

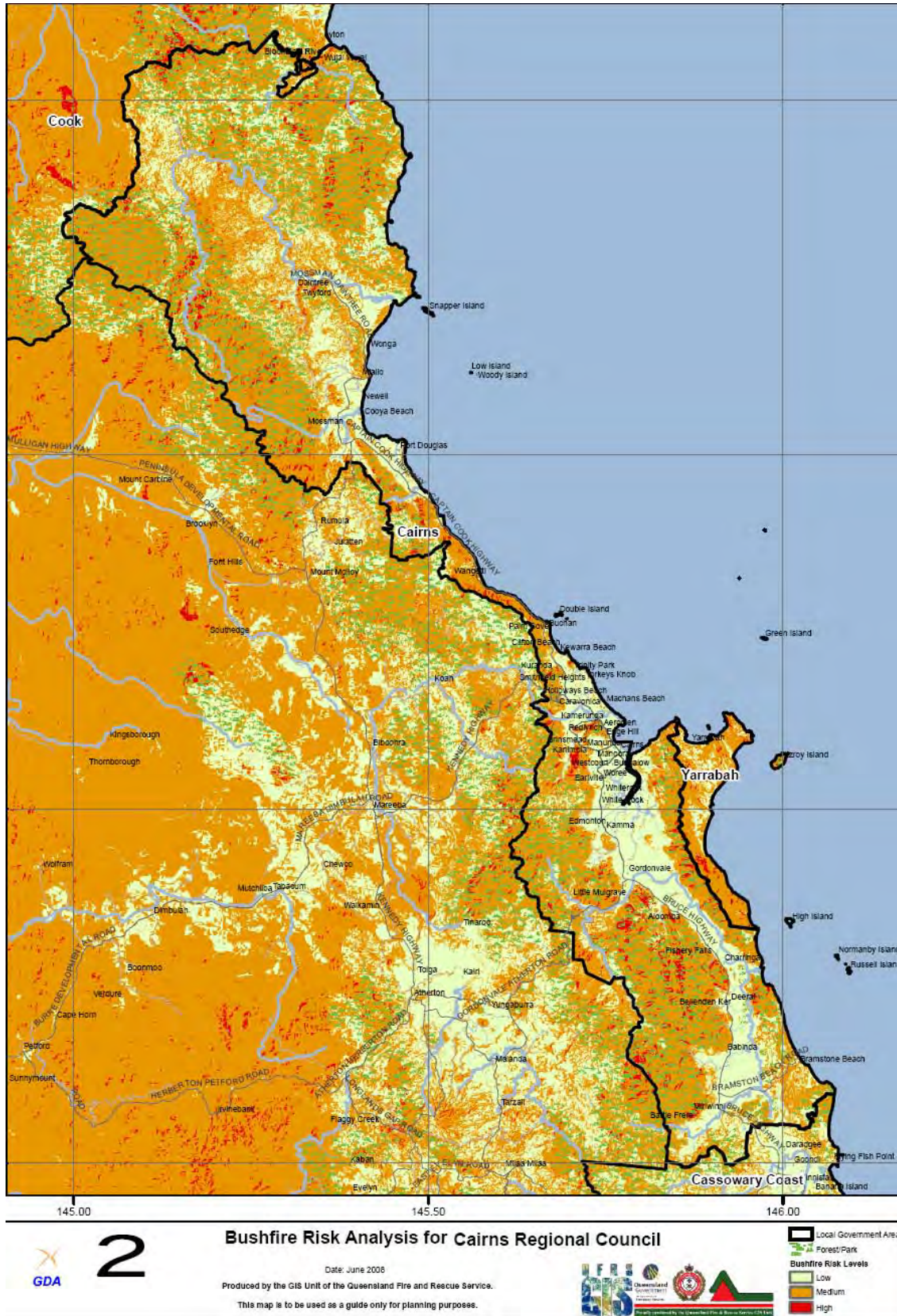
APPENDIX A

SUPPORTING INFORMATION



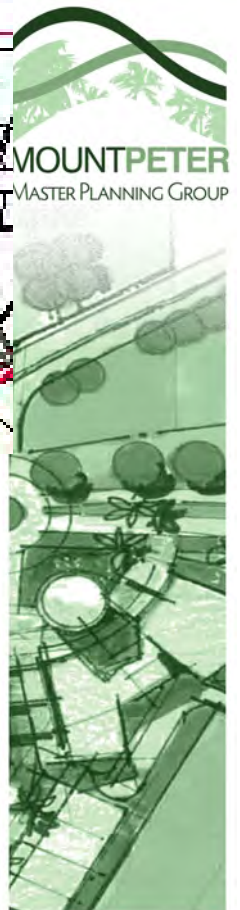
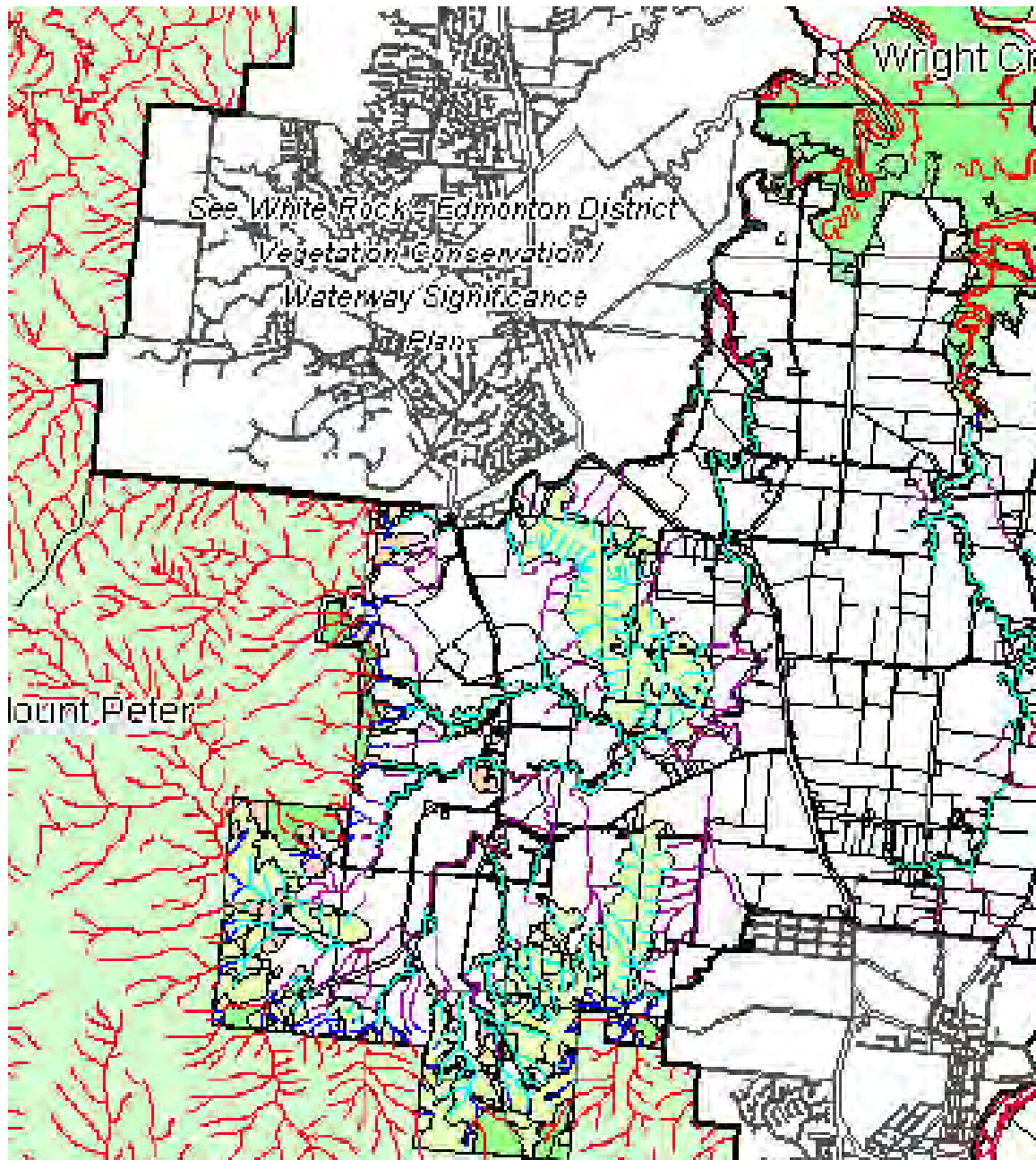
A2

Bushfire Risk Analysis for Cairns Regional Council produced by the Queensland Fire and Rescue Service (QFRS)



A4

Extract of Cairns Plan 2005's *Rural Lands District Plan – Vegetation Conservation/ Waterway Significance Map*



LEGEND

World Heritage Area

Wet Tropics

Vegetation Conservation Value

Key Conservation Value

Moderate Values

Low Values

Very Low Values

Waterway Significance

Category 1

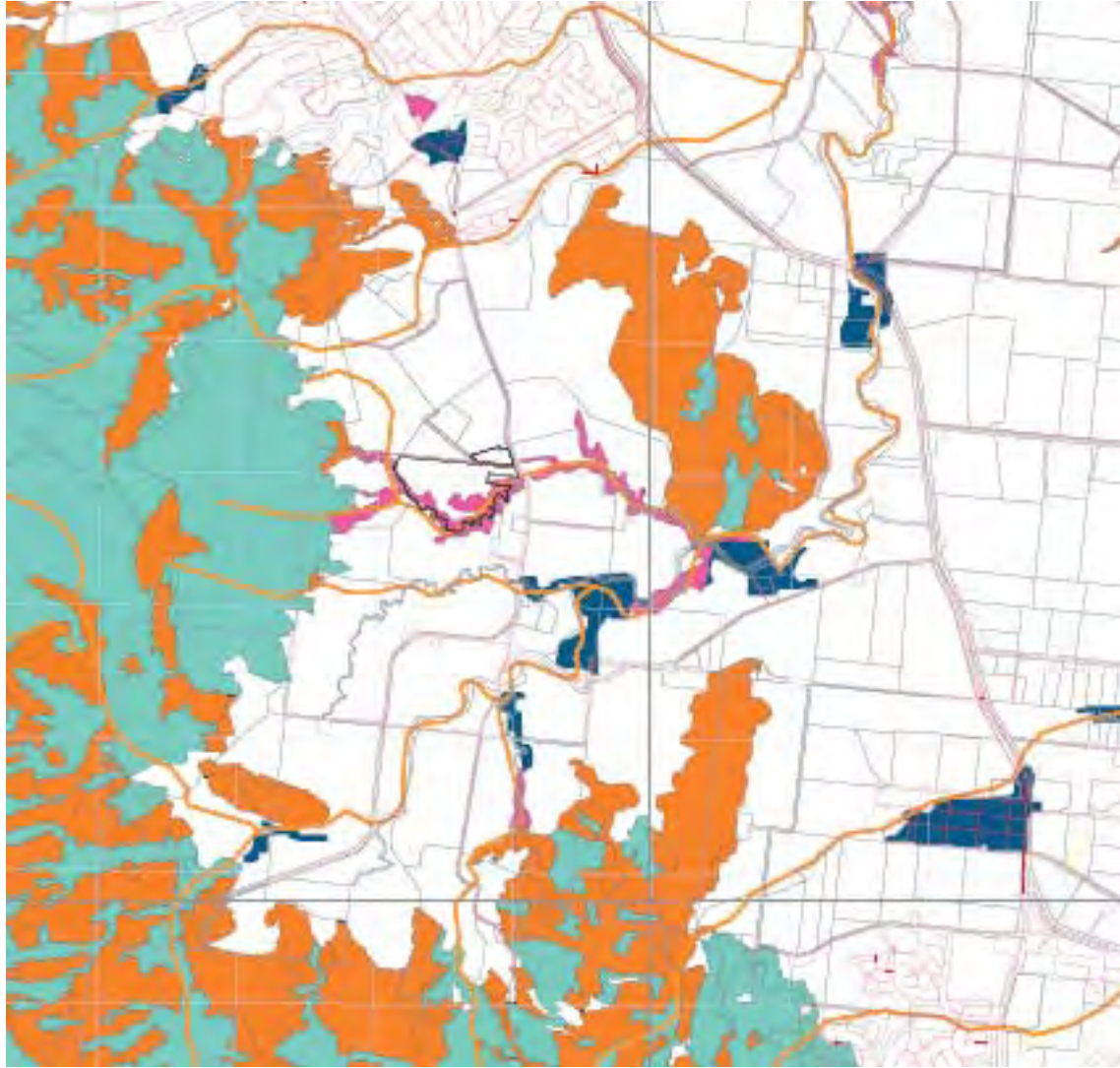
Category 2



Category 3

Category 4

A5

Extract of Moratorium Map for the MPMPA pursuant to the *Vegetation Management (Regrowth Clearing Moratorium) Act 2009*.

