

Dear Committee members,

The approach taken in the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* offers a way of integrating threatened species recovery planning with landscape-scale conservation. It links a strategic assessment to regional planning, as proposed in Chapter 10 of the interim report of the Independent review of the Environment Protection and Biodiversity Conservation Act 1999. The approach is also consistent with the resilience practice currently being implemented in regional natural resource management planning throughout Australia.

In the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008*, threatened and other significant species were identified for each ecosystem in two local government areas using the Queensland Government's Regional Ecosystem (RE) definitions and mapping. Threats to the species in each RE were identified and ecosystem management principles developed to address these collective threats. In one of the two local government areas the management principles were linked to local government planning through a Planning Scheme Biodiversity Code and Policy. Reports from the project are attached, and additional information can be found at <http://bruceboyes.info/2004/03/biodiversity-recovery-plan-for-gatton-and-laidley-shires-south-east-queensland-2003-2008/>

Kind regards,

Bruce Boyes.

Attachments:

1. Biodiversity Recovery Plan for Gatton and Laidley Shires
2. Recovery Plan Appendix A – Regional Ecosystem Management Principles
3. Recovery Plan Appendix B – Significant Species & Ecological Communities
4. Gatton Planning Scheme Draft Biodiversity Code & Policy March 2004

Biodiversity Recovery Plan

for

Gatton and Laidley Shires South-East Queensland 2003-2008

Version 2, 5 March 2004

**Revised to be compatible with Version 4.0 of the
Queensland Herbarium Vegetation Mapping**



**Lockyer
Catchment
Association**

**A project of the Lockyer Catchment Association
(LCA) Inc. supported by funding from the
Threatened Species Network (TSN) Community
Grants Program, which is a joint program of the
World Wide Fund For Nature Australia (WWF)
and the Commonwealth Government
Natural Heritage Trust (NHT)**



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1. Introduction

1.1 Approach and scope of recovery plan

The introduction of the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* has substantially strengthened the role and effectiveness of threatened species and ecological community recovery planning. Arguably the most significant innovation is the ability to prepare multi-species, local or regional recovery plans. These new approaches and their benefits are introduced in the Environment Australia booklet *How to Go About Preparing a Recovery Plan*:

Traditionally recovery plans have been prepared for a single species covering its entire range. This may not always be the most effective way of taking action to protect threatened species or ecological communities. Where feasible, the Commonwealth is therefore encouraging the development of multi-species, local or regional recovery plans that focus on particular actions to protect the populations of threatened species in a specific area. Often species that occur in the same region are subject to the same threats. A set of actions directed towards combating those threats will benefit multiple threatened species. The advantage of a local, multi-species or regional approach is that it can focus efforts on specific populations of animals and plants and can develop local community campaigns to help implement the necessary recovery actions. Further benefits include the avoidance of duplication, greater efficiency and cost-effectiveness, and the ability to bring together a broader range of interested groups and individuals.

The favoured approach for scoping a recovery plan should be one that most efficiently meets the particular recovery requirements of the species, group of species or ecological communities covered.

The *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* implements the multi-species and local approaches by carrying out recovery planning for all of the significant species and ecological communities within defined Local Government areas:

Local recovery planning

The recovery plan covers the Local Government areas of Gatton and Laidley Shires and focuses on actions to combat the common threats to the significant species and ecological communities in the Gatton and Laidley Shire area.

Multi-species recovery planning

The recovery plan covers all of the significant species and ecological communities within Gatton and Laidley Shires, including threatened species and ecological communities listed at National and State levels and species with regional significance.

Gatton and Laidley Shires are located within, and comprise most of the land area of, the catchment of Lockyer Creek. The Lockyer Catchment is located approximately 100 km west of Brisbane, South-East Queensland and is part of the wider Brisbane River Catchment.

Parts of the 295,400 ha Lockyer Catchment have been cleared for intensive agriculture and grazing, resulting in the extensive loss and fragmentation of native vegetation communities

on the alluvial creek flats and adjacent low hills. The Lockyer Catchment uplands retain good native vegetation cover, including the 35,000 ha Helidon Hills in the north of the catchment and large continuous habitat areas along and adjoining the Great Dividing Range in the south and west of the catchment. Overall, approximately 50% of the catchment retains native vegetation cover, with this vegetation hosting a large number of significant species and ecological communities.

1.2 Significant species and ecological communities covered

The *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* covers:

1. All of the species in Gatton and Laidley Shires listed as extinct, endangered or vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* - a total of 11 flora species and 15 fauna species.
2. All of the species in Gatton and Laidley Shires listed as endangered, vulnerable or rare under the Queensland *Nature Conservation Regulation 1994*.
3. All of the ecological communities in Gatton and Laidley Shires that have a status of endangered or of-concern under the Queensland *Vegetation Management Act 1999* and Queensland *Vegetation Management (Freehold Lands) Regulation*.
4. Species in Gatton and Laidley Shires identified as having regional significance (within the South-East Queensland bioregion). Included are species where biologists have expressed concern about decline or potential decline, species that have recently been removed (downgraded) from Commonwealth and/or Queensland threatened species lists and species with a restricted or disjunct occurrence in the South-East Queensland bioregion.

1.3 Identification and conservation of critical habitat

Regulations under the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* require a recovery plan to identify, to the extent practicable, areas of habitat that are critical to the survival of the species or ecological communities covered by the plan. Regulation 7.09 states that the following matters may be taken into account when identifying critical habitat:

- Whether the habitat is used during periods of stress (e.g. flood, drought or fire);
- Whether the habitat is used to meet essential life cycle requirements (e.g. foraging, breeding, nesting, roosting, social behaviour patterns or seed dispersal processes);
- The extent to which the habitat is used by important populations;
- Whether the habitat is necessary to maintain genetic diversity and long-term evolutionary development;

- Whether the habitat is necessary for use as corridors to allow the species to move freely between sites used to meet essential life cycle requirements;
- Whether the habitat is necessary to ensure the long-term future of the species or ecological community through reintroduction or re-colonisation; and
- Any other way in which habitat may be critical to the survival of a listed threatened species or ecological community.

The *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* uses the Queensland Environmental Protection Agency (EPA) regional ecosystem classification system to identify critical habitat. The Queensland EPA report *The Conservation Status of Queensland's Bioregional Ecosystems* highlights the relevance of the regional ecosystem classification system to the multi-species and local recovery planning approaches of this recovery plan:

Regional ecosystems are an integrated entity derived from landscape pattern, geology and landform, and vegetation, so as to provide a robust classification for biodiversity planning that incorporates ecological processes at the landscape scale. This landscape approach is developed for biodiversity planning because of the paucity of information on the distribution of biota over much of the State. This classification will be useful for land use planning and a range of land management activities.

Information on the exact distribution and life cycle requirements of the significant species and ecological communities covered by this recovery plan is very limited, and will remain limited for the foreseeable future. This is because of the comparatively large areas of vegetation remaining in Gatton and Laidley Shires and limits to the resources that can be realistically allocated for the intensive studies needed to locate every population of every significant species and to determine all of the life cycle requirements of every significant species. However, the recovery of significant species and ecological communities can still be achieved by using the regional ecosystem classification system to identify critical habitat for significant species and ecological communities, and by identifying management activities aimed at maintaining and restoring regional ecosystem ecological processes. This is the aim of the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008*.

1.4 Lockyer Catchment Biodiversity Recovery Project

The preparation of the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* was an initiative of the Lockyer Watershed Management Association (LWMA) Inc. - Lockyer Landcare Group, which in 2002 merged with the Lockyer Catchment Coordinating Committee (LCCC) to form the Lockyer Catchment Association (LCA) Inc.

The recovery plan preparation was a component of the Lockyer Catchment Biodiversity Recovery Project. The project involved recovery planning and on-ground conservation works and was funded from the Threatened Species Network (TSN) Community Grants

Program, which is a joint program of the World Wide Fund For Nature Australia (WWF) and the Commonwealth Government Natural Heritage Trust (NHT).

The recovery team for the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* project has been chaired by the Lockyer Watershed Management Association (LWMA) Inc. - Lockyer Landcare Group. Members of the recovery team include representatives from Landcare and Catchment Management Groups, the Queensland Parks and Wildlife Service (QPWS) and Environmental Protection Agency (EPA), Gatton and Laidley Shire Councils, The University of Queensland Gatton Campus, the University of Southern Queensland, the Toowoomba Bird Observers Group and Greening Australia.

1.5 Recovery plan preparation and structure

This recovery plan consists of a main recovery plan document (this document) and two appendices (Appendix A and Appendix B).

Appendix A and Appendix B have been designed so that they can also be used as stand-alone documents to:

- Assist landholders in Gatton and Laidley Shires to better manage the biodiversity on their properties; and
- Assist the preparation and assessment of development and vegetation clearing applications in Gatton and Laidley Shires.

The recovery plan has been prepared using the following process:

- Step 1** An exhaustive list of significant species and ecological communities present or likely to be present in Gatton or Laidley Shires was compiled. This list now appears as Section 2 of the recovery plan, and is also reproduced in Appendix B of the recovery plan.
- Step 2** A concise description of each significant species and ecological community was prepared. The Regional Ecosystem habitat for each significant species was then determined, and a list of threats for each significant species and ecological community was developed. This description, habitat and threat information now appears as Appendix B of the recovery plan.
- Step 3** A threat matrix was prepared using the description, habitat and threat information from Step 2. In the threat matrix, significant species and ecological communities facing a common range of threats are listed under that key threat group, e.g. vegetation clearing, inappropriate fire regimes etc. A list of actions to address each threat group was then prepared. This threat matrix and recovery action plan now appears as Section 3 of the recovery plan.

- Step 4** An implementation program was developed, consisting of monitoring and evaluation processes, Local Government measures, and a work plan. This implementation program now appears as Section 4 of the recovery plan.
- Step 5** A list of the significant species found in each Regional Ecosystem in Gatton and Laidley Shires was prepared, using the Regional Ecosystem habitat information from Step 2 above. Management principles for each Regional Ecosystem were then prepared, using the threat information from Step 2 above and the action plan and implementation program information from Steps 3 and 4 above. These Regional Ecosystem management principles now appear as Appendix A of the recovery plan.

1.6 Integration with other plans and strategies

The Lockyer Catchment Association (LCA) Inc. has prepared *Caring for our Lockyer Catchment - A Natural Resource Management Strategy* to guide the sustainable management of the catchment into the future. *Caring for our Lockyer Catchment* establishes management actions under five themes: Land, Water, Biodiversity, Understanding and Participation (Education), and Integrated Planning and Coordinated Management. The management actions have been developed from extensive consultation with landholders, the community and government agencies and are consistent with the actions of the *Natural Resource Management Strategy for South-East Queensland*.

