Centered on Coordinate:
Latitude: -27.4372 Longitude: 152.9367 (decimal degrees)

Labels for Vegetation Management Act Essential Regrowth Habitat are centred on the subject lot. Labels correlate to the label field in the attached essential regrowth habitat database.

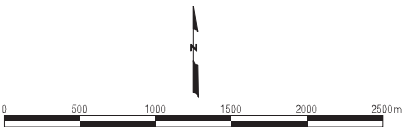
The high value regrowth, regrowth watercourse, other watercourse, Great Barrier Reef wetland protection area and essential regrowth habitat data shown on this map are representations of the preliminary data.

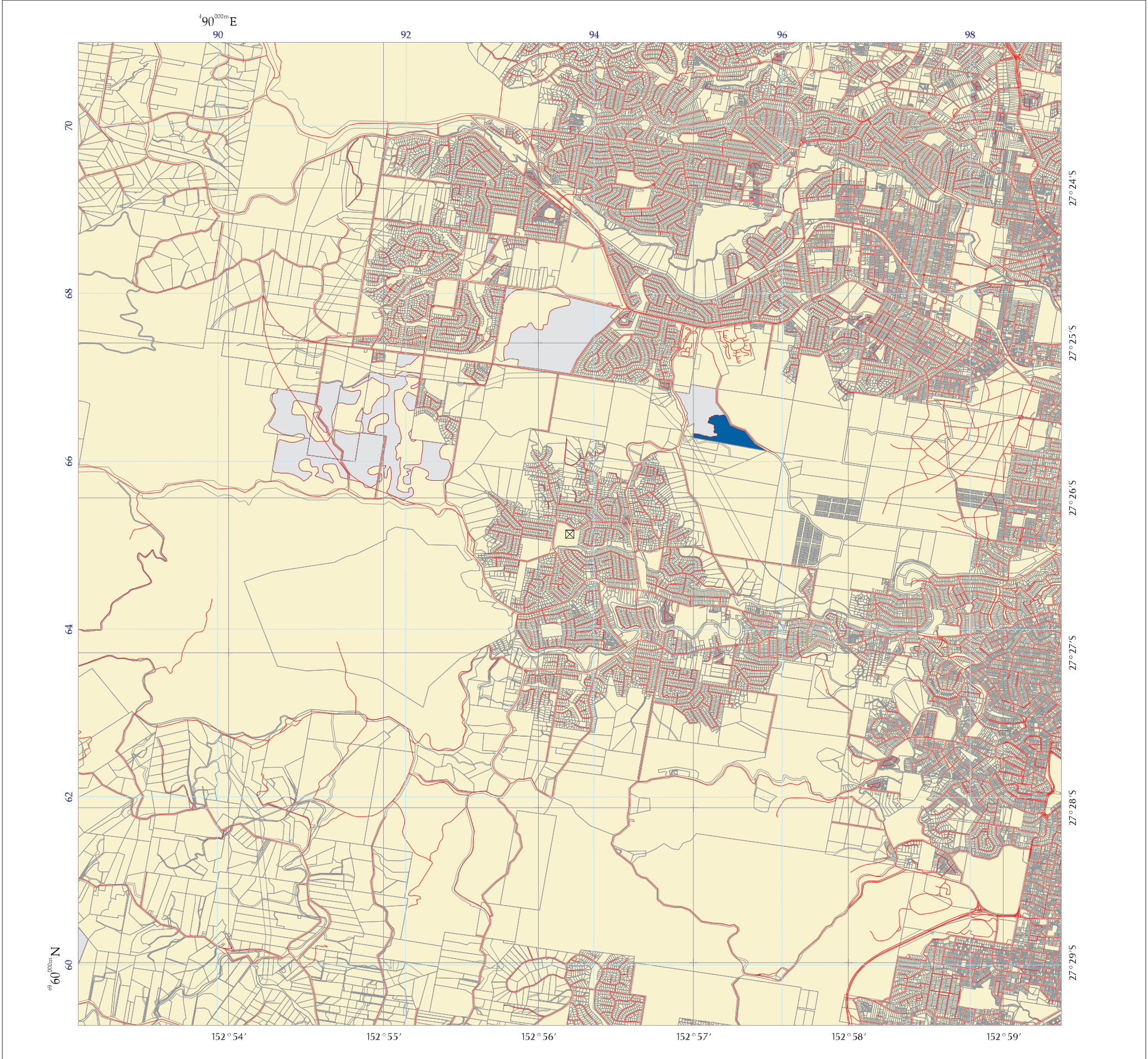
Some watercourse lines are derived from GeoScience Australia 1:250 000 mapping.

For further information go to the website:
<http://www.dnrm.qld.gov.au> or contact Vegetation Management, Department of Natural Resources and Mines.



Areas covered by a Property Map of Assessable Vegetation (PMAV) are represented on the map attached as Page 2 to this Regrowth Vegetation Map and provided with it.





Property Maps of Assessable Vegetation (PMAVs)

Requested By: TMETCHER@CHENOWETH.COM.AU
Date: 28 May 13 Time: 11.33.38
Centered on Coordinate:
Latitude: -27.4372 Longitude: 152.9367 (decimal degrees)

The PMAV data shown on this map are a representation of the data used to create certified PMAVs. Variations may occur between PMAV boundaries and cadastral boundaries. PMAV data incorporates cadastral boundary data as at the time of certification of the PMAV. The cadastral boundaries shown on this map may have shifted relative to the PMAV boundaries as more accurate cadastral boundary data have become available.

All datasets are updated as they become available to provide the most current information as of the date shown on this map.

For further information go to the website:
<http://www.dnrm.qld.gov.au> or contact Vegetation Management,
Department of Natural resources and Mines

Property Map of Assessable Vegetation

- Vegetation Category Area**
- Category A area
 - Category B area
 - Category C area
 - Category X area
 - Area that is subject to other PMAVs or, if no PMAV exists, a regional ecosystem map, remnant map or regrowth vegetation map
 - Subject Lot
 - Roads
 - © Pitney Bowes Software 2012
 - Cadastral line
 - Property boundaries shown are provided as a locational aid only.
 - Towns
 - Coordinate entered