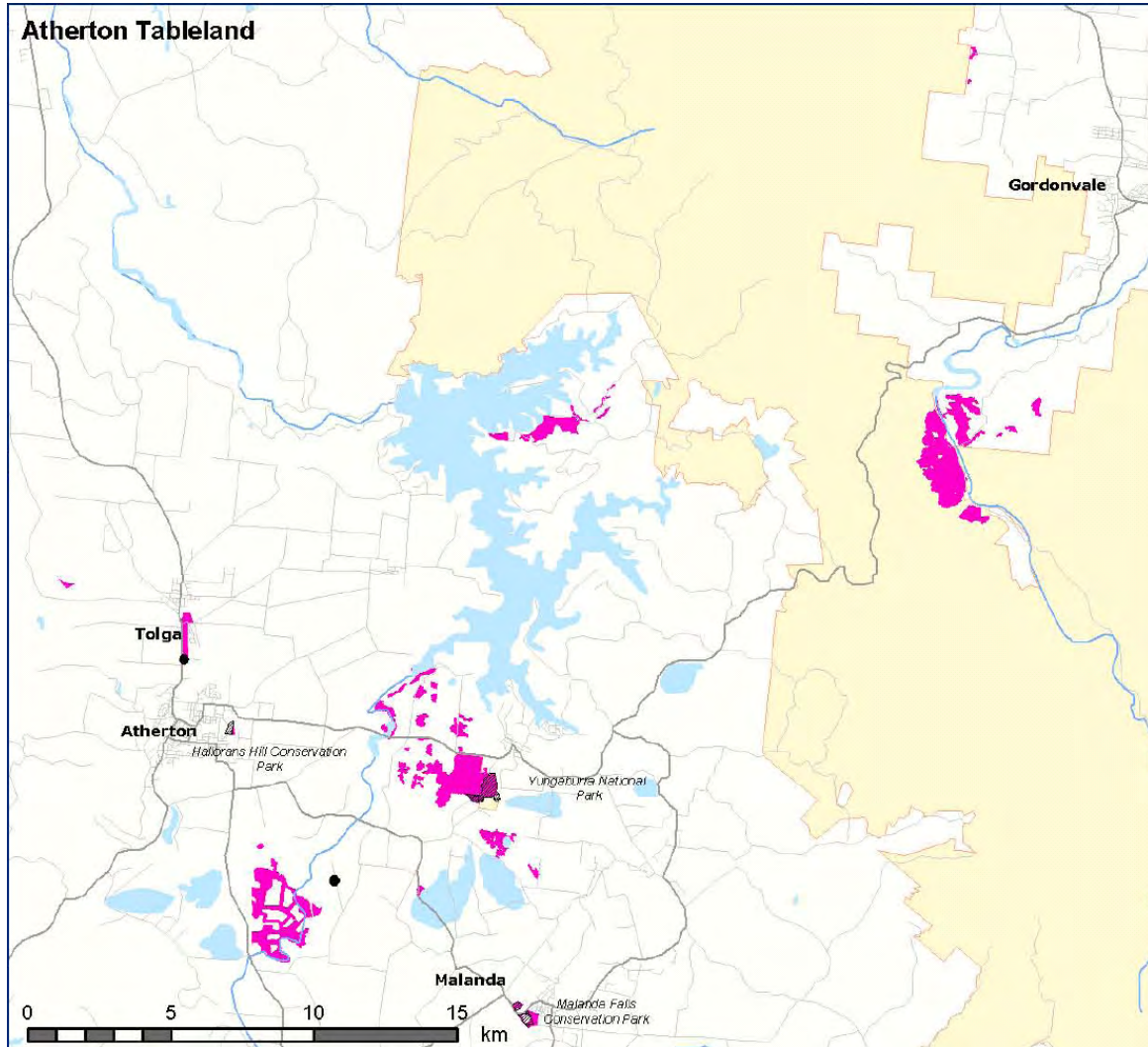


-  Moratorium regrowth vegetation area
-  Moratorium watercourse (vegetation within 50 metres of watercourses)



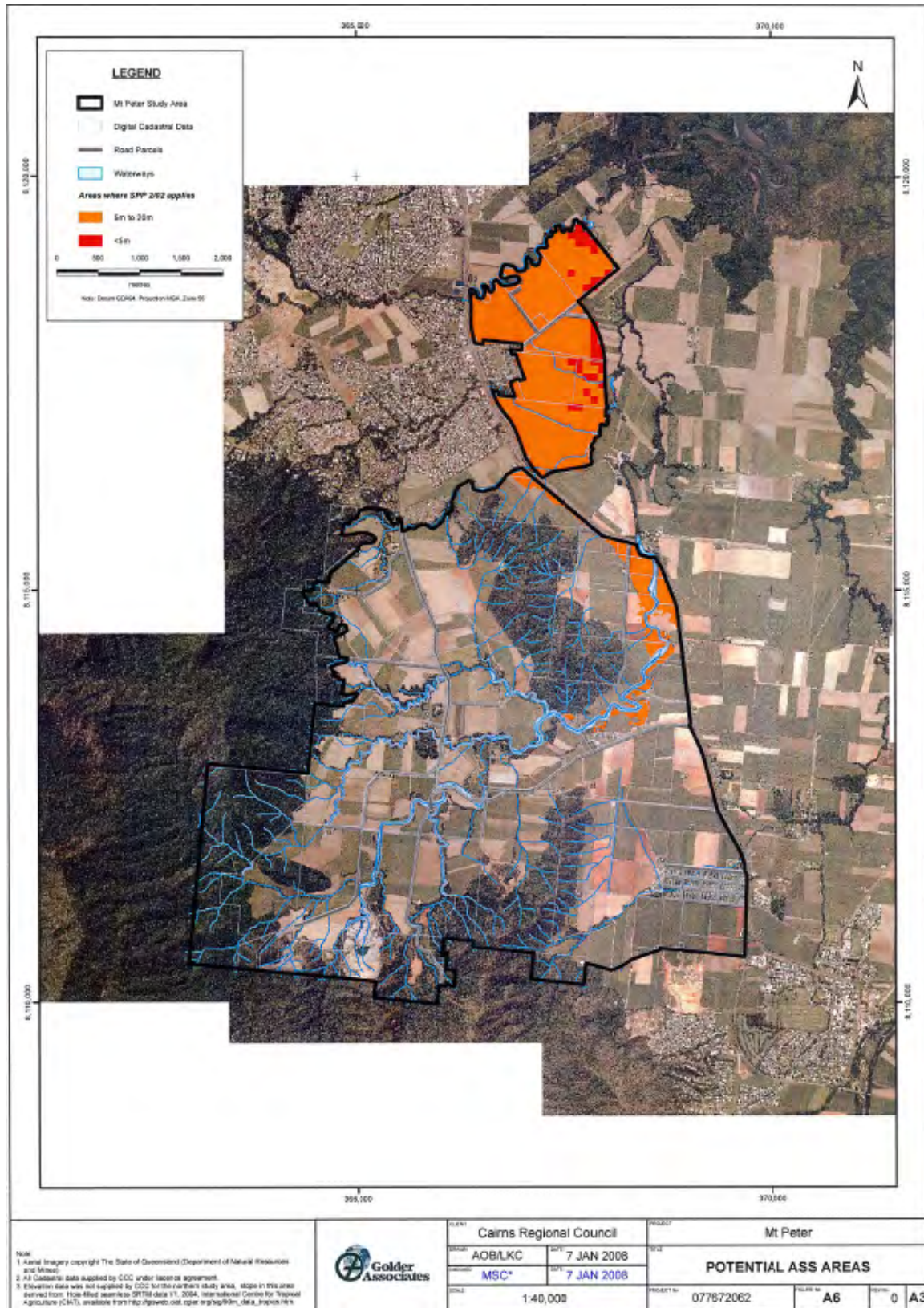
A6

Extract of Distribution Map produced by the DEWHA and entitled *Mabi Forest (Complex Notophyll Vine Forest 5b) Threatened Ecological Community*.



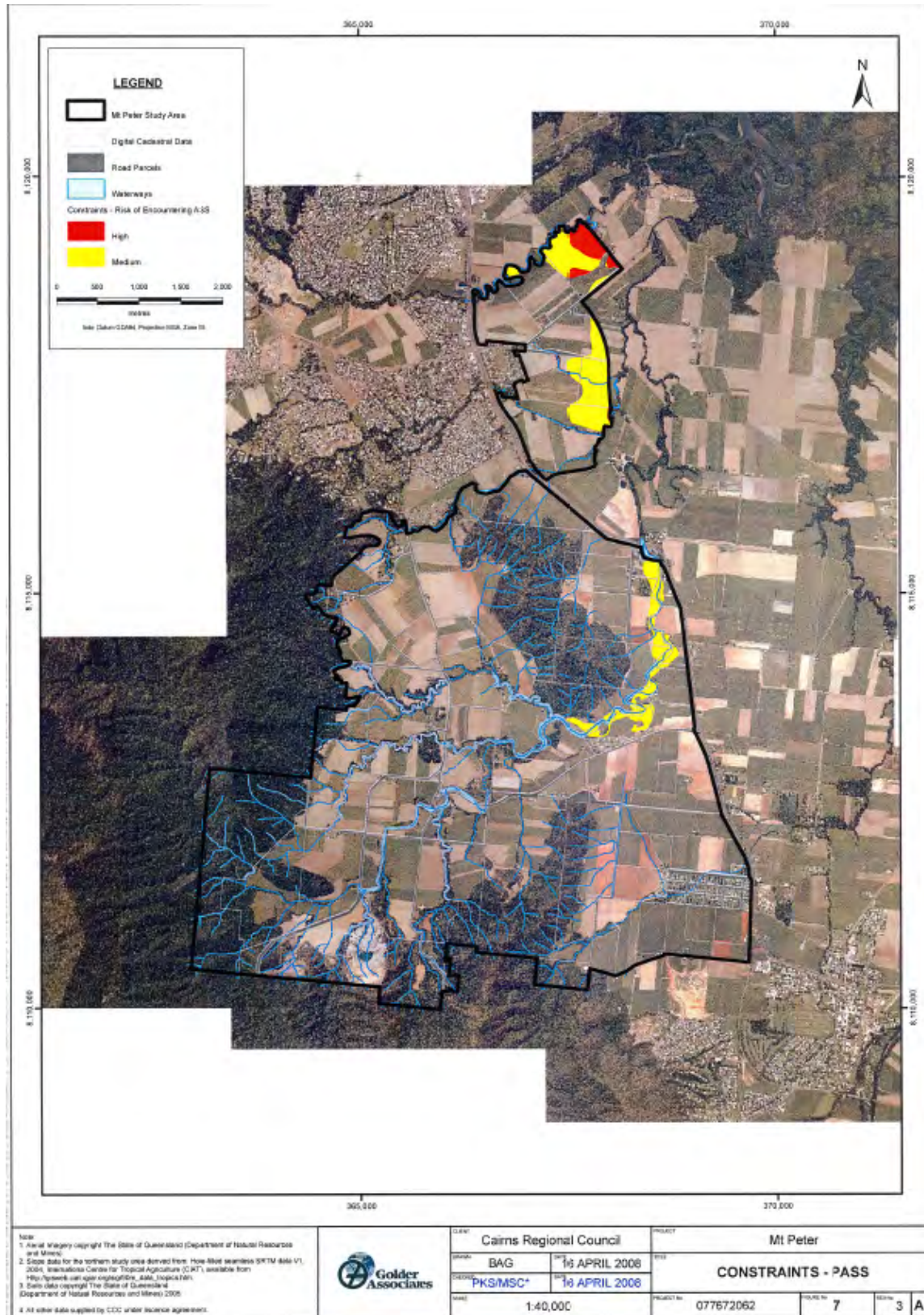
A7

Figure A6 – Potential ASS Areas reproduced from Golder Associates (2008) Mount Peter Master Planning – Geotechnical Constraints Mapping. Final Report to Cairns Regional Council.