The preparation of the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* implements Action 2 under Objective B1 of the “Biodiversity” theme of *Caring for our Lockyer Catchment*.

Objective B1: Develop community-based strategies to address issues related to the following:

- Biodiversity conservation on public and private land.
- Rare and threatened species and ecosystems.
- Significant habitat areas, wildlife corridors and remnant vegetation.
- Lack of community awareness.
- Lack of biodiversity data.
- Impact of weeds and feral animals.
- Managing fire for biodiversity conservation.

Action 2: Develop and implement the *Recovery Plan for the Threatened Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland*.

1.7 Acknowledgements

The Lockyer Catchment Association (LCA) Inc. thanks the individuals, groups, and agencies that have assisted with the preparation of this recovery plan:

- *Provision and interpretation of vegetation mapping* - Paul Grimshaw & Raelene Brown, Queensland Parks and Wildlife Service; Steve Fox & Gayle Drabsch, Lockyer Catchment Centre.
- *Preparation of significant species and ecosystem lists* - Paul Grimshaw, Queensland Parks and Wildlife Service.
- *Collation of significant species, significant ecosystem and habitat data* - Paul Grimshaw, Tanya Pritchard, Dr. Ian Gynther, Harry Hines & Craig Middleton, Queensland Parks and Wildlife Service; Patrick McConnell, University of Southern Queensland.
- *Technical advice* - Dyan Currie, Veronica Schilling & Michelle Milton, Gatton Shire Council; Jennifer Roughan, Buckley Vann Town Planning Consultants; Paul Grimshaw, Dr. Ian Gynther, & Harry Hines, Queensland Parks and Wildlife Service; Patrick McConnell, University of Southern Queensland; Rod Fensham, Queensland Herbarium; Peter Young, Queensland Environmental Protection Agency; Brigitta Wimmer & Liz Dovey, Environment Australia.
- *Project funding* - Threatened Species Network (TSN) Community Grants Program; Lockyer Watershed Management Association (LWMA) Inc. - Lockyer Landcare Group; Lockyer Catchment Centre.
- *Project office* - Lockyer Catchment Centre.
- *Proof reading of final drafts* - Graeme Burkett, Secretary, Biodiversity Subcommittee of the Lockyer Catchment Association.
- *Printing, binding and distribution* - Gatton Shire Council.

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2. Significant species and ecological communities

2.1 Plant species

Table 1. Significant flora species covered by the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008.</i>				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Acacia blakei</i> subsp. <i>diphylla</i>	Blake's wattle			S
<i>Acacia leichhardtii</i>	No common name			S
<i>Acacia montana</i>	No common name			S
<i>Allocasuarina inophloia</i>	Thready (Woolly)-barked oak			S
<i>Bertya</i> sp. (Helidon Hills G. Leiper AQ457013) now includes <i>B.</i> sp. (Oakey Creek B. O'Keefe 822)	No common name			S
<i>Bertya opponens</i>	Broad-leaved Bertya			S
<i>Boronia splendida</i> also includes <i>B.</i> sp. (Kogan L.S. Smith 14102)	Splendid Boronia			S
<i>Bothriochloa bunyensis</i>	Bunya bluegrass	V	V	
<i>Brasenia schreberi</i>	Watershield		R	
<i>Callistemon formosus</i>	White cliff bottlebrush		R	
<i>Callitris baileyi</i>	Bailey's cypress pine		R	
<i>Carex lophocarpa</i>	A sedge			S
<i>Caustis blakei</i> subsp. <i>macrantha</i> (Restricted species in trade)	Foxtails, 'Koala fern'		PV	
<i>Clematis fawcettii</i>	No common name	V	V	
<i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>	Flecked flatsedge			S
<i>Cyperus squarrosus</i>	Bearded flatsedge			S
<i>Damasonium minus</i>	Starfruit			S
<i>Dichanthium setosum</i>	Bristly bluegrass	V	R	
<i>Eryngium vesiculosum</i>	Prostrate blue devil			S

Table 1 (continued).				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Eucalyptus bakeri</i>	Baker's mallee			S
<i>Eucalyptus helidonica</i>	Helidon Hills white mahogany			S
<i>Eucalyptus melanoleuca</i> (recently downgraded from R)	Yarraman ironbark			S
<i>Eucalyptus sideroxylon</i>	Mugga, red ironbark			S
<i>Eucalyptus taurina</i>	Helidon Hills ironbark		PV	
<i>Floydia praealta</i>	Ball nut, Opossum nut	V	V	
<i>Gahnia clarkei</i>	Tall sawsedge			S
<i>Grevillea quadricauda</i>	No common name	V	PV	
<i>Grevillea singuliflora</i>	Single-flower grevillea		R	
<i>Hibbertia monticola</i>	Mountain guinea flower		R	
<i>Leionema obtusifolium</i>	Helidon Hills phebalium	V	V	
<i>Leptospermum lamellatum</i>	No common name			S
<i>Lysicarpus angustifolius</i>	Budgeroo			S
<i>Macrozamia lucida</i>	Pineapple zamia			S
<i>Melaleuca groveana</i>	Grove's paperbark		R	
<i>Melastoma affine</i>	Blue tongue			S
<i>Mentha grandiflora</i>	Gorge pennyroyal			S
<i>Paspalidium grandispiculatum</i>	Helidon Hills panic	V	V	
<i>Picris evae</i>	Hawk weed	V	V	
<i>Poranthera</i> sp. (Mt Ballow G. Leiper AQ502886) includes <i>P.</i> sp. (Beerwah D. Hassall DH7431)	Mt Beerwah poranthera			S
<i>Potamogeton pectinatus</i>	Sago pondweed			S
<i>Rubus probus</i>	A native raspberry			S

Table 1 (continued).				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Sarcochilus dilatatus</i> (recently downgraded from R)	No common name			S
<i>Sophora fraseri</i>	Brush sophora	V	V	
<i>Stemmacantha australis</i>	Native thistle	V	V	
<i>Thesium australe</i>	Thesium	V	V	
<i>Triodia</i> sp.	Porcupine grass, Spinifex			S
<i>Triplarina bancroftii</i>	No common name		PR	
<i>Wahlenbergia scopulicola</i>	No common name		R	

2.2 Invertebrate species

Table 2. Significant fauna species, invertebrates - covered by the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008.</i>				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Nesolycaena albosericea</i>	Satin (blue) opal butterfly		V	

2.3 Amphibian species

Table 3. Significant amphibian species covered by the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008</i> .				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Adelotus brevis</i>	Tusked frog			S
<i>Cyclorana alboguttata</i>	Greenstripe frog			S
<i>Cyclorana brevipes</i>	Superb collared-frog			S
<i>Cyclorana verrucosa</i>	Warty water-holding frog, Rough frog			S
<i>Kyarranus kundagungan</i>	Red-and-yellow mountain-frog		V	
<i>Lechriodus fletcheri</i>	Black-soled frog		V	
<i>Limnodynastes salmini</i>	Salmon-striped frog			S
<i>Litoria brevipalmata</i>	Green-thighed frog		R	
<i>Litoria pearsoniana</i>	Cascade treefrog		E	
<i>Mixophyes fleayi</i>	Fleay's barred-frog	E	E	

2.4 Reptile species

Table 4. Significant reptile species covered by the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008.</i>				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Coeranoscincus reticulatus</i>	Three-toed snake-toothed skink	V	R	
<i>Delma torquata</i>	Collared delma	V	V	
<i>Hoplocephalus stephensii</i>	Stephen's banded snake		R	

2.5 Bird species

Table 5. Significant bird species covered by the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008.</i>				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Accipiter novaehollandiae</i>	Grey goshawk		R	
<i>Atrichornis rufescens</i>	Rufous scrub-bird		V	
<i>Calyptorhynchus lathami</i>	Glossy black-cockatoo		V	
<i>Climacteris erythrops</i>	Red-browed treecreeper		R	
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	E	E	
<i>Dasyornis brachypterus</i>	Eastern bristlebird	E	E	

Table 5 (continued).				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Ephippiorhynchus asiaticus</i>	Black-necked stork		R	
<i>Erythrorhynchus radiatus</i>	Red goshawk	V	E	
<i>Falco hypoleucos</i>	Grey falcon		R	
<i>Geophaps scripta scripta</i>	Squatter pigeon (southern subsp.)	V	V	
<i>Grantiella picta</i>	Painted honeyeater		R	
<i>Lathamus discolor</i>	Swift parrot	E		
<i>Lophoictinia isura</i>	Square-tailed kite		R	
<i>Melithreptus gularis</i>	Black-chinned honeyeater		R	
<i>Menura alberti</i>	Albert's lyrebird		R	
<i>Neophema pulchella</i>	Turquoise parrot		R	
<i>Nettapus coromandelianus</i>	Cotton pygmy-goose		R	
<i>Ninox strenua</i>	Powerful owl		V	
<i>Podargus ocellatus plumiferous</i>	Plumed frogmouth		V	
<i>Psephotus pulcherrimus</i>	Paradise parrot	X	PX	
<i>Rallus pectoralis</i>	Lewin's rail		R	
<i>Rostratula benghalensis</i>	Painted snipe		R	
<i>Stictonetta naevosa</i>	Freckled duck		R	
<i>Turnix melanogaster</i>	Black-breasted button-quail	V	V	
<i>Tyto novaehollandiae</i>	Masked owl (southern subsp.)			S
<i>Tyto tenebricosa</i>	Sooty owl		R	
<i>Xanthomyza phrygia</i>	Regent honeyeater	E	E	

2.6 Mammal species

Table 6. Significant mammal species covered by the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008</i> .				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Chalinolobus dwyeri</i>	Large-eared pied bat		R	
<i>Chalinolobus picatus</i>	Little pied bat		R	
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed quoll (southern subsp.)	V	V	
<i>Kerivoula papuensis</i>	Golden-tipped bat		R	
<i>Petrogale penicillata</i>	Brush-tailed rock wallaby	V	V	
<i>Phascolarctos cinereus</i>	Koala			S
<i>Potorous tridactylus tridactylus</i>	Long-nosed potoroo	V	V	
<i>Pseudomys novaehollandiae</i>	New Holland mouse			S
<i>Pseudomys oralis</i>	Hasting's River mouse	E	V	

2.7 Ecological communities

Table 7. Significant ecological communities covered by the *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008*.

1. Regional Ecosystem (RE) descriptions follow Sattler, P.S. & Williams, R.D. (eds) 1999. *The Conservation Status of Queensland's Bioregional Ecosystems*. Queensland Environmental Protection Agency, Brisbane.
2. Conservation status is the status under the Queensland *Vegetation Management Act 1999* and Queensland *Vegetation Management (Freehold Lands) Regulation*.