A8

Figure 7 – Constraints – PASS reproduced from Golder Associates (2008) Mount Peter Master Planning – Geotechnical Constraints Mapping. Final Report to Cairns Regional Council.



A9

Appendix 2 of *State Planning Policy 1/92: Separating Agricultural and Residential Land Uses*

APPENDIX 2: Vegetated buffer element design

While buffer areas of 300 m width are recommended for forward planning between residential and agricultural areas, 'vegetated buffers' can offer an alternative to this separation requirement. Research into the behaviour of pesticide spray drift has shown that vegetation screens can prove effective barriers to spray drift where they meet the following criteria:

- are of a minimum total width of 40 m;
- contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of 4–5 m for a minimum width of 20 m;
- include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- provide a permeable barrier which allows air to pass through the buffer. A porosity of 0.5 is acceptable (approximately 50% of the screen should be air space);
- foliage is from the base to the crown;
- include species which are fast growing and hardy;
- have a mature tree height 1.5 times the spray release height or target vegetation height, whichever is higher;

- have mature height and width dimensions which do not detrimentally impact upon adjacent cropped land;
- include an area of at least 10 m clear of vegetation or other flammable material to either side of the vegetated area;

Vegetated buffers have other advantages in that they:

- create habitat and corridors for wildlife;
- increase the biological diversity of an area, thus assisting in pest control;
- favourably influence the microclimate;
- are aesthetically pleasing;
- provide opportunities for recreational uses;
- contribute to the reduction of noise and dust impacts.

Applications for development, where vegetated buffers are proposed, should include a landscape plan indicating the extent of the buffer, the location and spacing of proposed and existing trees and shrubs and a list of tree and shrub species to be planted. The application should also contain details concerning proposed ownership of the vegetated buffer and the means by which the buffer is to be maintained. Information on appropriate vegetation species is available in the publication *Trees and Shrubs* or from DNR forestry extension officers.

Based on research by Centre of Pesticide Application and Safety, University of Queensland, Gatton College,

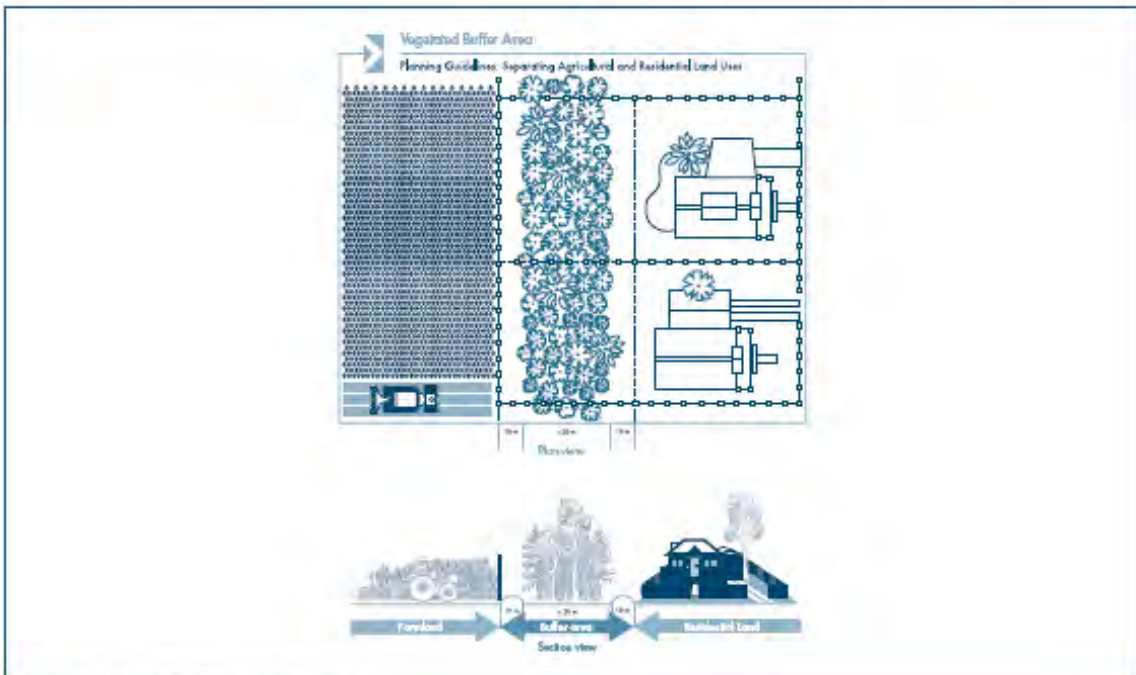


Figure 6. Vegetated buffer element



APPENDIX B

INVESTIGATION OF MABI FOREST IN MOUNT PETER AREA – A REPORT PREPARED BY THE DEPARTMENT OF ENVIRONMENT AND RESOURCE MANAGEMENT



Investigation of Mabi Forest in Mount Peter Area

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Introduction

As part of the Mount Peter Master Planning process an investigation was made of two areas within the study area identified by the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) as Mabi Forest which is listed as critically endangered under the EPBC Act.

The two areas recognised by DEWHA are based on vegetation mapping by Kemp (2002: Survey and mapping of regional ecosystems of the Wet Tropics Version 3.1 Interim, Queensland Herbarium, Environmental Protection Agency). The two areas occur close to the boundary of the study area with the Wet Tropics World Heritage Area (see Figure 1 below).

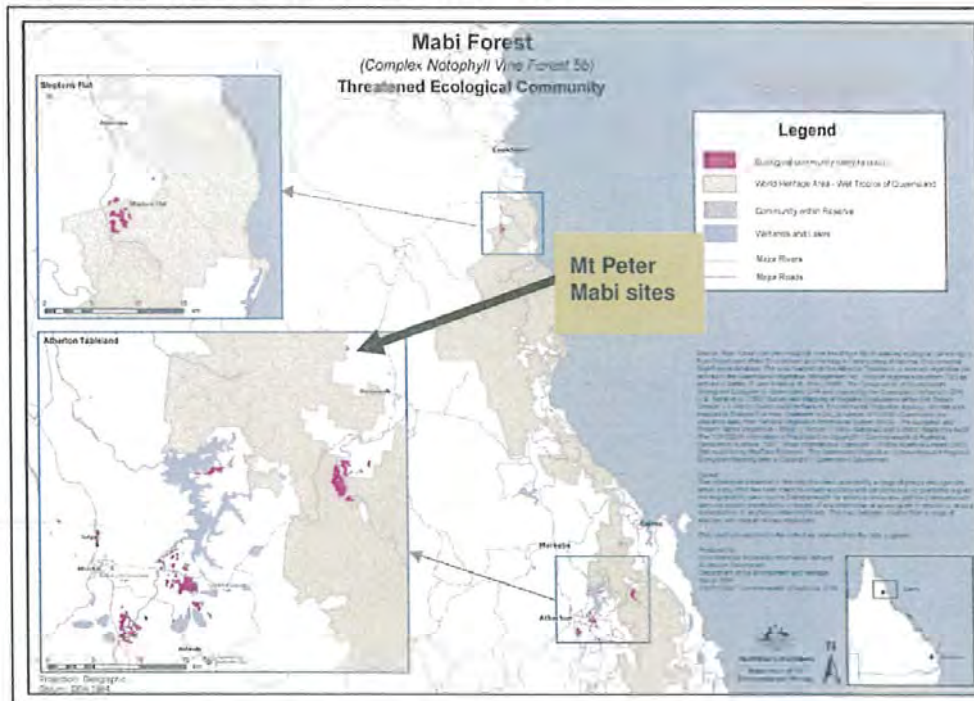
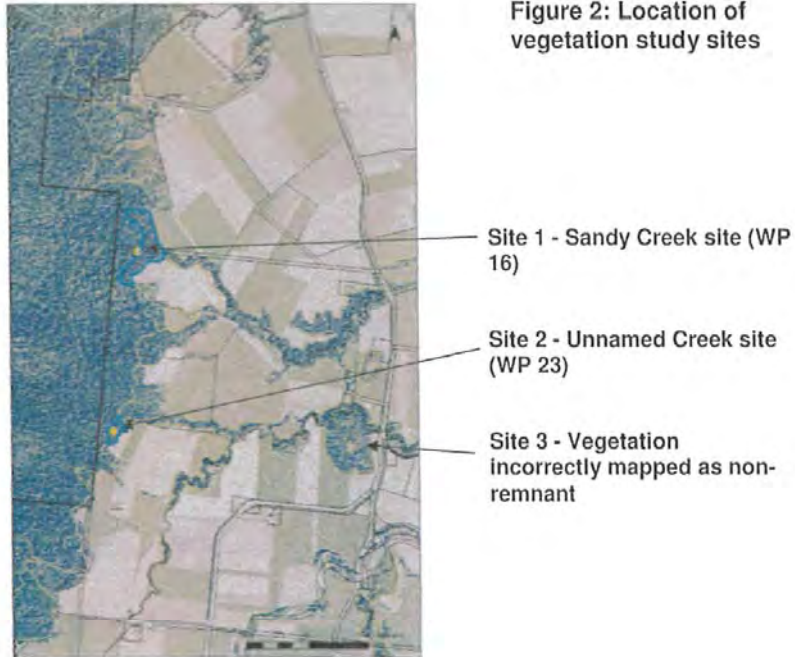


Figure 1 – Commonwealth DEWHA map of Mabi Forest

These two sites were inspected by Rob Jago and Bruce Wannan on 24 April 2009 where notes on structure and floristics were made including CORVEG proforma vegetation data sheets for the Queensland Herbarium.

Results

The two areas of Mabi forest investigated are shown below on Figure 2.



Site 1 - Sandy Creek

This site was reached on foot along the creek and was in the flat alluvial soil of the creek between two channels. It was evident that this vegetation community extended further west along the creek than is currently mapped. The vegetation was in generally good condition with few weeds or exotic species (Figure 3). Over 60 species were recorded at this site including the rare plants *Pseuduvaria mulgraveana* var. *glabrescens* and *Amomum dallachyi*.



Figure 3: Sandy Creek

Site 2 - Unnamed Creek

This site was quite restricted in area; the mapped polygon includes non-alluvial areas. At least 30% of the alluvial portion of this polygon was in poor condition due to past disturbance now vegetated by exotic grasses (*Panicum maximum*, *Pennisetum purpureum* – see photo below). The extent of remnant alluvial Regional Ecosystem in the polygon is likely to be approximately 50% of its mapped area. Only 26 species were recorded at this site.