Regional Ecosystem	Floristic description (constant characteristic species in bold type)	General structure	Conservation status
RE 12.3.3	<i>Eucalyptus tereticornis</i> ± <i>Eucalyptus crebra</i> ± <i>Eucalyptus moluccana</i> ± <i>Corymbia intermedia</i> ± <i>Angophora subvelutina/floribunda</i> ± <i>Corymbia clarksoniana</i> ± <i>Corymbia tessellaris</i> .	Grassy open forest to woodland	Endangered
RE 12.3.11	<i>Eucalyptus tereticornis</i> , <i>Melaleuca quinquenervia</i> ± <i>Corymbia intermedia</i>	Tall woodland to tall open forest	Of concern
RE 12.5.6	<i>Eucalyptus pilularis</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus helidonica</i> ± <i>Corymbia trachyphloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Angophora woodsiana</i> .	Shrubby to grassy open forest	Endangered
RE 12.8.9	<i>Lophostemon confertus</i> ± (<i>Eucalyptus tereticornis</i> , <i>Eucalyptus biturbinata</i> , <i>Eucalyptus eugenioides</i> , <i>Eucalyptus melliodora</i> , <i>emergents</i>) ± <i>Allocasuarina torulosa</i> , with mixed rainforest/riparian species and fern species.	Tall open forest	Of concern
RE 12.8.19	Heterogeneous mix of trees (stunted), shrubs, forbs and grasses including <i>Eucalyptus tereticornis</i> , <i>Eucalyptus melliodora</i> , <i>Angophora floribunda</i> , <i>Acacia</i> spp., <i>Bursaria spinosa</i> var. <i>macrophylla</i> , <i>Xanthorrhoea glauca</i> , <i>Hovea</i> spp., <i>Doryanthes palmeri</i> , <i>Cassinia</i> spp., <i>Pimelia linifolia</i> , <i>Plectranthus graveolens</i> , <i>Sorghum leiocladum</i> , <i>Poa</i> spp., <i>Themeda triandra</i> , <i>Asperula conferta</i> etc.	Mid-high woodland/ open woodland or tall shrubland	Of concern

Table 7 (continued).			
<p>1. <u>Regional Ecosystem</u> (RE) descriptions follow Sattler, P.S. & Williams, R.D. (eds) 1999. <i>The Conservation Status of Queensland's Bioregional Ecosystems</i>. Queensland Environmental Protection Agency, Brisbane.</p> <p>2. <u>Conservation status</u> is the status under the Queensland <i>Vegetation Management Act 1999</i> and Queensland <i>Vegetation Management (Freehold Lands) Regulation</i>.</p>			
Regional Ecosystem	Floristic description (constant characteristic species in bold type)	General structure	Conservation status
RE 12.8.21	<i>Brachychiton rupestris</i> , <i>Flindersia australis</i> , <i>Flindersia collina</i> , <i>Vitex lignumvitae</i> , <i>Elattostachys xylocarpa</i> , <i>Ficus</i> spp., <i>Dendrocnide excelsa</i> , <i>Arytera foveolata</i> ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Erythroxylum australe</i> . (<i>Araucaria cunninghamii</i> absent in Gatton & Laidley Shires)	Microphyll closed forest to semi-evergreen vine thicket sometimes on boulder scree	Endangered
RE 12.9/10.3	<i>Eucalyptus moluccana</i> ± <i>Corymbia citriodora</i> ± <i>Eucalyptus crebra</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus major</i> .	Grassy sometimes shrubby open forest	Of concern
RE 12.9/10.6	<i>Acacia harpophylla</i> ± <i>Casuarina cristata</i> ± <i>Brachychiton rupestris</i> ± <i>Acacia fasciculifera</i> ± <i>Alectryon diversifolius</i> ± <i>Santalum lanceolatum</i> ± <i>Carissa ovata</i> .	Open forest	Endangered
RE 12.9/10.7	<i>Eucalyptus crebra</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Corymbia tessellaris</i> ± <i>Corymbia clarksoniana</i> ± <i>Allocasuarina luehmannii</i> .	Grassy woodland (sometimes with vine thicket understorey)	Of concern
RE 12.9/10.11	<i>Melaleuca tamariscina</i> subsp. <i>irbyana</i> ± <i>Eucalyptus moluccana</i> ± <i>Eucalyptus tereticornis</i> .	Low open forest or thicket with emergent eucalypts	Endangered

Table 7 (continued).			
<p>1. <u>Regional Ecosystem</u> (RE) descriptions follow Sattler, P.S. & Williams, R.D. (eds) 1999. <i>The Conservation Status of Queensland's Bioregional Ecosystems</i>. Queensland Environmental Protection Agency, Brisbane.</p> <p>2. <u>Conservation status</u> is the status under the Queensland <i>Vegetation Management Act 1999</i> and Queensland <i>Vegetation Management (Freehold Lands) Regulation</i>.</p>			
Regional Ecosystem	Floristic description (constant characteristic species in bold type)	General structure	Conservation status
RE 12.9/10.15	<i>Flindersia australis, Flindersia collina, Brachychiton rupestris, Acacia fasciculifera, Ficus spp. ± <i>Flindersia xanthoxyla</i> ± <i>Vitex lignumvitae</i> ± <i>Excoecaria dallachyana</i> ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Bursaria incana</i> ± <i>Croton insularis</i> ± <i>Drypetes deplanchei</i> ± <i>Owenia venosa</i> ± <i>Secamone elliptica</i>.</i>	Microphyll closed forest to semi-evergreen vine thicket	Endangered
RE 12.11.9	<i>Eucalyptus tereticornis, Eucalyptus crebra ± <i>Angophora subvelutina</i> ± <i>Eucalyptus melanophloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus melliodora</i> ± <i>Allocasuarina torulosa</i>.</i>	Very tall open forest/ woodland	Of concern
RE 12.12.3	<i>Corymbia citriodora subsp. variegata/Corymbia henryi, Eucalyptus crebra ± <i>Corymbia intermedia</i> ± <i>Eucalyptus major</i> ± <i>Eucalyptus melanophloia</i></i>	Tall woodland to tall open forest	Of concern

3. Threat matrix and recovery action plan

Acronyms used in recovery action plan

LCA	Lockyer Catchment Association
GSC	Gatton Shire Council
LSC	Laidley Shire Council
UQGC	The University of Queensland Gatton Campus
EPA	Queensland Environmental Protection Agency
QPWS	Queensland Parks and Wildlife Service
SEQWCG	South-East Queensland Western Catchments Group

3.1 Vegetation clearing

Threats
<p>1. Loss or fragmentation of significant species populations, significant species habitat or significant ecological communities through vegetation clearing.</p> <p><u>Significant species at risk:</u> All of the significant species covered by this recovery plan except <i>Falco hypoleucos</i> and <i>Grantiella picta</i>.</p> <p><u>Significant ecological communities at risk:</u> All of the significant ecosystems covered by this recovery plan.</p>
<p>2. Loss of trees suitable for nesting through vegetation clearing.</p> <p><u>Significant bird species at risk:</u> <i>Calyptorhynchus lathami</i>, <i>Cyclopsitta diophthalma coxeni</i>, <i>Ephippiorhynchus asiaticus</i>, <i>Erythroriorchis radiatus</i>, <i>Lophoictinia isura</i>, <i>Neophema pulchella</i>, <i>Nettapus coromandelianus</i>, <i>Ninox strenua</i>, <i>Tyto novaehollandiae</i>, <i>Tyto tenebricosa</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>.</p>
<p>3. Loss of trees with decorticating bark through vegetation clearing.</p> <p><u>Significant reptile species at risk:</u> <i>Hoplocephalus stephensii</i>.</p> <p><u>Significant bird species at risk:</u> <i>Climacteris erythrops</i>.</p>
<p>4. Loss of food trees through vegetation clearing.</p> <p><u>Significant bird species at risk:</u> <i>Calyptorhynchus lathami</i>, <i>Cyclopsitta diophthalma coxeni</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Phascolarctos cinereus</i>.</p>
<p>5. Loss of trees suitable for roosting through vegetation clearing.</p> <p><u>Significant mammal species at risk:</u> <i>Chalinolobus picatus</i>, <i>Kerivoula papuensis</i>.</p>
<p>6. Loss or fragmentation of Boronia species populations or species habitat through vegetation clearing.</p> <p><u>Significant invertebrate species at risk:</u> <i>Nesolycaena albosericea</i>.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
1. To ensure that vegetation clearing does not cause or contribute to: <ul style="list-style-type: none"> • A decline in the conservation status of Regional Ecosystems, • A decline in the conservation status of threatened species; or • The loss of regionally significant species. 	<ul style="list-style-type: none"> • Development applicants are required to demonstrate that significant species and ecological communities will not be negatively impacted by proposed developments. 	1A Develop Local Government Planning Scheme and/or Local Law mechanisms from the recommended statutory measures in Section 4.2 of this Recovery Plan.	Complete by 06/03	GSC & LSC assisted by LCA
	<ul style="list-style-type: none"> • Vegetation clearing applicants are required to demonstrate that significant species and ecological communities will not be negatively impacted by proposed clearing. 	1B Seek the incorporation of the significant species and ecological community management principles identified in this recovery plan into the South-East Queensland Regional Vegetation Management Plan (SEQ RVMP).	Complete by 06/03	LCA
	<ul style="list-style-type: none"> • Nature Refuge Agreements, Voluntary Conservation Covenants (VCCs) or Voluntary Conservation Agreements (VCAs) are secured for significant species habitats and significant ecological communities on private land. 	1C Establish Voluntary Conservation Covenant (VCC) and Voluntary Conservation Agreement (VCA) programs in Gatton and Laidley Shires (refer Section 4.2 of this Recovery Plan).	Complete by 12/03	GSC & LSC assisted by LCA
		1D Negotiate private land Nature Refuge Agreements, Voluntary Conservation Covenants (VCCs) and/or Voluntary Conservation Agreements (VCAs) in accordance with annual targets (refer Action 11A).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
	<ul style="list-style-type: none"> Land for Wildlife registrations are secured for significant species habitats and significant ecological communities on private land. 	1E Continue to resource the Land for Wildlife program.	Ongoing	GSC & LSC
		1F Negotiate Land for Wildlife registrations in accordance with annual targets (refer Action 11A).	Complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA
	<ul style="list-style-type: none"> Property management plans are prepared for private properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration. The property management plans designate significant species habitats and significant ecological communities, and describe conservation measures for these areas. 	1G Implement property management planning programs targeting properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration, in accordance with annual targets (refer Action 11A).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA
		1H Develop property management planning technical notes and workshop programs from the Regional Ecosystem Management Principles identified in Appendices A & B of this recovery plan, and use these in the property management planning program. (Refer also to Actions 5A and 5B)	Complete by 12/03, then review annually and update as required	GSC & LSC assisted by LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
	<ul style="list-style-type: none"> Significant species habitats and significant ecological communities on public land are securely protected. 	11 Seek the protection of significant species habitats and significant ecological communities on public land (including roadsides) by conversion to Conservation Park, National Park, or other protected area under the <i>Queensland Nature Conservation Act 1992</i> .	Ongoing	LCA