Figure 4: Unnamed Creek

Other Areas

In addition to the sites visited in relation to the extent of Mabi Forest in the study area, a small area of disturbed/ non-remnant vegetation was inspected near Mount Peter Road and Sandy Creek. This area (Site 3 on Figure 2) is a small hill which has suffered disturbance in the past. A brief inspection of the site suggests that at least 50% of the vegetation of this site should be mapped as remnant regional ecosystem. This site consisted of woodland on metasediments (nearly closed forest) – Tree 1(20-25): *Corymbia tessellaris*, *Eucalyptus tereticornis*. Tree 2(15): *Lophostemon suaveolens*, *Acacia mangium*. T3(4-6): *L.s.*, *Macaranga involucreta*, *Pittosporum ferrugineum*, *Glochidion philippicum*, *Ficus opposita*, Shrubs: sparse *Alphitonia incana*, *Jagera pseudorhus*, *Mallotus philippensis*. Gnd: sparse *Dianella*.

Additionally, a brief assessment of riparian vegetation in the vicinity of sites 1 and 2 suggests that its designation as Regional Ecosystem 7.3.40 (*Eucalyptus tereticornis* (forest red gum) open-forest. Well-drained alluvial plains of lowlands) is not accurate. There appears to be an alluvial vine forest component in the base of the creek and a non-alluvial forest component dominated by *Corymbia tessellaris* and *Eucalyptus tereticornis* above on the much higher creek banks. Further investigation of these would be required to match them with an existing regional ecosystem.

Discussion

The table below shows a floristic comparison of the two Mount Peter Mabi sites with an alluvial Tablelands Mabi site (Barron 2) and an overall Mabi floristic description (McKenna et al. in prep.). The table below indicates the occurrence of species in each structural layer (T1 to Shrub layers) with species occurrence identified as dominant (D) or present (+); absence indicates that the species does not occur.

The table shows that:

- Due to the disturbed nature of Site 2 (Unnamed Creek) approximately half the number of plant species was recorded compared with Site 1 (Sandy Creek).
- Of the 8 species dominant in either the T1 or T2 at Sandy Creek, two (*Alstonia scholaris*, *Semecarpus australiensis*) occur as T1/T2 dominants and two (*Aleurites rockinghamensis*, *Syzygium tierneyanum*) occur as T1/T2 subdominants at Unnamed Creek. Overall there is five T1/T2 species shared between the sites.
- Of the 8 species dominant in either the T1 or T2 at Sandy Creek **none** occur at the Tablelands alluvial Mabi site (Barron 2). Indeed, of the 5 species dominant in either the T1 or T2 that occur at the Barron 2 site **none** occur in the T1/T2 at Sandy Creek.
- Similarly there is only one species (*Aleurites rockinghamensis*) which occurs in Sandy Creek T1/T2 dominants and the overall Mabi T1/T2 dominants. Of the remaining 7 dominant T1/T2 species from Sandy Creek only one (*Alstonia scholaris*) occurs in the overall Mabi T1/T2 as an occasional record. Of the 18 dominant T1/T2 species from Mabi only three occur as non-dominants at Sandy Creek (*Mallotus polyadenos*, *Cryptocarya hypospodia*, *Castanospermum australe*). The species in common between these data sets are elevated by the multiple sites included within the overall Mabi data.
- Of the 4 species dominant in either the T1 or T2 at Unnamed Creek **none** occur at the Tablelands alluvial Mabi site (Barron 2). Indeed, of the 5 species dominant in either the T1 or T2 at Barron 2 **none** occur in the T1/T2 at Sandy Creek.
- Similarly, there are two species (*Mallotus polyadenos*, *Mallotus philippensis*) which occur in Unnamed Creek T1 or T2 dominants and the overall Mabi T1/T2 dominants. Of the remaining 2 dominant T1/T2 species from Unnamed Creek only one (*Alstonia scholaris*) occurs in the overall Mabi T1/T2 as an occasional record. Of the 18 dominant T1/T2 species from Mabi only one occurs as a non-dominant at Unnamed Creek (*Aleurites rockinghamensis*).

Species	WP 16 – Mt Peter – Sandy Ck	WP 23 Mount Peter	Barron 2 ¹	Overall Mabi ¹
Tree 1 Canopy (height in metres)	25-30	25	24-35	20-35
<i>Aleurites rockinghamensis</i>	D			D
<i>Alstonia scholaris</i>	D	D		+
<i>Nauclea orientalis</i>	D			
<i>Syzygium tierneyanum</i>	D	+		
<i>Elaeocarpus grandis</i>			D	
<i>Syzygium sayeri</i>			D	
<i>Diploglottis diphylostegia</i>			D	D
<i>Castanospermum australe</i>				D
<i>Argyrodendron peralatum</i>				D
<i>Melia azedarach</i>				D
<i>Toona ciliata</i>				D
<i>Aphananthe philippinensis</i>				D
<i>Beilschmiedia obtusifolia</i>	+			
<i>Cryptocarya hypospodia</i>	+		+	D
<i>Dysoxylum mollissimum</i>	+		+(T3)	
<i>Ficus variegata</i>	+			
<i>Mallotus polyadenos</i>	+	D		
<i>Neonauclea glabra</i>	+			
<i>Terminalia sericocarpa</i>		+		
<i>Barringtonia calypttrata</i>		+		
Tree 2 Subcanopy (height in metres)	15-22	15-20	13-22	Not stated
<i>Cleistanthus semiopacus</i>	D			
<i>Ganophyllum falcatum</i>	D			
<i>Myristica globosa</i> subsp. <i>muelleri</i>	D			
<i>Semecarpus australiensis</i>	D	D		

MOUNT PETER MASTER PLANNING
ENVIRONMENTAL CONSTRAINTS AND OPPORTUNITIES ANALYSIS

Species	WP 16 – Mt Peter –Sandy Ck	WP 23 Mount Peter	Barron 2 ¹	Overall Mabi ¹
<i>Syzygium tierneyanum</i>	D			
<i>Ficus fraseri</i>			D	
<i>Acronychia acidula</i>			D	D
<i>Castanospermum australe</i>	+			
<i>Dimocarpus australianus</i>	+			
<i>Dysoxylum arborescens</i>	+		T1	
<i>Mallotus polyadenos</i>	+	+		D
<i>Neonauclea glabra.</i>	+			
<i>Dendrocnide photinophylla</i>				D
<i>Mallotus philippensis</i>		D		D
<i>Castanospora alphanthi</i>				D
<i>Arytera divaricata</i>				D
<i>Anthocarapa nitidula</i>				D
<i>Mallotus polyadenos</i>				D
<i>Sarcomelicope simplicifolia</i> subsp. <i>simplicifolia</i>				D
<i>Aglaiia sapindina</i>				D
<i>Daphnandra repandula</i>				D
<i>Aleurites rockinghamensis</i>		+		
Tree 3 (height in metres)	4-10	5-10	4-12	6-12
<i>Pandanus monticola</i>	D			
<i>Argyrodendron polyandrum</i>	+			
<i>Aglaiia sapindina</i>			D	
<i>Neolitsea dealbata</i>			D	
<i>Calamus radicalis</i>			D	
<i>Fontainea picrosperma</i>				D
<i>Gossia myrsinocarpa</i>				D
<i>Haplostichanthus</i> sp. (Topaz L.W.Jessup 520)				D
<i>Melicope rubra</i>				D
<i>Neisosperma poweri</i>				D
<i>Phaleria clerodendron.</i>			+	D
<i>Rhodamnia sessiliflora</i>			+	D
<i>Tetrasynandra longipes</i>			+	D
<i>Mallotus philippensis</i>		D		
<i>Semecarpus australiensis</i>		D		
Shrub layer (height in metres)	2-3	2-4	0-3	1-4
<i>Adiantum diaphanum</i>	+			
<i>Amomum dallachyi</i>	+			
<i>Aphananthe philippinensis.</i>	+		+ & T2	T1
<i>Argyrodendron polyandrum</i>	+			
<i>Asplenium nidus</i>	+			
<i>Barringtonia calyptata</i>	+	+		
<i>Beilschmiedia obtusifolia</i>	+	+		
<i>Calamus australis</i>	+			
<i>Cardiopteris moluccana</i>	+			
<i>Codiaeum variegatum</i>	D			D
<i>Corymborkis veratrifolia</i>	+			
<i>Cupaniopsis foveolata</i>	+	+		
<i>Dendrocnide moroides</i>	+			
<i>Diospyros hebecarpa</i>	+			
<i>Diploglottis diphylostegia</i>	+	+	+	T1
<i>Doodia media</i>	+			
<i>Dysoxylum oppositifolium</i>	+			
<i>Elatostachys microcarpa</i>	+	+		
<i>Epipremnum pinnatum</i>	+		+	
<i>Eupomatia barbata</i>	+			
<i>Faradaya splendida</i>	+		+	
<i>Flagellaria indica</i>	+		+	
<i>Harpullia frutescens</i>	+			
<i>Piper caninum</i>	+			
<i>Pouteria myrsinodendron</i>	+			
<i>Pseuduvaria mulgraveana</i> var. <i>glabrescens</i>	+			
<i>Pycnarrhena novoguineensis</i>	+			

Species	WP 16 – Mt Peter –Sandy Ck	WP 23 Mount Peter	Barron 2 ¹	Overall Mabi ¹
Rhodamnia spongiosa	+			
Rhodomyrtus macrocarpa	+			
Salacia disepala	+			
Tetragium nitens	+			
Calamus radicalis			D	
Castanospermum australe			D	
Dendrocnide moroides				D
Dichapetalum papuanum				D
Hodgkinsonia frutescens			+	D
Phaleria octandra				D
Sauropus macranthus				D
Alpinia caerulea		D		
Elattostachys microcarpa				
Cryptocarya hypospodia				
Dysoxylum gaudichaudianum				
Pipturus argenteus				
Melicope rubra		+		
Breynia cernua		+		
Dimocarpus australianus				
Cryptocarya triplinervis				
Atractocarpus fitzalanii				
Chionanthus ramiflora				
Ganophyllum falcatum				

1: Data from McKenna, Jensen R. and Wannan B. In prep. *Mabi Forest Survey*. Report for Threatened Species Unit, Environmental Protection Agency.

The vegetation at sites 1 and 2 is mapped as 7.3.38 - Complex notophyll vine forest with emergent *Agathis robusta* alluvial fans. An assessment of the floristics at both sites provides little support for this designation. It is likely that the vegetation at sites 1 and 2 is more closely related to Regional Ecosystem 7.3.23 Simple-complex semi-deciduous notophyll to mesophyll vine forest on lowland alluvium, creeks and river levees which occurs on nearby streams.

Conclusion

A floristic and structural analysis of vegetation mapped by the Commonwealth as Mabi in the Mount Peter study area has indicated that neither site presents a match for this vegetation type. Whilst alluvial Mabi is represented by few extant sites on the Tablelands, it is clear that the Mount Peter examples are floristically unrelated to either these or to the broader Mabi forest which occurs on basalt soils.

The lack of similarity between the Tableland alluvial Mabi and the Mount Peter sites is not surprising given the different landscape context and climate of the two areas, in particular:

- Altitude – alluvial Mabi 700 m ASL compared with Mount Peter sites at 60 m ASL
- Rainfall – alluvial Mabi 1400 mm compared with Mount Peter sites at 2000 mm

The floristics of the two Mount Peter sites do not support their mapped identity as Regional Ecosystem 7.3.38 Complex notophyll vine forest with emergent *Agathis robusta* alluvial fans. The complete absence of the diagnostic *Agathis robusta* from both sites suggests that the sites may be closer to Regional Ecosystem 7.3.23 which occurs nearby. However, the paucity of floristic data for many of the Wet Tropics alluvial regional ecosystems makes a reliable match more difficult.

Brief assessments of other vegetation within the Mount Peter study area suggest that the current regional ecosystem mapping may not be accurate at a number of locations.

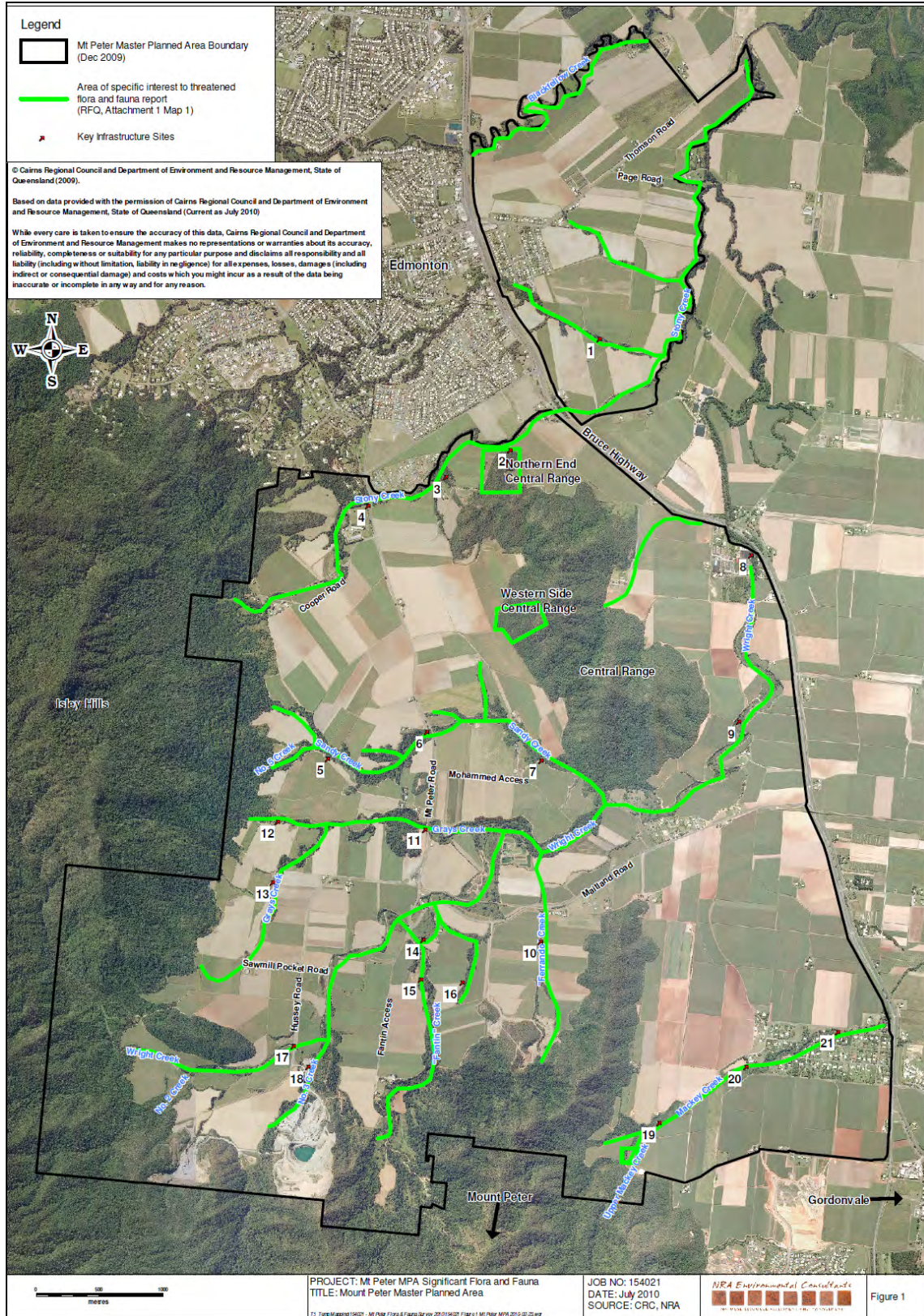
APPENDIX C

**FIGURES PRESENTED WITHIN NRA ENVIRONMENTAL CONSULTANTS (2010)
*THREATENED FLORA AND FAUNA ASSESSMENT REPORT – MOUNT PETER
MASTER PLANNED AREA. DRAFT REPORT TO CAIRNS REGIONAL COUNCIL***



C1

Figure 1 of NRA Environmental Consultants (2010) *Threatened Flora and Fauna Assessment Report – Mount Peter Master Planned Area*. This figure highlights the location of the threatened species survey effort.



C4

Table 5: Threatened and near-threatened flora and their known or likely occurrence in the MPMPA taken from NRA Environmental Consultants (2010) *Threatened Flora and Fauna Assessment Report – Mount Peter Master Planned Area*.

Table 5: Threatened and near-threatened flora and their known or likely occurrence in the MPMPA

Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Acacia lyonoma</i>	Yarrabah Wattle	V#		A rainforest wattle with an altitudinal range from 0 – 400 m. Reported from Hinchinbrook Island north to Cape Melville, but most records from around Yarrabah (Hyland <i>et al.</i> 2003, ANHSIR 2010). No records from around Edmonton. Most commonly on small streams flowing through granite. Most likely in RE 7.12.7 (Simple to complex microphyll to notophyll vine forest, often with <i>Agathis robusta</i> or <i>A. microstachya</i> , on granites and rhyolites of moist foothills and uplands). Suitable habitat comprising ephemeral streams on granite-derived substrate is found in the upper reaches of Wrights Creek westernmost tributaries (the footslopes of the Isley Hills). However, there are no local records of the species from any locality west of Trinity Inlet/Mulgrave River axis; therefore the likelihood of the species occurrence is low.	Low
<i>Acalypha lysorii</i>	No common name	V		A distinctive, small-leaved shrub from lowland rainforests (0 to 200 m) near Cairns. Records of the species are from rocky ephemeral or perennial creeks in rainforest or complex notophyll vine forest, in the Barron Gorge and behind Edmonton (ANHSIR 2010). Most likely in RE 7.11.1 (Simple-complex mesophyll to notophyll vine forest on moderately to poorly drained metamorphics (excluding amphibolites) of moderate fertility of the moist and wet lowlands, foothills and uplands). Suitable habitat is present in the study area, notably in the upper reaches of Stony Creek and Sandy Creek. The species occurs at Isabella Falls, within a kilometre of the study area. The likelihood of occurrence is therefore considered high.	High
<i>Arenga australasica</i>	Australian arenga palm	V	V	A palm of lowland rainforests in north Queensland (and Northern Territory). Often found near drainages on sandy and red soils. This species was found in the upper reaches of 'Fantin Creek', near the southern boundary of the study area (Figure 2). Although similar habitat occurs in the upper reaches of 'Fernando Creek', No. 3 Creek, Stony Creek, Sandy Creek and Wrights Creek no other individuals were observed during surveys.	Present
<i>Cleistanthus discolor</i>	No common name	NT#		Shrub or small tree. Endemic to northeast Queensland between the Daintree River and Mission Beach. Grows in well developed rainforest. Altitudinal range 100 – 500 m (Hyland <i>et al.</i> 2003), rarely lower (ANHSIR 2010). Suitable habitat for this species occurs in the study area, however the species was not observed during surveys, nor has it been recently collected in the study area. The likelihood of its presence is therefore considered moderate.	Moderate



Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Dendrobium mirbelianum</i>	Mangrove orchid	E	E	Also called <i>Durabaculum mirbelianum</i> . Epiphytic herb. Known from coastal areas from Innisfail to Daintree; also Moa Island, PNG and the Solomon Islands. Grows mainly on trees in mangroves and coastal swamps (TSSC 2008c). Flowers August to November (Jones 2006). Altitudinal range 2 – 150 m. Likely habitat occurs east of the Bruce Highway. Several epiphytic orchids of the genus <i>Dendrobium</i> (in the traditional sense) were observed during surveys (Figure 2). These specimens could not be identified due to lack of flowers. The habitat in the study area is considered marginal; it does not include mangroves and swampy areas to the east of the Bruce Highway are severely degraded. There are no records of the species in the study area, with the closest record from Wyvuri Swamp (near Babinda). Therefore the likelihood of occurrence is considered low.	Low
<i>Dendrobium nindii</i>	Blue orchid	E	E	Also called <i>Durabaculum nindii</i> . Epiphytic herb. Occurs on Cape York, south to Innisfail, also in New Guinea. Habitat is in near-coastal swamps, coastal rainforest, mangroves, and low altitude gorges and streams. Flowers July to September (Jones 2006). Altitudinal range sea level to 400 m (TSSC 2008b). Several epiphytic orchids of the genus <i>Dendrobium</i> (in the traditional sense) were observed during surveys (Figure 2). These specimens could not be identified due to lack of flowers. The habitat in the study area is considered marginal; it does not include mangroves or coastal rainforest and swampy areas to the east of the Bruce Highway are severely degraded. Suitable habitat may be present in low altitude gorges and streams, however no records of the species exist for the study area or nearby areas. Therefore the likelihood of occurrence is considered low.	Low
<i>Dendrobium superbians</i>	Curly Pinks	V	V	Also called <i>Dendrobium x superbians</i> or <i>X Vappaculum superbians</i> . Epiphytic on low trees or rocks. Believed to be a hybrid. Occurs on Cape York, through Indonesia to Singapore. Habitat is generally bright, with high, extremely seasonal rainfall, in coastal scrubs or open monsoon forest, often occurring along creeks or on rocky hillsides where fire cannot penetrate. (TSSC 2008a). Flowers February to June (Jones 2006). Several epiphytic orchids of the genus <i>Dendrobium</i> (in the traditional sense) were observed during surveys (Figure 2). These specimens could not be identified due to lack of flowers. The study area appears to be outside the known range of this species. Suitable fire-free habitat is largely absent from the study area. Therefore the likelihood of occurrence is considered low.	Low
<i>Diplazium cordifolium</i>		V	V	A fern to about 80 cm high. Occurs as small colonies in deep shaded gullies in montane and lowland rainforests in NEQ (TSSC 2008d) in very high rainfall areas (eg between Babinda and Tully). Lowland records are south of Babinda. The study area appears to be outside the known range of this species. Suitable high-rainfall habitat is not present in the study area. Therefore the likelihood of occurrence in the study area is considered low.	Low



Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Eleocharis retroflexa</i>	No common name	V	V	<p>Small to medium sedge. Recorded from the lower reaches of Blackfellow Creek, Eubenangee Swamp and the Northern Territory (it also occurs outside of Australia) (Environment North 1998, TSSC 2008e). Found in freshwater as an emergent plant. Environment North (1998) observed the species growing in Blackfellow Creek in full sunlight on a substrate of grey clay soil, sometimes with a very fine sand. They observed it in wet areas or flowing water up to 40 cm in depth and in association with the submerged aquatic herb <i>Potamogeton javanicus</i>. It was suggested that cattle grazing was controlling populations of vigorous exotic grasses that would otherwise smother the low-growing sedge in check.</p> <p>Although there are records of the species from the study area in the lower reaches of Blackfellow Creek (Environment North 1998), habitat suitability at this location has declined substantially due to rank growth of exotic grasses. Nevertheless small populations of this small, short-lived species may persist at the Blackfellow Creek location, and/or may exist elsewhere in the MPPMA. Under favourable conditions larger populations could re-establish. Given this uncertainty about its actual presence the species is considered to have a high likelihood of occurrence.</p>	High
<i>Hodgkinsonia frutescens</i>	Turkey bush		V	<p>Understorey shrub. Endemic to north-east Queensland and Cape York. Grows in undisturbed lowland and upland rainforest, usually in the drier more seasonal types of rainforest. Altitudinal range from near sea level to 800 m (Hyland <i>et al.</i> 2003).</p> <p>Suitable seasonal rainforest habitat is present in the study area. Although there are no records of the species from in or near the study area, the closest records are from the footslopes of the Malbon Thompson Range to the east and from Lake Barrine to the west (ANSHIR 2010). The likelihood of occurrence is therefore moderate.</p>	Moderate
<i>Huperzia filiformis</i>	Rat's tail tasseled fern	E	E	<p>Rainforest epiphyte. In Australia, known from the Carbine Tableland, Atherton Tablelands as far south as the Tully River area. It may possibly on the coastal ranges between Finchbrook Island and Cairns and between Mossman and Cooktown (TSSC 2008f). There are no records of the species from the study area. All records of the species are from areas above 800 m (ANSHIR 2010).</p> <p>The absence of collections from the study area and its vicinity, and the lack of suitable highland rainforest habitat indicate the species has a low likelihood of occurrence.</p>	Low
<i>Huperzia phlegmariaoides</i>	Layered tasseled fern	V	V	<p>Epiphytic or lithophytic herb. Reported to occur from Iron Range to Townsville. Grows in lowland to mid-altitude rainforests or lowland swamps (TSSC 2008g).</p> <p>Suitable lowland rainforest habitat occurs in the study area. Although there are no collections, the study area lies within the range of the species. The likelihood of occurrence is therefore considered moderate.</p>	Moderate



Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Huperzia phlegmaria</i>	Tassel fern	NT#		A rainforest (rarely open forest with rainforest elements) epiphyte. Reported from Clark Range (west of Mackay) to Cape York, also PNG, Solomons and Malasia. Also occasionally occurs on mossy rocks and in humus accumulations on banks (ANSHER 2010). Suitable rainforest habitat occurs along waterways in the study area. Collections of the species have been made from within 10 km of the study area. The likelihood of occurrence is therefore considered high.	High
<i>Marsdenia rara</i>	No common name	V		Slender wiry herbaceous vine with tuberous roots (Forster 1996). Grows in open forest on rocky (granite) hillslope, below 100 m. Records from open forest in granitic areas at the base of ranges around Yarrabah and Gordonvale. Suitable woodland on granite habitat occurs to the west of the study area, on the east-facing footslopes of the Isley Hills. Collections of the species have been made from within 10 km of the study area. The likelihood of occurrence is therefore considered high.	High
<i>Myrmecodia beccarii</i>	Ant plant	V	V	Epiphyte. Generally associated with paperbark trees and mangrove forests in the lowlands of North Queensland, from Ingham to Cooktown (TSSC 2008h). Previously recorded on Blackfellows Creek, east of the Bruce Highway (Environment North 1997). The study area occurs in the known range of the plant, and collections of the species have been made within 5 km of the study area. Suitable habitat (mature <i>Metaleuca leucadenra</i> trees) was observed to the east of the Bruce Highway on Blackfellows Creek. The likelihood of occurrence of this species is therefore considered high.	High
<i>Phalaenopsis amabilis</i> subsp. <i>rosenstromii</i>	Native moth orchid	E	E	Epiphytic or lithophytic herb. Occurs sporadically from the Iron Range to the Paluma Ranges. Occurs in lowland gorges in rainforest in humid airy situations on sheltered slopes and in gullies, in deep gorges and close to streams in rainforests. Reported altitudinal range is 200 – 500 m (TSSC 2008i). Several creeklines in the study area (for instance, the Wrights Creek and its southern tributaries) may have marginal habitat for this species. Although the study area falls within the known range of this orchid, there are no collections from the vicinity. The likelihood of occurrence is therefore considered low.	Low
<i>Phyllanthera grayi</i>	No common name	V		Formerly called <i>Cryptolepis grayi</i> . Robust twining vine. Lowland and upland (up to 800 m) rainforests liana in Cape York and the Atherton Tablelands (Hyland <i>et al.</i> 2003). Although found at lower altitudes on Cape York, it has most often been collected on the Atherton Tablelands at altitudes of around 800 m. The study area is on the edge of the known distribution of the plant, and the plant has been collected within 2 km of the study area, on the lower slopes of the Isley Hills. Suitable rainforest habitat occurs along creeks draining the Isley Hills (including the upper reaches of Stony Creek, Sandy Creek and the western tributaries of Wrights Creek). The species is considered to have a high likelihood of	High



Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Plectranthus amoerius</i>	No common name	V		occurrence. A succulent herb. Generally growing on rocky outcrops in open forest and rainforest. Records from near Yarrabah and southwest of Atherton. Rocky outcrops occur on the Central Range. However, within the areas surveyed, these were too small to act as a fire refuge for <i>Plectranthus</i> . Forest on the Central Range appears to be subject to regular burning, impacting on the survival prospects of fire-sensitive species that may establish on rocky outcrops. Although collections have been made in the vicinity of the study area, the fire-impacted nature of the limited available rocky-outcrop habitat suggests the likelihood of occurrence is moderate.	Moderate
<i>Plectranthus gratus</i>	No common name	V	V	A soft, woody, densely hairy shrub to 1 m. Known only from an area of about 100 km ² to the south of Cairns. Collected from Walsh's Pyramid and the Gillies Range and surrounding region. Found in open forest (sometimes in rainforest) on rocky outcrops of basalt or granite between 100 m and 600 m altitude (TSSC 2008j). Suitable habitat may occur on rocky outcrops in the central ridge, although no <i>Plectranthus</i> of any sort were observed during field surveys – this may be related to frequent burning. Although collections have been made in the vicinity of the study area, the degraded nature of the limited available habitat suggests the likelihood of occurrence is moderate.	Moderate
<i>Pseuduvaria mulgraveana</i> var. <i>mulgraveana</i>	No common name	NT#		Understory shrub of well developed lowland rainforest (to 180 m) from the footslopes of the Mount Bartle Frere/Bellenden Ker Range and also Cairns area (Hyland <i>et al.</i> 2005). This species was encountered in rainforest habitat on Sandy Creek in previous surveys (NRA 2008).	Present
<i>Randia audasii</i>	Daintree gardenia	NT#		Small tree. Known to occur between Cooktown, Cairns and the Atherton Tablelands. Grows in well developed and regrowth lowland and upland rainforests (0-1200 m) (Hyland <i>et al.</i> 2003), although most frequently collected at mid altitudes. Suitable rainforest habitat is present along creeklines, although it is limited in extent. Records of this species from low altitudes are rare. The nearest collections are from mid-altitude rainforests at Kuranda, more than 20 km from the study area. The likelihood of occurrence is therefore considered low.	Low



Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Sarcotechia villosa</i>	No common name	NT#		Endemic to north-east Queensland restricted to the area between Mossman, Mt Molloy and Kuranda. Altitudinal range from 50 - 1000 m. Grows as an understory tree in well developed rainforest on a variety of sites (Hyland <i>et al.</i> 2003). Suitable rainforest habitat is present along creeklines, though limited in area and degraded in many places. However, the study area is outside the known range of the narrowly distributed species, with the nearest collection being from the Kuranda Range Road, more than 20 km to the north. The likelihood of occurrence is therefore considered low.	Low
<i>Sphaerantia discolor</i>	Tully penda	V#		Canopy tree. Endemic to northeast Queensland, restricted to the Russell and Johnstone River catchments west of Innisfail, Wrights Creek near Edmonton and creeks in the Whyambeel area. Altitudinal range from 15 - 300 m. Grows in well developed lowland rainforest often close to creeks (Hyland <i>et al.</i> 2003). The long-lived species has been collected on Wrights Creek, in the study area, although not seen during this study. It is assumed to be present.	Present
<i>Taeniophyllum muelleri</i>	No common name	LC	V	Leafless epiphytic orchid with photosynthetic roots. Grows on outer branches and branchlets of rainforest trees and riparian trees. Occasionally found in heaths and open forest. Occurs along the coast and coastal ranges, from sea level to 250 m altitude (up to 1 200 m in northeast Queensland), north from the Bellinger River, NSW (National Herbarium of NSW 1999-2009) to Cape York. Also in New Caledonia and Papua New Guinea (ANSHR 2010). This species is widespread and often reported as locally common (ANSHR 2010). However, it is a tiny epiphyte that is easily overlooked, so a degree of discretion has been given when assessing the probability of occurrence based upon collection records. The study area lies in the known range of the species, with the nearest collection being from Saddle Mountain (some 20 km to the north), and suitable habitat is present. It is therefore considered to have a high likelihood of occurrence in the study area.	High
<i>Tylophora williamsii</i>	No common name	LC#	V	Herbaceous twining vine with stems up to 1 mm in diameter. Occurs from Charters Towers, west of Townsville, to Pascoe River on Cape York. Generally associated with deciduous vine thickets, but also grows in riparian notophyll rainforest on rocky slopes (TSSC 2008k). Altitudinal range from near sea level to 450 m (Hyland <i>et al.</i> 2003). This species was present on the edge of vegetation in the upper reaches of No. 3 Creek, a tributary of Wrights Creek (Figure 2), and at Site 5 on Sandy Creek. It may occur along any of the creeks that contain rainforest and are in reasonable condition.	Present



Species Name	Common Name	Status		Description	Likelihood of Occurrence
		NC Act	EPBC Act		
<i>Waterhousea mulgraveana</i>	No common name	NT#		<p>Endemic to northeast Queensland, restricted to the area between Bloomfield and Innisfail and the southern edge of the Atherton Tableland. Altitudinal range from sea level to 700 m. Grows in well-developed lowland and upland rainforest. Frequently found near watercourses but not restricted to that habitat (Hyland <i>et al.</i> 2003).</p> <p>Suitable riparian rainforest habitat for this species occurs in the study area. The species has been collected in the Little Mulgrave River catchment, less than 5 km to the south of the study area. The species is therefore considered to have a high likelihood of occurrence.</p>	High

Indicates species whose conservation status was changed since the issue of the Preliminary Wet Season Report.



Table 8: Threatened and migratory protected fauna and their known or likely occurrence in the MPMPA taken from NRA Environmental Consultants (2010) *Threatened Flora and Fauna Assessment Report – Mount Peter Master Planned Area*.

Table 8: Threatened and migratory protected fauna and their known or likely occurrence in the MPMPA

Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
Birds					
<i>Accipiter novaehollandiae</i>	Grey Goshawk ^a	NT	-	High	Permanent residents likely to be present. All forest areas within the MPMPA provide potential habitat.
<i>Aerodramus terraereginae</i>	Australian Swiftlet	NT	-	Recorded	Permanent populations likely to be present. Overlying more open areas including cane paddocks and adjacent forests. Likely to roost in mine shafts, rock piles and caves adjacent to the MPMPA.
<i>Ardea alba</i>	Great Egret ^a	LC	M	High	Likely to be irregular visitor. Preferred habitat in MPMPA likely to comprise larger and more open creek systems (Wrights Creek and possibly Grays Creek) and aquaculture ponds.
<i>Ardea ibis</i>	Cattle Egret ^a	LC	M	Moderate	Possibly irregular visitor. Preferred habitat in MPMPA likely to comprise wet open grasslands or paddocks.
<i>Casuaris casuaris johnsonii</i>	Southern Cassowary	E	E	Moderate	Species probably occurs at low density in ranges adjacent to the MPMPA. The high level of dog activity and pig hunting may be discouraging Cassowaries from forays along forest edge.
<i>Cyclopsitta diophthalma macleayana</i>	Double-eyed (Macleay's) Fig-parrot	V	-	Recorded	It was observed at a number of locations in the MPMPA and is likely to range widely across this area using forested areas and well established gardens.



Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork*	NT	-	Recorded	Permanent populations likely to be present. Observed at and near the aquaculture farm along Grays Creek. Other more open sections of creek (eg Wrights Creek and Grays Creek) and intermittent wetlands may also provide suitable habitat.
<i>Erythrotriorchis radiatus</i>	Red Goshawk	E	V	Low-Moderate	Red Goshawks have very large territories and they may occasionally overfly the MPMPA. The MPMPA itself contains marginal habitat for the species.
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle*	LC	M	High	Anecdotal records of species in MPMPA. Frequency of occurrence unclear but resident bird(s) possibly occur. Wrights Creek probably offers best foraging habitat for the species in the MPMPA.
<i>Hirundapus caudacutus</i>	White-throated Needletail*	LC	M	High	Anecdotal records of species overflying more open areas including cane paddocks and adjacent forests in the MPMPA.
<i>Hirundo rustica</i>	Barn Swallow	LC	M	Moderate	Species may occur irregularly. Overflying more open areas including cane paddocks and adjacent forests in the MPMPA.
<i>Lophoictinia isura</i>	Square-tailed Kite	NT	-	Moderate	Species probably present in wider region and occasionally overfly MPMPA. The MPMPA itself contains marginal habitat for the species.
<i>Merops ornatus</i>	Rainbow Bee-eater	LC	M	Recorded	Observed at Wrights Creek. Overflying more open areas including cane paddocks and adjacent forests. The MPMPA is likely to comprise permanent and migratory populations.



Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
<i>Monarcha melanops</i>	Black-faced Monarch	LC	M	High	Likely to be regular visitors to MPMPA in cooler months. Most areas of remnant forest, especially rainforest, is likely to provide suitable habitat.
<i>Monarcha trivirgatus</i>	Spectacled Monarch	LC	M	Recorded	Permanent and migratory populations likely to occur within the MPMPA. Most areas of remnant forest, especially rainforest, are likely to provide suitable habitat.
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	LC	M	Low	Species may occasionally visit MPMPA. Permanent or regular visitors unlikely. Remnant forest likely to provide marginal habitat.
<i>Nettion coromanda lianus</i>	Cotton pygmy-goose	NT	-	Low	Possibly irregular visitor to MPMPA. Farm dams and sections of Wrights Creek may provide suitable habitat.
<i>Ninox rufa queenslandica</i>	Rufous Owl (Southern Subspecies)	V	-	Low-Moderate	The larger creek systems (Wright's Creek, Grays Creek, Stony Creek and Sandy Creek) may provide suitable roosting habitat. Adjacent open forests and woodlands may provide foraging habitat. The lack of extensive woodlands in lowland areas probably inhibits potential presence of species in MPMPA.
<i>Pandion cristatus</i>	Eastern Osprey	-	M	Recorded	Observed at bridge (Mt Peter Road) over Wrights Creek. Frequency of occurrence unclear but possibly irregular visitor to MPMPA. Wrights Creek probably offers best foraging habitat for the species in the MPMPA.
<i>Rhipidura rufifrons</i>	Rufous Fantail ^a	LC	M	High	Likely to be regular visitors to MPMPA in cooler months. Most areas of remnant forest, especially rainforest, are likely to provide suitable habitat.



Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
<i>Rostratula australis</i>	Australian Painted Snipe	V	V	Low	Possibly erratic visitor to MPMPA. Preferred habitats likely to be flooded grasslands, including drains and cane paddocks.
<i>Tadorna radjah</i>	Radjah Shelduck	NT	-	Low	Possibly irregular visitor to MPMPA. Farm dams and sections of Wrights Creek may provide suitable habitat.
<i>Tyto novaehollandiae kimberli</i>	Masked Owl (Northern Subspecies)	V	V	Low-Moderate	The larger creek systems (Wright's Creek, Grays Creek, Stony Creek and Sandy Creek) may provide suitable roosting habitat. Adjacent open forests and woodlands may provide foraging habitat. The lack of extensive woodlands in lowland areas probably inhibits potential presence of species in MPMPA.
Mammals					
<i>Dasyurus hallucatus</i>	Northern Quoll	-	E	Moderate	Anecdotal accounts that species may have once occurred in general area. If still present likely to occur at low density with preferred habitats likely to be near boulder fields and mine workings in open woodland or forest habitats.
<i>Dasyurus maculatus gracilis</i>	Spotted-tailed Quoll	V	E	Low	May occur in upland forests above MPMPA. Some individuals may visit lowland areas of MPMPA on rare occasions.
<i>Hipposideros diademata reginae</i>	Diadem Leaf-nosed Bat ⁴	NT	-	Recorded	Recorded at a number of locations across the MPMPA (Figure 5). Utilises rainforest or woodland habitats. Commonly roosts in caves and disused mines but are also in road culverts and buildings. While they probably occur in most of the forested areas in the MPMPA the mine shafts in the south of the area are probably important habitat.



Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
<i>Hipposideros semoni</i>	Semon's Leaf-nosed Bat	E	E	Moderate-High	All forested areas in the MPMPA provide potential foraging habitat. Does not appear to have specialised roost requirements.
<i>Kerivoula (Phoniscus) papuensis</i>	Golden-tipped Bat ^a	NT	-	Moderate	All forested areas in the MPMPA provide potential foraging habitat. Does not appear to have specialised roost requirements.
<i>Murina florium</i>	Flute-nosed Bat ^a	V	-	Low-Moderate	Rainforest areas along foot slopes of MPMPA may provide potential habitat, especially the Wrights Creek catchment where a relatively wide band of rainforest occurs along an altitudinal gradient (inside and outside the MPMPA).
<i>Pteropus conspicillatus</i>	Spectacled Flying Fox	LC	V	Recorded	Observed in riparian vegetation in the upper sections of Wrights Creek. All forested areas in the MPMPA provide potential foraging habitat. No Flying-fox camps were found during the field survey.
<i>Rhinolophus philippinensis macros</i>	Greater Large-eared Horseshoe Bat	E	E	High	All forested areas in the MPMPA provide potential foraging habitat. Roost requirements unclear but known to roost in caves and disused mines.
<i>Saccolaimus saccolaimus mudicunianus</i>	Bare-rumped Sheathtail Bat	E	CE	Low	Ecology of species poorly known but appears to prefer woodland habitats especially those containing Poplar Gum (<i>Eucalyptus platyphylla</i>).
<i>Taphozous australis</i>	Coastal Sheathtail Bat ^a	V	-	Low	Species tends to occur within a few kilometres of the coast and has a low chance of occurring within the MPMPA.



Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
Amphibians					
<i>Litoria genimaculata</i>	Green-eyed Tree Frog	NT	-	Recorded	Observed in the upper sections of Sandy Creek but expected to occur in the upper sections of most of the forest lined creek systems.
<i>Litoria nannotis</i>	Waterfall Frog	E	E	Moderate	Probably occurs in the higher reaches of Wrights Creek along the edge or just outside the MPMPA.
<i>Litoria nyakalensis</i>	Mountain Mist Frog	E	CE	Low	Occurs at higher altitudes than the MPMPA.
<i>Litoria rheocola</i>	Common Mist Frog	E	E	Recorded	Observed in the upper sections of Stony Creek, Wrights Creek and the un-named creek shown on Figure 5 as Fantin's Creek.
<i>Nyctimystes dayi</i>	Australian Lacelid	E	E	Recorded	The Australian Lacelid was only observed in the upper sections of Wrights Creek but probably occurs in Stony Creek and the un-named creek shown on Figure 5 as Fantin's Creek.
<i>Taudactylus acutirostris</i>	Sharp-snouted Torrent Frog	E	EX	Low	Presumed extinct. Occurred at higher altitudes than the MPMPA.
Reptiles					
<i>Acanthopphis antarcticus</i>	Common Death Adder	NT	-	Recorded	A Death Adder was collected along Mt Peter Road in the south-west of the MPMPA. The taxonomy of Death Adders is unresolved and it is not clear if the individual is the Rare (NC Act) Common Death Adder or the Least Concern (NC Act) Northern Death Adder. The species occur in a variety of habitats but usually near to forested areas, rocky areas or creek lines and therefore may occur widely across the MPMPA.



Scientific name	Common Name	NC Act status ¹	EPBC Act status ¹	Likelihood of Occurrence	Comments
<i>Coeranoscincus frontalis</i>	Three-toed Snake-tooth Skink	NT	-	High	Secretive species that is difficult to detect. May occur in any of the forested areas within the MPMPA.
Invertebrates					
<i>Hypochoeris apollo apollo</i>	Apollo Jewel (butterfly)	V	-	Low	The species has a low likelihood of occurrence due to an absence of suitable host plants in the MPMPA.

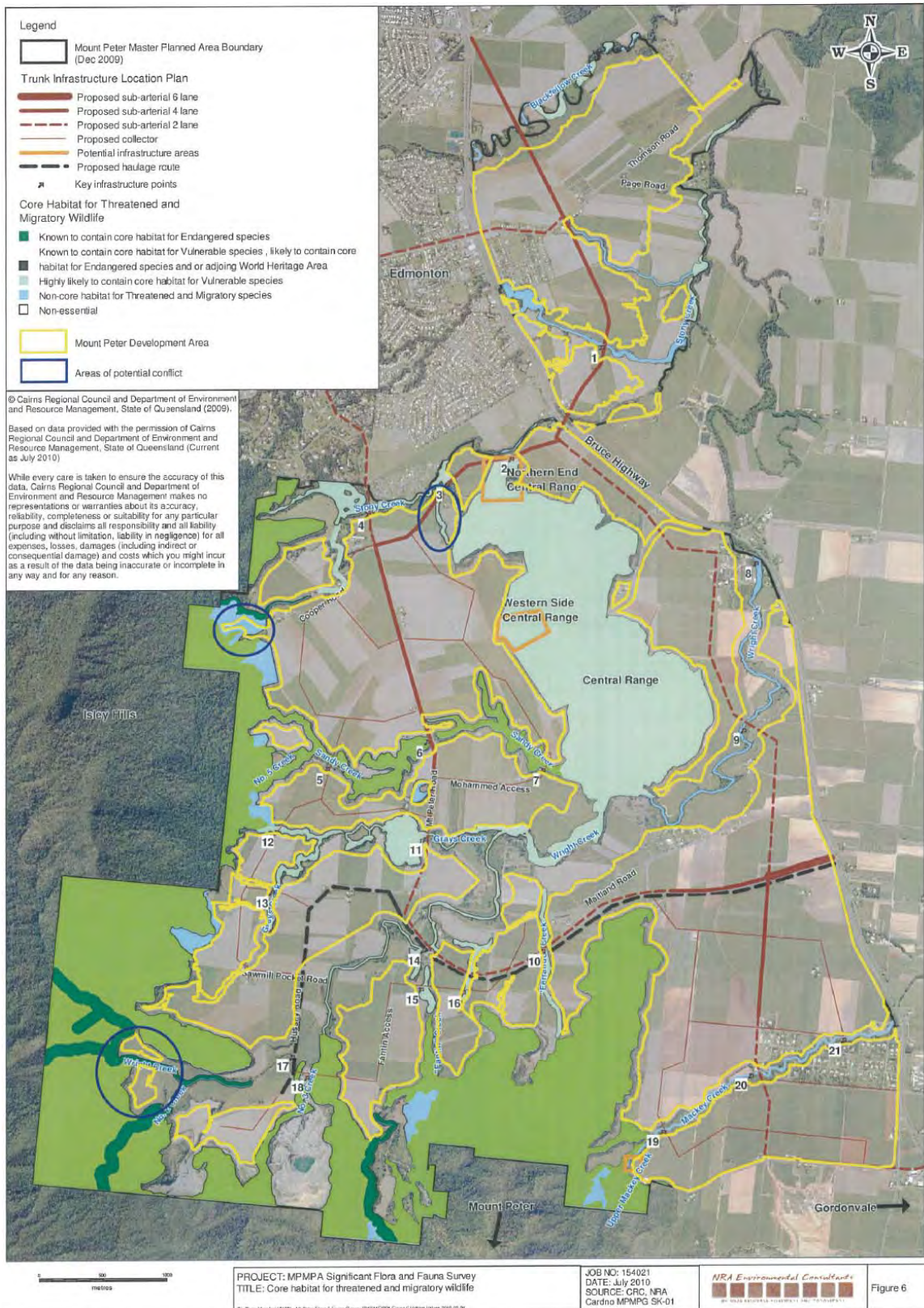
¹ Species status codes: LC = least concern, NT = near threatened, V = vulnerable, E = endangered, EX = Presumed Extinct, M = migratory.