3.2 Inappropriate fire management practices

Threats
<p>1. The frequent low-intensity burning of shrubby understorey woodlands/forests to reduce fuel loads or promote grass growth for cattle grazing. <u>Significant flora species at risk:</u> <i>Acacia blakei</i> subsp. <i>diphylla</i>, <i>Acacia leichhardtii</i>, <i>Acacia montana</i>, <i>Bertya</i> sp. (Helidon Hills G.Leiper AQ457013), <i>Bertya opposens</i>, <i>Boronia splendida</i>, <i>Callistemon formosus</i>, <i>Callitris baileyi</i>, <i>Caustis blakei</i> subsp. <i>macrantha</i>, <i>Gahnia clarkei</i>, <i>Grevillea quadricauda</i>, <i>Grevillea singuliflora</i>, <i>Leionema obtusifolium</i>, <i>Leptospermum lamellatum</i>, <i>Melaleuca groveana</i>, <i>Melastoma affine</i>, <i>Mentha grandiflora</i>, <i>Paspalidium grandispiculatum</i>, <i>Poranthera</i> sp. (Mt Ballow G.Leiper AQ502886), <i>Rubus probus</i>, <i>Sophora fraseri</i>, <i>Triodia</i> sp., <i>Triplarina bancroftii</i>. <u>Significant invertebrate species at risk:</u> <i>Nesolycaena albosericea</i>.</p>
<p>2. The infrequent burning of grassy understorey woodlands/forests. <u>Significant flora species at risk:</u> <i>Bothriochloa bunyensis</i>, <i>Dichanthium setosum</i>, <i>Picris evae</i>, <i>Stemmacantha australis</i>, <i>Thesium australe</i>, <i>Wahlenbergia scopulicola</i>.</p>
<p>3. The construction of firebreaks in ecotones and the absence of high-intensity fire in ecotones. <u>Significant flora species at risk:</u> <i>Bertya opposens</i>.</p>

<p>4. Fire incursion into rainforest ecosystems as a result of weed or exotic pasture grass invasion.</p> <p><u>Significant flora species at risk:</u> <i>Clematis fawcettii</i>, <i>Floydia praealta</i>, <i>Sarcochilus dilatatus</i>.</p> <p><u>Significant bird species at risk:</u> <i>Turnix melanogaster</i></p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.8.21, Regional Ecosystem 12.9/10.6, Regional Ecosystem 12.9/10.15.</p>
<p>5. Degradation of habitat quality through inappropriate fire regimes</p> <p><u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i>, <i>Dasyornis brachypterus</i>, <i>Erythrorchis radiatus</i>, <i>Geophaps scripta scripta</i>, <i>Lathamus discolor</i>, <i>Lophoictinia isura</i>, <i>Melithreptus gularis</i>, <i>Neophema pulchella</i>, <i>Ninox strenua</i>, <i>Tyto novaehollandiae</i>, <i>Tyto tenebricosa</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Chalinolobus dwyeri</i>, <i>Chalinolobus picatus</i>, <i>Dasyurus maculatus maculatus</i>, <i>Petrogale penicillata</i>, <i>Phascogale cinereus</i>, <i>Potorous tridactylus tridactylus</i>, <i>Pseudomys novaehollandiae</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.5.6, Regional Ecosystem 12.8.9, Regional Ecosystem 12.8.10, Regional Ecosystem 12.8.19.</p>
<p>6. Loss of trees with decorticated bark through inappropriate fire regimes.</p> <p><u>Significant reptile species at risk:</u> <i>Hoplocephalus stephensii</i>.</p> <p><u>Significant bird species at risk:</u> <i>Climacteris erythrops</i>.</p>
<p>7. Loss or degradation of leaf litter through inappropriate fire regimes.</p> <p><u>Significant bird species at risk:</u> <i>Atrichornis rufescens</i>.</p>
<p>8. Loss, degradation or modification of leaf litter, surface rocks and logs or subsurface features through inappropriate fire regimes.</p> <p><u>Significant reptile species at risk:</u> <i>Coeranoscincus reticulatus</i>, <i>Delma torquata</i>.</p>
<p>9. Loss of, or damage to, <i>Allocasuarina</i> plant species or trees with suitable nesting sites through inappropriate fire regimes.</p> <p><u>Significant bird species at risk:</u> <i>Calyptorhynchus lathamii</i>.</p>
<p>10. Loss of, or damage to, fig trees through inappropriate fire regimes.</p> <p><u>Significant bird species at risk:</u> <i>Cyclopsitta diophthalma coxeni</i>.</p>
<p>11. Lack of recruitment of new trees caused by inappropriate fire regimes.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.3.3.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
2. To develop and implement fire management plans that balance the needs of significant species and ecological communities with the needs of landholders and land managers.	<ul style="list-style-type: none"> Fire management plans are in place for private properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration. Fire management plans are in place for Conservation Parks, National Parks and other protected areas. The fire management plans result in a decrease in the extent to which significant species habitats and significant ecological communities are subject to inappropriate fire regimes. 	2A Implement fire management planning programs targeting properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration, in accordance with annual targets (refer Action 11A). The fire management plans are to be prepared using Appendices A & B of this recovery plan and the South-East Queensland Fire and Biodiversity Consortium <i>Individual Property Fire Management Planning Kit</i> , ecological guidelines and other products. The fire management plans should preferably be components of overall property management plans (refer Action 1G).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA
		2B Seek the preparation and implementation of fire management plans for protected areas on public land.	Ongoing	LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
		2C Develop Local Government Planning Scheme and/or Local Law mechanisms that regulate development in bushfire prone areas. The mechanisms should be consistent with the South-East Queensland Fire and Biodiversity Consortium <i>Strategic Fire Management Manual</i> , ecological guidelines and other products.	Complete by 06/03	GSC & LSC

3.3 Pest plants

Threats
<p>1. Invasion by the weed species <i>Lantana camara</i> (lantana).</p> <p><u>Significant flora species at risk:</u> <i>Bothriochloa bunyenensis</i>, <i>Callistemon formosus</i>, <i>Callitris baileyi</i>, <i>Clematis fawcettii</i>, <i>Dicanthium setosum</i>, <i>Floydia praealta</i>, <i>Sarcophilus dilatatus</i>, <i>Stemmacantha australis</i>, <i>Thesium australe</i>, <i>Triplarina bancroftii</i>, <i>Wahlenbergia scopulicola</i>.</p> <p><u>Significant bird species at risk:</u> <i>Turnix melanogaster</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.3.3, Regional Ecosystem 12.8.21, Regional Ecosystem 12.9/10.3, Regional Ecosystem 12.9/10.6, Regional Ecosystem 12.9/10.7, Regional Ecosystem 12.9/10.15, Regional Ecosystem 12.11.9.</p>
<p>2. Invasion by the weed species <i>Rivina humilis</i> (coral berry).</p> <p><u>Significant flora species at risk:</u> <i>Clematis fawcettii</i>, <i>Floydia praealta</i>, <i>Sarcophilus dilatatus</i>.</p> <p><u>Significant bird species at risk:</u> <i>Turnix melanogaster</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.8.21, Regional Ecosystem 12.9/10.15.</p>

<p>3. Invasion by the weed species <i>Anredera cordifolia</i> (madeira vine), <i>Macfadyena unguis-cati</i> (cat's claw creeper) and <i>Protasparagus</i> spp. (asparagus fern).</p> <p><u>Significant flora species at risk:</u> <i>Clematis fawcettii</i>, <i>Floydia praealta</i>, <i>Sarcochilus dilatatus</i>.</p> <p><u>Significant bird species at risk:</u> <i>Turnix melanogaster</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.8.21, Regional Ecosystem 12.9/10.6, Regional Ecosystem 12.9/10.15.</p>
<p>4. Invasion by the weed species <i>Opuntia tomentosa</i> (tree pear).</p> <p><u>Significant ecological communities at risk:</u> 12.9/10.6.</p>
<p>5. Invasion by the weed species <i>Bryophyllum tubiflorum</i> (mother of millions).</p> <p><u>Significant flora species at risk:</u> <i>Stemmacantha australis</i>, <i>Thesium australe</i>.</p> <p><u>Significant ecological communities at risk:</u> 12.3.3.</p>
<p>6. Invasion by the exotic pasture grass species <i>Panicum maximum</i> (green panic).</p> <p><u>Significant flora species at risk:</u> <i>Clematis fawcettii</i>, <i>Floydia praealta</i>, <i>Sarcochilus dilatatus</i>, <i>Stemmacantha australis</i>, <i>Thesium australe</i>.</p> <p><u>Significant bird species at risk:</u> <i>Turnix melanogaster</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.3.3, Regional Ecosystem 12.8.21, Regional Ecosystem 12.9/10.6, Regional Ecosystem 12.9/10.7, Regional Ecosystem 12.9/10.15.</p>
<p>7. Degradation of habitat quality through weed invasion.</p> <p><u>Significant mammal species at risk:</u> <i>Petrogale penicillata</i>, <i>Phascolarctos cinereus</i>, <i>Potorous tridactylus tridactylus</i>.</p>
<p>8. Loss or degradation of leaf litter through weed invasion.</p> <p><u>Significant bird species at risk:</u> <i>Atrichornis rufescens</i>.</p>
<p>9. Loss, degradation or modification of leaf litter, surface rocks and logs or subsurface features through weed invasion.</p> <p><u>Significant reptile species at risk:</u> <i>Coeranoscincus reticulatus</i>, <i>Delma torquata</i>.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
3. To prevent an increase in the area of significant species habitats and significant ecological communities invaded by pest plants, and, where possible, to decrease the area currently invaded.	<ul style="list-style-type: none"> Pest plant management plans are in place for private properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration. Pest plant management plans are in place for Conservation Parks, National Parks and other protected areas. The pest plant management plans and associated on-ground actions result in preventing an increase in the area currently invaded or, where possible, result in a decrease in the area currently invaded. 	3A Prepare new or revised Pest Management Plans for Gatton and Laidley Shires. The plans are to include actions to address the pest plant species listed above.	Complete by 06/03	GSC & LSC assisted by LCA
		3B Implement pest plant management planning programs targeting properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration, in accordance with annual targets (refer Action 11A). The plans are to be prepared using Appendices A & B of this recovery plan and be consistent with Pest Management Plans for Gatton and Laidley Shires, and should preferably be components of overall property management plans (refer Action 1G).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
		3C Seek the preparation of pest plant management plans for protected areas on public land. The plans should be consistent with the Pest Management Plans for Gatton and Laidley Shires.	Ongoing	LCA
		3D Facilitate funding and labour assistance for landholders to carry out on-ground actions to control pest plants. The on-ground actions should be consistent with property management plans.	Ongoing	GSC & LSC assisted by LCA

3.4 Pest animals

Threats
<p>1. Predation by feral animals.</p> <p><u>Significant amphibian species at risk:</u> <i>Mixophyes fleayi</i>.</p> <p><u>Significant reptile species at risk:</u> <i>Coeranoscincus reticulatus</i>, <i>Delma torquata</i>, <i>Hoplocephalus stephensii</i>.</p> <p><u>Significant bird species at risk:</u> <i>Atrichornis rufescens</i>, <i>Dasyornis brachypterus</i>, <i>Geophaps scripta scripta</i>, <i>Menura alberti</i>, <i>Rallus pectoralis</i>, <i>Rostratula benghalensis</i>, <i>Turnix melanogaster</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>, <i>Petrogale penicillata</i>, <i>Phascolarctos cinereus</i>, <i>Pseudomys novaehollandiae</i>, <i>Pseudomys oralis</i>.</p>

<p>2. Possible predation by feral animals.</p> <p><u>Significant amphibian species at risk:</u> <i>Lechriodus fletcheri</i>, <i>Litoria pearsoniana</i>.</p>
<p>3. Possible predation by feral animals, including the possible predation of eggs and tadpoles by exotic fish species.</p> <p><u>Significant amphibian species at risk:</u> <i>Litoria brevipalmata</i>.</p>
<p>4. Competition from feral animals.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>, <i>Petrogale penicillata</i>.</p>
<p>5. Competition from introduced house mice.</p> <p><u>Significant mammal species at risk:</u> <i>Pseudomys novaehollandiae</i>, <i>Pseudomys oralis</i>.</p>
<p>6. Competition from introduced herbivores.</p> <p><u>Significant mammal species at risk:</u> <i>Potorous tridactylus tridactylus</i>.</p>
<p>7. Predation by domestic dogs.</p> <p><u>Significant mammal species at risk:</u> <i>Phascogale cinereus</i>.</p>
<p>8. Being caught in traps set for animals such as rabbits and foxes.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>.</p>
<p>9. Possible poisoning from the ingestion of baits set for wild dogs and dingoes.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>.</p>
<p>10. Habitat degradation through disturbance by feral pigs.</p> <p><u>Significant bird species at risk:</u> <i>Dasyornis brachypterus</i>.</p>
<p>11. Degradation of water quality and riparian vegetation arising from feral animal disturbance.</p> <p><u>Significant amphibian species at risk:</u> <i>Kyarranus kundagungan</i>.</p>
<p>12. Possible poisoning from the ingestion of cane toads (<i>Bufo marinus</i>).</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
4. To prevent an increase in the area of significant species habitats and significant ecological communities currently affected by pest animals, and, where possible, to decrease the area currently affected.	<ul style="list-style-type: none"> • Pest animal management plans are in place for private properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration. • Pest animal management plans are in place for Conservation Parks, National Parks and other protected areas. • The pest animal management plans result in either preventing an increase in the area currently affected or facilitating a decrease in the area currently affected. 	4A Prepare new or revised Pest Management Plans for Gatton and Laidley Shires. The plans are to include actions to address the pest animal species listed above.	Complete by 06/03	GSC & LSC assisted by LCA
		4B Implement pest animal management planning programs targeting properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration, in accordance with annual targets (refer Action 11A). The plans are to be prepared using Appendices A & B of this recovery plan and be consistent with Pest Management Plans for Gatton and Laidley Shires, and should preferably be components of overall property management plans (refer Action 1G).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA & UQGC

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
		4C Seek the preparation of pest animal management plans for protected areas on public land. The plans should be consistent with the Pest Management Plans for Gatton and Laidley Shires.	Ongoing	LCA
		4D Facilitate funding and labour assistance for landholders to carry out on-ground actions to control pest animals. The on-ground actions should be consistent with property management plans.	Ongoing	GSC & LSC assisted by LCA & UQGC

3.5 Lack of awareness

Threats
<p>1. A lack of awareness by landholders, community members and decision-makers in regard to the significant species and ecological communities of Gatton and Laidley Shire and their conservation requirements.</p> <p><u>Significant species at risk:</u> All of the significant species covered by this recovery plan.</p> <p><u>Significant ecological communities at risk:</u> All of the significant ecological communities covered by this recovery plan.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
5. Landholders and land managers gain an understanding of the significant species and ecological communities on their area and the conservation requirements of these species and communities.	<ul style="list-style-type: none"> The landholders of private properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration and the land managers responsible for protected areas on public land can identify their significant species and ecological communities and can demonstrate an awareness of their conservation requirements. 	5A Prepare, publish and distribute written information that assists landholders and land managers to identify significant species and ecological communities and their conservation requirements. The information should be prepared using Appendices A & B of this recovery plan, and be presented in a form that allows inclusion in property management planning kits and allows for easy updating. (Refer also to Action 1H).	Complete by 12/03, then review annually and update as required	GSC & LSC assisted by LCA
		5B Host field days, workshops and other events to educate landholders and land managers in the identification and conservation of significant species and ecological communities. (Refer also to Action 1H).	Commence by 12/03, then ongoing	GSC & LSC assisted by LCA

3.6 Inappropriate grazing practices

Threats
<p>1. Degradation of habitat through inappropriate grazing practices.</p> <p><u>Significant flora species at risk:</u> <i>Acacia leichhardtii</i>, <i>Acacia montana</i>, <i>Allocasuarina inophloia</i>, <i>Bothriochloa bunyenensis</i>, <i>Callistemon formosus</i>, <i>Callitris baileyi</i>, <i>Clematis fawcettii</i>, <i>Dicanthium setosum</i>, <i>Eucalyptus bakeri</i>, <i>Floydia praealta</i>, <i>Gahnia clarkei</i>, <i>Grevillea quadricauda</i>, <i>Grevillea singuliflora</i>, <i>Leionema obtusifolium</i>, <i>Leptospermum lamellatum</i>, <i>Macrozamia lucida</i>, <i>Melaleuca groveana</i>, <i>Melastoma affine</i>, <i>Mentha grandiflora</i>, <i>Paspalidium grandispiculatum</i>, <i>Picris evae</i>, <i>Poranthera</i> sp. (Mt. Ballow G. Leiper AQ502886), <i>Rubus probus</i>, <i>Sarcophilus dilatatus</i>, <i>Sophora fraseri</i>, <i>Stemmacantha australis</i>, <i>Thesium australe</i>, <i>Triplarina bancroftii</i>, <i>Wahlenbergia scopulicola</i>.</p> <p><u>Significant bird species at risk:</u> <i>Dasyornis brachypterus</i>, <i>Erythrorhynchus radiatus</i>, <i>Geophaps scripta scripta</i>, <i>Lathamus discolor</i>, <i>Melithreptus gularis</i>, <i>Menura alberti</i>, <i>Psephotus pulcherrimus</i>, <i>Turnix melanogaster</i>, <i>Xanthomyza phrygia</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>, <i>Petrogale penicillata</i>, <i>Phascogale cinereus</i>, <i>Potorous tridactylus tridactylus</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.5.6, Regional Ecosystem 12.8.9, Regional Ecosystem 12.8.10, Regional Ecosystem 12.8.21, Regional Ecosystem 12.9/10.6, Regional Ecosystem 12.9/10.15.</p>
<p>2. Lack of recruitment of new trees caused by inappropriate grazing practices.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.3.3.</p>
<p>3. Loss or degradation of leaf litter through inappropriate grazing practices.</p> <p><u>Significant bird species at risk:</u> <i>Atrichornis rufescens</i>.</p>
<p>4. Loss, degradation or modification of leaf litter, surface rocks and logs or subsurface features through inappropriate grazing practices.</p> <p><u>Significant reptile species at risk:</u> <i>Coeranoscincus reticulatus</i>, <i>Delma torquata</i>.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
6. To decrease the area of significant species habitats and significant ecological communities currently affected by inappropriate grazing practices.	<ul style="list-style-type: none"> Grazing management plans are in place for private grazing properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration. Grazing management plans are in place for relevant Conservation Parks, National Parks and other protected areas. The grazing management plans result in a decrease in the extent to which significant species habitats and significant ecological communities are subject to inappropriate grazing regimes. 	6A Implement grazing management planning programs targeting properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration, in accordance with annual targets (refer Action 11A). The grazing management plans are to be prepared using Appendices A & B of this recovery plan and the CSIRO publication <i>Balancing Conservation and Production: Understanding and Using Landscape Thresholds in Property Planning</i> . The grazing management plans should preferably be components of overall property management plans (refer Action 1G).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA
		6B Seek the preparation and implementation of grazing management plans for relevant protected areas on public land.	Ongoing	LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
		6C Facilitate funding and labour assistance for landholders to carry out on-ground actions to manage grazing, including the fencing of significant areas to exclude stock or control stock access. The on-ground actions should be consistent with property management plans.	Ongoing	GSC & LSC assisted by LCA