* Species not listed in Attachment 2 of RFQ but which may occur in the MPMPA.



C6

Figure 6 of NRA Environmental Consultants (2010) *Threatened Flora and Fauna Assessment Report – Mount Peter Master Planned Area*. This figure highlights habitat values for threatened and migratory wildlife and road transport and service infrastructure location plan.



C7

Table 10: Presence of Core Habitat for T&M wildlife and infrastructure planning taken from NRA Environmental Consultants (2010) *Threatened Flora and Fauna Assessment Report – Mount Peter Master Planned Area*.

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
1. Stony Creek tributary crossing – Sub-Arterial 4 lane road.	Non-core habitat for T&M wildlife.	Vegetation is generally in good condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets</p> <p>No identifiable need for offsets based on current information.</p>
2. Northern Central Range road corridor – Sub-Arterial 4 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is generally in excellent condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Road design elements that facilitate fauna movement between Stony Creek and the Central Range are warranted. For example, fauna underpasses, dual carriageway to provide for revegetation between roadways (and opportunity for high level canopy overlap) <p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain and improve connectivity (broadened corridor) and habitat integrity between Stony Ck and Central Range. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act 1999</i> (Of Concern RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation along Stony Ck and the Central Range.</p>
3. Stony Creek crossing – Sub-Arterial 4 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation condition varies from good to poor. Crossing will traverse a wide section of riparian vegetation.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites).

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<ul style="list-style-type: none"> • Crossing design that facilitate fauna movement between Stony Creek and the Central Range should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge, dual carriageway to provide for revegetation between roadways (and opportunity for high level canopy overlap). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain connectivity and improve habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to existing riparian vegetation upstream or downstream of the crossing.</p>
4. Stony Creek crossing – Sub-Arterial 2 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in poor condition (existing corridor).	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance is unlikely to be warranted as the alignment is expected to lie on the existing road corridor. However, some variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that maintains or improves connectivity along Stony Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act 1999</i> (Of Concern RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation along Stony Ck upstream or downstream of the crossing.</p>
5. Sandy Creek crossing – Collector Road.	Known to contain core habitat for Vulnerable wildlife.	Vegetation is in excellent condition. Crossing will traverse a wide section of riparian vegetation. Important habitat linkage between Central Range and Isley Hills.	<p>Avoidance</p> <ul style="list-style-type: none"> • Design alignment so as to avoid impact on vulnerable species. • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that maintains or improves connectivity along Sandy Creek is required. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Rehabilitation of compensatory habitat may be warranted (relocation unlikely to be practical for <i>Tylophora williamsii</i>)

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to maintain connectivity and improve habitat integrity. <p>Offsets Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act 1999</i> (Endangered RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation along Sandy Ck upstream or downstream of the crossing.</p>
6. Sandy Creek crossing – Sub-Arterial 4 lane road.	Known to contain core habitat for Vulnerable wildlife.	Vegetation is in poor condition (existing corridor). Important habitat linkage between Central Range and Isley Hills.	<p>Avoidance</p> <ul style="list-style-type: none"> Avoidance is unlikely to be warranted as the alignment is expected to lie on the existing road corridor. However, some variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). Crossing design that maintains or improves connectivity along Sandy Creek is required. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge, dual carriageway to provide for revegetation between roadways (and opportunity for high level canopy overlap). <p>Rehabilitation</p> <ul style="list-style-type: none"> Rehabilitation of compensatory habitat may be warranted (relocation unlikely to be practical for <i>Tylophora williamsii</i>) Bank stabilisation, weed control and revegetation to maintain connectivity and improve habitat integrity. <p>Offsets Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act 1999</i> (Endangered RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation along Sandy Ck upstream or downstream of the crossing.</p>
7. Sandy Creek crossing – Collector Road.	Known to contain core habitat for Vulnerable wildlife.	Vegetation is in poor condition (existing corridor). Important habitat linkage between Central Range and Isley Hills.	<p>Avoidance</p> <ul style="list-style-type: none"> Design alignment so as to avoid impact on vulnerable species. Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). Crossing design that maintains or improves connectivity along Sandy Creek is required. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> Rehabilitation of compensatory habitat may be warranted (relocation unlikely to be practical for

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<p><i>Tylophora williamsii</i>)</p> <ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to maintain connectivity and improve habitat integrity. <p>Offsets Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act</i> 1999 (Endangered RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation along Sandy Ck upstream or downstream of the crossing.</p>
8. Wright Creek crossing – Bruce Hwy	Non-core habitat for T&M wildlife.	Vegetation is in poor to very poor condition (existing corridor).	<p>Avoidance</p> <ul style="list-style-type: none"> Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets No identifiable need for offsets based on current information.</p>
9. Wright Creek crossing - Sub-Arterial 2 lane road.	Non-core habitat for T&M wildlife.	Vegetation is in poor to very poor condition.	<p>Avoidance</p> <ul style="list-style-type: none"> Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets No identifiable need for offsets based on current information.</p>
10. Ferrando Creek crossing - Sub-Arterial 2 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Remnant vegetation is generally in good condition.	<p>Avoidance</p> <ul style="list-style-type: none"> Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). Crossing design that maintains or improves connectivity along Ferrando Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p>

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation along Ferrando Ck upstream or downstream of the crossing.</p>
11. Grays Creek - Sub-arterial 2 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in poor to very poor condition (existing corridor).	<p>Avoidance</p> <ul style="list-style-type: none"> Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). Crossing design that maintains or improves connectivity along Grays Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation downstream of the crossing.</p>
12. Grays Creek tributary – Collector Road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in good to poor condition.	<p>Avoidance</p> <ul style="list-style-type: none"> Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). Crossing design that maintains or improves connectivity along Grays Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation downstream of the crossing.</p>
13. Grays Creek – Collector Road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in poor to very poor condition.	<p>Avoidance</p> <ul style="list-style-type: none"> Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> Minimise disturbance footprint. Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites).

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<ul style="list-style-type: none"> • Crossing design that maintains or improves connectivity along Grays Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation downstream of the crossing.</p>
14. No 3 Creek - Sub-Arterial 2 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is generally in poor condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that maintains or improves connectivity along No 3 Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation downstream of the crossing.</p>
15. Fantin Creek - Collector Road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in poor condition to good condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that maintains or improves connectivity along Fantin Creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation downstream of the crossing.</p>
16. Un-named waterway – Collector Road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is generally in poor condition to good condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p>

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that maintains or improves connectivity along the creek should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to maintain and improve connectivity and habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation downstream of the crossing.</p>
17. Wright Creek – Haulage Route	Non-essential habitat.	Existing roadway. No development constraint.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets</p> <p>No identifiable need for offsets based on current information.</p>
18. No. 3 Creek - Collector Road.	Known to contain core habitat for Vulnerable wildlife.	Vegetation varies in condition from poor to good. Alignment traverses No. 3 Creek where the Vulnerable <i>Tylophora williamsii</i> was found. Other creek lines traversed by alignment Highly likely to contain core habitat for Vulnerable plants. Crossing will traverse a wide section of riparian vegetation.	<p>Avoidance</p> <ul style="list-style-type: none"> • Design alignment so as to avoid impact on vulnerable species. • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that maintains or improves connectivity along No 3 Creek is required. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge. <p>Rehabilitation</p> <ul style="list-style-type: none"> • Rehabilitation of compensatory habitat may be warranted (relocation unlikely to be practical for <i>Tylophora williamsii</i>) • Bank stabilisation, weed control and revegetation to maintain connectivity and improve habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation upstream or downstream of the crossing.</p>
19. Mackey Creek - Collector Road.	Non-core habitat for T&M wildlife.	Vegetation is generally in good condition.	<p>Avoidance</p>

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<ul style="list-style-type: none"> • Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets</p> <p>No identifiable need for offsets based on current information.</p>
20. Mackey Creek – Sub-Arterial 2 lane road.	Non-core habitat for T&M wildlife.	Vegetation is in poor condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets</p> <p>No identifiable need for offsets based on current information.</p>
21. Mackey Creek - Collector Road.	Non-core habitat for T&M wildlife.	Vegetation is in very poor condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not warranted based on current information. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets</p> <p>No identifiable need for offsets based on current information.</p>
Infrastructure Site – North end of Central Range	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in excellent condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not required however, sighting of infrastructure within the defined area will depend on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites).

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			<p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain a connectivity and habitat integrity between Stony Ck and Central Range. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act</i> 1999 (Of Concern RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation of the Central Range.</p>
Infrastructure Site – Western side of Central Range	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation of high integrity. Remnant vegetation is in excellent condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not required however, sighting of infrastructure within the defined area will depend on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain a connectivity and habitat integrity of surrounding areas. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act</i> 1999 (Of Concern RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation of the Central Range.</p>
Infrastructure Site – Adjacent Upper Mackey Creek	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is in excellent condition although part of the area is cleared.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not required. As far as possible, development should be located in the cleared section if the development area. If clearing is necessary sighting will depend on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain a connectivity and habitat integrity between the foothills of Mount Peter and Mackay Creek. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for offsets are available immediately adjacent to riparian vegetation of Mount Peter.</p>
Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
1. Stony Creek tributary crossing – Sub-Arterial 4 lane	Non-core habitat for T&M wildlife.	Vegetation is generally in good condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Avoidance not warranted based on current information.

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
road.			<p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Bank stabilisation, weed control and revegetation to improve integrity and connectivity and broaden riparian buffers. <p>Offsets</p> <p>No identifiable need for offsets based on current information.</p>
2. Northern Central Range road corridor – Sub-Arterial 4 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation is generally in excellent condition.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Road design elements that facilitate fauna movement between Stony Creek and the Central Range are warranted. For example, fauna underpasses, dual carriageway to provide for revegetation between roadways (and opportunity for high level canopy overlap) <p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain and improve connectivity (broadened corridor) and habitat integrity between Stony Ck and Central Range. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Notwithstanding this, offsets may be a means of meeting relevant performance requirements under the <i>Vegetation Management Act 1999</i> (Of Concern RE). Suitable locations for offsets are available immediately adjacent to remnant vegetation along Stony Ck and the Central Range.</p>
3. Stony Creek crossing – Sub-Arterial 4 lane road.	Highly likely to contain core habitat for Vulnerable wildlife	Vegetation condition varies from good to poor. Crossing will traverse a wide section of riparian vegetation.	<p>Avoidance</p> <ul style="list-style-type: none"> • Variation of alignment may be required depending on outcomes of pre-clearance surveys. <p>Mitigation</p> <ul style="list-style-type: none"> • Minimise disturbance footprint. • Undertake pre-clearing vegetation surveys / searches for individuals of listed plant species or habitat values of importance (eg roosting sites). • Crossing design that facilitate fauna movement between Stony Creek and the Central Range should be considered. For example, a bridge design that facilitates revegetation and fauna movement beneath the bridge, dual carriageway to provide for revegetation between roadways (and opportunity for high level canopy overlap). <p>Rehabilitation</p> <ul style="list-style-type: none"> • Weed control and revegetation to maintain connectivity and improve habitat integrity. <p>Offsets</p> <p>Offsets may be warranted if disturbance to habitat of T&M cannot be avoided. Suitable locations for</p>

Infrastructure Site	Presence of T&M Core Habitat	Comments	Potential Infrastructure Planning Considerations
			offsets are available immediately adjacent to existing riparian vegetation upstream or downstream of the crossing.