3.7 Inappropriate timber harvesting or timber thinning practices

Threats
<p>1. Degradation of habitat caused by inappropriate timber harvesting or inappropriate timber thinning practices.</p> <p><u>Significant flora species at risk:</u> <i>Acacia leichhardtii</i>, <i>Acacia montana</i>, <i>Allocasuarina inophloia</i>, <i>Bothriochloa bunyenensis</i>, <i>Callistemon formosus</i>, <i>Callitris baileyi</i>, <i>Dicanthium setosum</i>, <i>Gahnia clarkei</i>, <i>Grevillea quadricauda</i>, <i>Grevillea singuliflora</i>, <i>Leionema obtusifolium</i>, <i>Leptospermum lamellatum</i>, <i>Macrozamia lucida</i>, <i>Melastoma affine</i>, <i>Paspalidium grandispiculatum</i>, <i>Poranthera</i> sp. (Mt. Ballow G. Leiper AQ502886), <i>Rubus probus</i>, <i>Sophora fraseri</i>, <i>Triplarina bancroftii</i>.</p> <p><u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i>, <i>Erythrorchis radiatus</i>, <i>Geophaps scripta scripta</i>, <i>Lathamus discolor</i>, <i>Lophoictinia isura</i>, <i>Melithreptus gularis</i>, <i>Menura alberti</i>, <i>Neophema pulchella</i>, <i>Ninox strenua</i>, <i>Podargus ocellatus plumiferous</i>, <i>Tyto novaehollandiae</i>, <i>Tyto tenebricosa</i>, <i>Xanthomyza phrygia</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Chalinolobus dwyeri</i>, <i>Chalinolobus picatus</i>, <i>Dasyurus maculatus maculatus</i>, <i>Kerivoula papuensis</i>, <i>Petrogale penicillata</i>, <i>Phascolarctos cinereus</i>.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.5.6, Regional Ecosystem 12.8.9, Regional Ecosystem 12.8.10, Regional Ecosystem 12.9/10.3.</p>

<p>2. Loss or fragmentation of species populations or species habitat through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant flora species at risk:</u> <i>Eucalyptus helidonica</i>, <i>Eucalyptus melanoleuca</i>, <i>Eucalyptus sideroxylon</i>, <i>Eucalyptus taurina</i>, <i>Lysicarpus angustifolius</i>.</p>
<p>3. Loss of, or damage to, <i>Allocasuarina</i> plant species through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant bird species at risk:</u> <i>Calyptorhynchus lathami</i>.</p>
<p>4. Loss of, or damage to, fig trees through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant bird species at risk:</u> <i>Cyclopsitta diophthalma coxeni</i>.</p>
<p>5. Loss of trees with decorticating bark through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant reptile species at risk:</u> <i>Hoplocephalus stephensii</i>.</p> <p><u>Significant bird species at risk:</u> <i>Climacteris erythrops</i>.</p>
<p>6. Lack of recruitment of new trees caused by inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant ecological communities at risk:</u> Regional Ecosystem 12.3.3.</p>
<p>7. Loss of trees suitable for nesting through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant bird species at risk:</u> <i>Calyptorhynchus lathami</i>, <i>Cyclopsitta diophthalma coxeni</i>, <i>Ephippiorhynchus asiaticus</i>, <i>Erythrorhynchus radiatus</i>, <i>Lophoictinia isura</i>, <i>Neophema pulchella</i>, <i>Nettapus coromandelianus</i>, <i>Ninox strenua</i>, <i>Tyto novaehollandiae</i>, <i>Tyto tenebricosa</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>.</p>
<p>8. Loss of food trees through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant bird species at risk:</u> <i>Calyptorhynchus lathami</i>, <i>Cyclopsitta diophthalma coxeni</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Phascolarctos cinereus</i>.</p>
<p>9. Loss of trees suitable for roosting through inappropriate timber harvesting practices or inappropriate timber thinning practices.</p> <p><u>Significant mammal species at risk:</u> <i>Chalinolobus picatus</i>, <i>Kerivoula papuensis</i>.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
7. To decrease the area of significant species habitats and significant ecological communities currently affected by inappropriate timber harvesting and timber thinning practices.	<ul style="list-style-type: none"> Timber harvesting and timber thinning management plans are in place for private grazing properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration. Timber harvesting and timber thinning management plans are in place for relevant areas on public land. The timber harvesting and timber thinning management plans result in a decrease in the extent to which significant species habitats and significant ecological communities are subject to inappropriate grazing regimes. 	7A Implement timber harvesting and timber thinning management planning programs targeting properties covered by a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) or Land for Wildlife registration, in accordance with annual targets (refer Action 11A). The grazing management plans are to be prepared using Appendices A & B of this recovery plan and the native forest management and timber thinning guidelines referred to in the <i>Regional Vegetation Management Plan - South East Queensland</i> . The timber harvesting and timber thinning management plans should preferably be components of overall property management plans (refer Action 1G).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
		7B Seek the preparation and implementation of timber harvesting and timber thinning management plans for relevant protected areas on public land.	Ongoing	LCA

3.8 Impacts on wetlands and riparian areas

Threats
<p>1. Alteration of stream flows. <u>Significant amphibian species at risk:</u> <i>Adelotus brevis</i>, <i>Cyclorana alboguttata</i>, <i>Cyclorana brevipes</i>, <i>Cyclorana verrucosa</i>, <i>Limnodynastes salmini</i>.</p>
<p>2. Alteration of wet/dry cycles of ephemeral wetlands and ponds. <u>Significant amphibian species at risk:</u> <i>Cyclorana alboguttata</i>, <i>Cyclorana brevipes</i>, <i>Cyclorana verrucosa</i>, <i>Limnodynastes salmini</i>.</p>
<p>3. Alteration of the wet/dry cycles of ephemeral wetlands. <u>Significant flora species at risk:</u> <i>Brasenia schreberi</i>, <i>Carex lophocarpa</i>, <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>, <i>Cyperus squarrosus</i>, <i>Damasonium minus</i>, <i>Eryngium vesiculosum</i>, <i>Potamogeton pectinatus</i>. <u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i>, <i>Ephippiorhynchus asiaticus</i>, <i>Falco hypoleucos</i>, <i>Melithreptus gularis</i>, <i>Nettapus coromandelianus</i>, <i>Stictonetta naevosa</i>.</p>
<p>4. Drainage of wetlands. <u>Significant bird species at risk:</u> <i>Nettapus coromandelianus</i>, <i>Rallus pectoralis</i>, <i>Rostratula benghalensis</i>, <i>Stictonetta naevosa</i>.</p>

<p>5. Cultivation.</p> <p><u>Significant flora species at risk:</u> <i>Brasenia schreberi</i>, <i>Carex lophocarpa</i>, <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>, <i>Cyperus squarrosus</i>, <i>Damasonium minus</i>, <i>Eryngium vesiculosum</i>, <i>Potamogeton pectinatus</i>.</p> <p><u>Significant amphibian species at risk:</u> <i>Cyclorana alboguttata</i>, <i>Cyclorana brevipes</i>, <i>Cyclorana verrucosa</i>, <i>Limnodynastes salmini</i>.</p>
<p>6. Siltation, pollution or exotic water-weed invasion of streams and ponds.</p> <p><u>Significant amphibian species at risk:</u> <i>Adelotus brevis</i>.</p>
<p>7. Siltation, pollution or exotic water-weed invasion of wetlands and ponds.</p> <p><u>Significant amphibian species at risk:</u> <i>Cyclorana alboguttata</i>, <i>Cyclorana brevipes</i>, <i>Cyclorana verrucosa</i>, <i>Limnodynastes salmini</i>.</p>
<p>8. Siltation, pollution or exotic water-weed invasion of wetlands.</p> <p><u>Significant flora species at risk:</u> <i>Brasenia schreberi</i>, <i>Carex lophocarpa</i>, <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>, <i>Cyperus squarrosus</i>, <i>Damasonium minus</i>, <i>Eryngium vesiculosum</i>, <i>Potamogeton pectinatus</i>.</p> <p><u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i>, <i>Ephippiorhynchus asiaticus</i>, <i>Falco hypoleucos</i>, <i>Melithreptus gularis</i>, <i>Nettapus coromandelianus</i>, <i>Rallus pectoralis</i>, <i>Rostratula benghalensis</i>, <i>Stictonetta naevosa</i>.</p>
<p>9. Degradation of water quality and riparian vegetation arising from inappropriate timber harvesting practices, inappropriate grazing practices, weed invasion and pollution.</p> <p><u>Significant amphibian species at risk:</u> <i>Kyarranus kundagungan</i>, <i>Litoria brevipalmata</i>, <i>Litoria pearsoniana</i>, <i>Mixophyes fleayi</i>.</p>
<p>10. Modification of the vegetation fringing ephemeral wetlands and ponds through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.</p> <p><u>Significant amphibian species at risk:</u> <i>Cyclorana alboguttata</i>, <i>Cyclorana brevipes</i>, <i>Cyclorana verrucosa</i>, <i>Limnodynastes salmini</i>.</p>
<p>11. Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.</p> <p><u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i>, <i>Ephippiorhynchus asiaticus</i>, <i>Falco hypoleucos</i>, <i>Melithreptus gularis</i>, <i>Nettapus coromandelianus</i>, <i>Stictonetta naevosa</i>.</p>

<p>12. Modification of riparian vegetation and the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.</p> <p><u>Significant flora species at risk:</u> <i>Brasenia schreberi</i>, <i>Carex lophocarpa</i>, <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>, <i>Cyperus squarrosus</i>, <i>Damasonium minus</i>, <i>Eryngium vesiculosum</i>, <i>Potamogeton pectinatus</i>.</p> <p><u>Significant bird species at risk:</u> <i>Rallus pectoralis</i>, <i>Rostratula benghalensis</i>.</p>
<p>13. Clearance or fragmentation of riparian vegetation.</p> <p><u>Significant amphibian species at risk:</u> <i>Adelotus brevis</i>.</p>
<p>14. Modification of riparian vegetation through inappropriate fire regimes, inappropriate grazing practices or weed invasion.</p> <p><u>Significant amphibian species at risk:</u> <i>Adelotus brevis</i>.</p>
<p>15. Habitat degradation through inappropriate timber harvesting practices, inappropriate grazing practices, weed invasion and pollution.</p> <p><u>Significant amphibian species at risk:</u> <i>Lechriodus fletcheri</i>.</p>
<p>16. Modification of the vegetation covering the floor of ephemeral wetlands and ponds during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.</p> <p><u>Significant amphibian species at risk:</u> <i>Cyclorana alboguttata</i>, <i>Cyclorana brevipes</i>, <i>Cyclorana verrucosa</i>, <i>Limnodynastes salmini</i>.</p>
<p>17. Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.</p> <p><u>Significant flora species at risk:</u> <i>Brasenia schreberi</i>, <i>Carex lophocarpa</i>, <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>, <i>Cyperus squarrosus</i>, <i>Damasonium minus</i>, <i>Eryngium vesiculosum</i>, <i>Potamogeton pectinatus</i>.</p> <p><u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i>, <i>Ephippiorhynchus asiaticus</i>, <i>Falco hypoleucos</i>, <i>Melithreptus gularis</i>, <i>Stictonetta naevosa</i>.</p>
<p>18. Disease.</p> <p><u>Significant amphibian species at risk:</u> <i>Lechriodus fletcheri</i>, <i>Litoria brevipalmata</i>, <i>Litoria pearsoniana</i>, <i>Mixophyes fleayi</i>.</p>
<p>19. Reductions in the availability of prey species caused by the loss or modification of wetlands.</p> <p><u>Significant bird species at risk:</u> <i>Erythrorchis radiatus</i>.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
8. To develop and implement wetland and riparian area management strategies that integrate the conservation needs of significant species with agricultural land use needs.	<ul style="list-style-type: none"> Riparian areas are protected from further degradation, and where possible rehabilitated. Wetland areas are protected from further degradation, and where possible rehabilitated. 	8A Develop and implement programs to protect and rehabilitate riparian areas in accordance with Appendices A & B of this recovery plan, <i>Caring for our Lockyer Catchment - A Natural Resource Management Strategy</i> , and annual targets (refer Action 11A).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA
		8B Develop and implement programs to protect and rehabilitate wetlands in accordance with Appendices A & B of this recovery plan, the <i>Lockyer Wetlands Directory</i> , and annual targets (refer Action 11A).	Commence by 12/03, complete by 12/08 in accordance with annual targets	GSC & LSC assisted by LCA
		8C Facilitate funding and labour assistance for landholders to protect and rehabilitate riparian areas and wetlands.	Ongoing	GSC & LSC assisted by LCA

3.9 Lack of knowledge

Threats
<p>1. A lack of knowledge in regard to the presence/absence of particular significant species in the recovery plan area.</p> <p><u>Significant flora species at risk:</u> <i>Floydia praealta</i>, <i>Picris evae</i>, <i>Thesium australe</i>, <i>Triodia</i> sp., <i>Wahlenbergia scopulicola</i>.</p> <p><u>Significant invertebrate species at risk:</u> <i>Nesolycaena albosericea</i>.</p> <p><u>Significant amphibian species at risk:</u> <i>Litoria brevipalmata</i>, <i>Litoria pearsoniana</i>.</p> <p><u>Significant reptile species at risk:</u> <i>Hoplocephalus stephensii</i>.</p> <p><u>Significant bird species at risk:</u> <i>Atrichornis rufescens</i>, <i>Cyclopsitta diophthalma coxeni</i>, <i>Dasyornis brachypterus</i>, <i>Podargus ocellatus plumiferous</i>, <i>Psephotus pulcherrimus</i>, <i>Tyto tenebricosa</i>.</p> <p><u>Significant mammal species at risk:</u> <i>Dasyurus maculatus maculatus</i>, <i>Pseudomys oralis</i>.</p>
<p>2. A lack of knowledge in regard to the presence/absence of the species in Regional Ecosystems 12.3.3, 12.8.14, 12.8.19 and 12.9/10.7.</p> <p><u>Significant flora species at risk:</u> <i>Stemmacantha australis</i>.</p>
<p>3. Limited knowledge in regard to habitat requirements.</p> <p><u>Significant flora species at risk:</u> <i>Hibbertia monticola</i>.</p>
<p>4. A lack of knowledge in regard to which species of <i>Triodia</i> is present in Cambooya Shire.</p> <p><u>Significant flora species at risk:</u> <i>Triodia</i> sp.</p>

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
9.1 To determine the presence/absence of particular significant species that may potentially occur in the recovery plan area.	<ul style="list-style-type: none"> The presence of all of the significant species that may potentially occur in the recovery plan area, as listed above, is confirmed/denied. 	9A Carry out surveys and studies. Revise Sections 2 and 3 and Appendices A and B of this recovery plan as required.	Commence by 12/03, complete by 12/04	GSC & LSC assisted by LCA
9.2 To determine the presence/absence of <i>Stemmacantha australis</i> in Regional Ecosystems 12.3.3, 12.8.14, 12.8.19, and 12.9/10.7.	<ul style="list-style-type: none"> The presence of all <i>Stemmacantha australis</i> in Regional Ecosystems 12.3.3, 12.8.14, 12.8.19, and 12.9/10.7 is confirmed/denied. 	9B Carry out surveys and studies. Revise Sections 2 and 3 and Appendices A and B of this recovery plan as required.	Commence by 12/03, complete by 12/04	GSC & LSC assisted by LCA
9.3 To determine the habitat requirements of <i>Hibbertia monticola</i> .	<ul style="list-style-type: none"> Habitat requirements are identified. 	9C Carry out surveys and studies. Revise Sections 2 and 3 and Appendices A and B of this recovery plan as required.	Commence by 12/03, complete by 12/04	GSC & LSC assisted by LCA
9.4 To determine the species of <i>Triodia</i> present in Cambooya Shire.	<ul style="list-style-type: none"> The species of <i>Triodia</i> is identified. 	9D Carry out surveys and studies. Revise Sections 2 and 3 and Appendices A and B of this recovery plan as required.	Commence by 12/03, complete by 12/04	GSC & LSC assisted by LCA

3.10 Other threats

Threats
1. Over-harvesting for flora trade. <u>Significant flora species at risk:</u> <i>Caustis blakei</i> subsp. <i>macrantha</i> .
2. Inappropriate road maintenance activities. <u>Significant flora species at risk:</u> <i>Eucalyptus bakeri</i> , <i>Grevillea quadricauda</i> , <i>Triplarina bancroftii</i> .
3. Traffic. <u>Significant bird species at risk:</u> <i>Tyto novaehollandiae</i> . <u>Significant mammal species at risk:</u> <i>Phascolarctos cinereus</i> .
4. Illegal collection. <u>Significant flora species at risk:</u> <i>Sarcophilus dilatatus</i> .
5. Illegal collection of eggs. <u>Significant bird species at risk:</u> <i>Calyptorhynchus lathami</i> , <i>Cyclopsitta diophthalma coxeni</i> , <i>Erythrorhynchus radiatus</i> .
6. Deliberate shooting. <u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i> , <i>Erythrorhynchus radiatus</i> , <i>Lophoictinia isura</i> .
7. Reduction in breeding success caused by pesticide residues in the food chain. <u>Significant bird species at risk:</u> <i>Erythrorhynchus radiatus</i> .
8. Possible reduction in breeding success caused by pesticide residues in the food chain. <u>Significant bird species at risk:</u> <i>Accipiter novaehollandiae</i> .
9. Abandonment of nest sites caused by humans coming too close to nest sites. <u>Significant bird species at risk:</u> <i>Erythrorhynchus radiatus</i> .

10. Possible reduction in prey availability.Significant bird species at risk: *Tyto novaehollandiae*.**11. Possible competition for nectar from some larger species of honeyeater which have benefited from habitat fragmentation.**Significant bird species at risk: *Xanthomyza phrygia*.

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
10.1 To prevent the over-harvesting of <i>Caustis blakei</i> subsp. <i>macrantha</i> .	<ul style="list-style-type: none"> Harvesting activities do not contribute to a decline in species populations and numbers. 	10A Develop and implement measures to prevent the over-harvesting of <i>Caustis blakei</i> subsp. <i>macrantha</i> .	Complete by 12/03	EPA/QPWS
10.2 To prevent damage to populations of <i>Eucalyptus bakeri</i> , <i>Grevillea quadricauda</i> and <i>Triplarina bancroftii</i> from road maintenance activities.	<ul style="list-style-type: none"> Road maintenance activities do not contribute to a decline in species populations and numbers. 	10B Develop and implement measures to protect <i>Eucalyptus bakeri</i> , <i>Grevillea quadricauda</i> and <i>Triplarina bancroftii</i> and their habitats from damage due to road maintenance activities.	Complete by 12/03	GSC & LSC assisted by LCA
10.3 To prevent traffic causing the death or injury of <i>Phascolarctos cinereus</i> and <i>Tyto novaehollandiae</i> .	<ul style="list-style-type: none"> Traffic does not contribute to a decline in species populations and numbers. 	10C Develop and implement measures to protect <i>Phascolarctos cinereus</i> and <i>Tyto novaehollandiae</i> from death or injury due to traffic.	Complete by 12/03	GSC & LSC assisted by LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
10.4 To discourage the illegal collection of <i>Sarcophilus dilatatus</i> .	<ul style="list-style-type: none"> Known locations of <i>Sarcophilus dilatatus</i> are not publicly revealed. 	10D Ensure that <i>Sarcophilus dilatatus</i> locations on GIS or other databases are not shown or made available to the public.	Commence immediately, then ongoing	GSC & LSC assisted by LCA
10.5 To discourage human contact with nest sites of <i>Calyptorhynchus lathami</i> , <i>Cyclopsitta diophthalma coxeni</i> and <i>Erythrotriorchis radiatus</i> .	<ul style="list-style-type: none"> Nest site locations are not publicly revealed. 	10E Ensure that nest site locations on GIS or other databases are not shown or made available to the public.	Commence immediately, then ongoing	GSC & LSC assisted by LCA
10.6 To discourage the deliberate shooting of <i>Accipiter novaehollandiae</i> , <i>Erythrotriorchis radiatus</i> and <i>Lophoictinia isura</i> .	<ul style="list-style-type: none"> Education programs are implemented. 	10F Education programs are implemented to promote an awareness of the values and benefits of <i>Accipiter novaehollandiae</i> , <i>Erythrotriorchis radiatus</i> and <i>Lophoictinia isura</i> . (Refer also to Actions 5A & 5B).	Commence by 12/03, then ongoing	GSC & LSC assisted by LCA
10.7 To encourage the reduced use of pesticides in areas frequented by <i>Erythrotriorchis radiatus</i> and <i>Accipiter novaehollandiae</i> .	<ul style="list-style-type: none"> Education programs are implemented. 	10G Education programs are implemented to promote an awareness of the values and benefits of <i>Erythrotriorchis radiatus</i> and <i>Accipiter novaehollandiae</i> and the risk that pesticides pose to the survival of these species. (Refer also to Actions 5A & 5B).	Commence by 12/03, then ongoing	GSC & LSC assisted by LCA

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
10.8 To determine whether reduction in prey availability is affecting <i>Tyto novaehollandiae</i> . If so, to initiate recovery actions.	<ul style="list-style-type: none"> Studies are carried out. 	10H Carry out studies to determine whether reduction in prey availability is affecting <i>Tyto novaehollandiae</i> . Develop and implement management strategies if required.	Commence by 12/03, complete by 12/05	GSC & LSC assisted by LCA & QPWS
10.9 To determine if competition for nectar from some larger species of honeyeater is affecting <i>Xanthomyza phrygia</i> . If so, to initiate recovery actions.	<ul style="list-style-type: none"> Studies are carried out. 	10I Carry out studies to determine if competition for nectar from some larger species of honeyeater is affecting <i>Xanthomyza phrygia</i> . Develop and implement management strategies if required.	Commence by 12/03, complete by 12/05	GSC & LSC assisted by LCA & QPWS

3.11 Supporting actions

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
11.1 To establish targets for recovery plan actions.	<ul style="list-style-type: none"> Annual targets for each of the years 2003 to 2008 are established and incorporated into the Regional Natural Resource Management Plan for the Western Catchments of South East Queensland. The progress of recovery plan implementation meets or exceeds the annual targets. 	<p>11A Establish annual targets for each of the years 2003 to 2008 for the implementation of Actions 1D, 1F, 1G, 2A, 3B, 4B, 6A, 7A, 8A and 8B. The targets must be:</p> <ul style="list-style-type: none"> Quantifiable (i.e. state the number of properties or hectare area which will be achieved). Location-specific (i.e. state the exact sub-catchment or bushland area where implementation will occur). Sufficient to ensure the achievement of all relevant recovery objectives and performance criteria. Developed using Appendices A & B of this recovery plan, EPA <i>Southeast Queensland Biodiversity Planning Assessment, Lockyer Wetlands Directory</i>, and any other relevant documents. 	Complete by 12/03	LCA assisted by GSC, LSC & SEQWCG

Recovery objective	Performance criteria	Actions	Timeline	Responsibility
11.2 To secure an adequate level of resourcing for the implementation of recovery plan actions.	<ul style="list-style-type: none"> A level of resourcing is secured that will enable the implementation of all recovery plan actions in accordance with determined targets. 	11B Allocate and/or seek funding and other resources that will enable the implementation of all recovery plan actions in accordance with the targets determined under Action 11A. Funding and other resources are to be allocated from the budgets of Gatton and Laidley Shire Councils and sought from programs such as the Natural Heritage Trust (NHT), National Action Plan for Salinity and water Quality (NAPSWQ) and Green Corps.	Commence by 12/03, then ongoing	GSC & LSC assisted by LCA & SEQWCG

4. Implementation program

4.1 Monitoring and evaluation

Monitoring and evaluation of this recovery plan is to be carried out annually by the Biodiversity Sub-Committee of the Lockyer Catchment Association (LCA) Inc. and reported to Environment Australia, Queensland Environmental Protection Agency (EPA), Queensland Parks and Wildlife Service (QPWS), Queensland Department of Natural Resources and Mines (DNR&M), South East Queensland Western Catchments Group (SEQWCG), Gatton Shire Council and Laidley Shire Council. The first monitoring and evaluation is to be carried out by the Biodiversity Sub-Committee in February 2004.

The monitoring and evaluation process will include:

- Monitoring and evaluating the progress made in implementing recovery plan actions; and
- Monitoring and evaluating the efficacy of recovery plan actions.

4.1.1 Progress made in implementing recovery plan actions

Monitoring and evaluating the progress made in implementing recovery plan actions will include an assessment of:

- The number of development applications and clearing permit applications assessed using the Regional Ecosystem Management Principles in Appendices A & B of this recovery plan.
- The number of hectares of private land covered by a conservation agreement (Nature Refuge Agreement, Voluntary Conservation Covenant, Voluntary Conservation Agreement or Land for Wildlife registration).
- The existence of targets for recovery plan actions.
- The amount of funding secured for the implementation of recovery actions.
- The proportion of conservation agreement land covered by property management plans, and the extent to which property management plans designate significant species habitats and significant ecological communities.
- The number of hectares of public land secured by conversion to Conservation Park or National Park or other form of protected area.
- The proportion of private and public land covered by a fire management plan.
- The proportion of private and public land covered by a pest plant management plan.
- The proportion of private and public land covered by a pest animal management plan.
- The proportion of landholders and land managers who can identify the significant species and ecological communities on their land and can demonstrate an awareness of their conservation requirements.
- The proportion of private and public land covered by a grazing management plan.
- The proportion of private and public land covered by a timber harvesting and thinning management plan.
- The number of wetlands protected or rehabilitated.

- The length of riparian vegetation protected or rehabilitated.

4.1.2 The efficacy of recovery plan actions

Monitoring and evaluating the efficacy of recovery plan actions will include an assessment of:

- The area that has been cleared of (a) endangered Regional Ecosystems, (b) of-concern Regional Ecosystems, (c) not-of-concern Regional Ecosystems that are significant species habitat, and (d) wetlands.
- The extent to which fire management plans have resulted in a decrease in the significant species habitats and significant ecological communities that are subject to inappropriate fire regimes. This will be determined using representative monitoring sites.
- The extent to which pest plant management plans and associated on-ground actions have resulted in preventing an increase in the area currently invaded or have resulted in a decrease in the area currently invaded. This will be determined using representative monitoring sites.
- The extent to which pest animal management plans and associated on-ground actions have resulted in preventing an increase in the area currently affected or have resulted in a decrease in the area currently affected. This will be determined using representative monitoring sites.
- The extent to which wetland management plans and associated on-ground actions have resulted in preventing an increase in the area currently affected by threats or have resulted in a decrease in the area currently affected by threats. This will be determined using representative monitoring sites.
- The extent to which grazing management plans, sustainable timber thinning practices and other recovery actions result in the maintenance of, or improvement of, habitat quality. This will be determined using representative monitoring sites.

4.2 Local Government measures

The Lockyer Catchment Association (LCA) Inc. will work with Gatton Shire Council and Laidley Shire Council to assist them to adopt the following recommended conservation measures. These measures implement recovery plan Actions 1A and 1C (refer to Section 3.1).

4.2.1 Statutory measures

Development proposals in Gatton and Laidley Shires should be assessed using the Regional Ecosystem management principles identified in Appendices A and B of this recovery plan. To facilitate this assessment, Gatton and Laidley Shire Council should each prepare either a Planning Scheme Code/Policy or Local Law using:

- Appendices A and B of this recovery plan;
- *Gatton Shire Vegetation Mapping Report* (Grimshaw, 2001) or *An Assessment of Native Vegetation Areas within Laidley Shire* (Fox et al, 1997);

- *Land Use Planning Handbook for the Lockyer Catchment* (Boyes, 2001);
- The Queensland Environmental Protection Agency *Southeast Queensland Biodiversity Planning Assessment* (current version); and
- The recommended Performance Criteria and Acceptable Measures from the table below.

Recommended Performance Criteria	Recommended Acceptable Measures
<p>P1. Populations of significant species and their habitats and other identified significant habitat areas must be retained, or where degraded, rehabilitated, and the impacts of development must be minimised.</p>	<p>A1.1 Known populations of significant species that occur in the area are conserved.</p> <p>A1.2 Surveys are undertaken to identify any additional populations and these are also conserved.</p> <p>A1.3 An environmental management plan is prepared and implemented which addresses matters identified in Appendices A and B of the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008</i>.</p> <p>A1.4 Where applicable, a fire management plan is prepared as part of an environmental management plan, that demonstrates fire regimes suitable for conserving significant species and ecological communities.</p> <p>A1.5 Biodiversity assessment information accompanying applications is comprehensive, competent and adequate.</p>
<p>P2. The relatively unfragmented nature of native vegetation areas must be maintained.</p>	<p>A2.1 Development occurs within existing cleared areas on a site.</p> <p>A2.2 There is no or minimal clearance of vegetation in identified significant habitat areas.</p>
<p>P3. Ecological corridors must be identified and retained or re-established to maintain, improve or create connectivity between habitat areas and to allow wildlife movement between habitat areas.</p>	<p>A3.1 Development does not occur in locations that would preclude or significantly diminish the retention or re-establishment of ecological corridors linking with identified significant habitat areas.</p>

	A3.2 Degraded ecological corridors are rehabilitated or re-established.
<p>P4. Development layout, planning and construction must minimise impacts on the edges of native vegetation (“edge effects”) as a result of:</p> <ul style="list-style-type: none"> • Garden plants that are potential bushland weeds; • Domestic animals that could prey on native wildlife; • Rubbish dumping that could cause pollution of habitat or pose a risk to wildlife that may forage rubbish for food; • Light pollution that may pose a risk to wildlife, in particular nocturnal wildlife; • Noise pollution that may pose a risk to wildlife; and • Vandalism that may pose a risk to native vegetation and wildlife. 	<p>A4.1 Appropriate separation or buffering is provided to minimise the impact of edge effects.</p> <p>A4.2 Landscaping predominantly involves the use of native species typical of the particular ecosystem.</p> <p>A4.3 Landscaping does not involve any species known to invade or that could potentially invade significant habitat areas.</p> <p>A4.4 An environmental management plan is prepared and implemented which addresses measures to control edge effects.</p>
<p>P5. Development layout, planning and construction must minimise impacts on waterways and wetlands, with regard to:</p> <ul style="list-style-type: none"> • Surface and ground water flow patterns of waterways and wetlands; • The effects of siltation or pollution; and • The wet/dry cycles of seasonally inundated (ephemeral) wetlands. 	<p>A5.1 Appropriate separation or buffering is provided to minimise impacts on waterways or wetlands.</p> <p>A5.2 Riparian or wetland vegetation and habitat is retained or, where in a degraded state, rehabilitated.</p> <p>A5.3 Specific management principles outlined Appendices A and B of the <i>Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008</i> and <i>Lockyer Wetlands Directory</i> are implemented.</p>
P6. Significant habitat areas are given secure protection.	A6.1 Significant habitat areas are subject to a Nature Refuge Agreement, Voluntary Conservation Agreement, Voluntary Conservation Covenant, or Land for Wildlife registration, or are transferred to community ownership or control (such as Council or community group trusteeship).

4.2.2 Voluntary measures

The biodiversity policies of Gatton and Laidley Shires should include a range of voluntary measures to complement the statutory measures in Section 4.2.1

The clearance of native vegetation in Gatton and Laidley Shires is now at a very low level, with most landholders valuing and appreciating their native vegetation. However, some clearance of significant vegetation is still occurring. In this context, the best outcomes will be achieved through a balance of both statutory and voluntary measures.

The voluntary measures should comprise conservation agreement programs and landholder incentives. The conservation agreement programs should include Land for Wildlife and both Voluntary Conservation Agreements (VCAs) and Voluntary Conservation Covenants (VCCs). The conservation agreement program developed by Crows Nest Shire Council provides a useful model. Recommended landholder incentives for Gatton and Laidley Shires are:

- *Bonus development rights - ecotourism.* Landholders who want to establish an ecotourism enterprise on their property receive discounts on application fees and other charges in return for conserving areas of native vegetation.
- *Bonus development rights - subdivision.* Landholders are given the right to carry out limited subdivision of their property in return for conserving areas of native vegetation.
- *Valuation concessions.* Landholders are given valuation concessions in return for conserving areas of native vegetation.
- *Rate rebates.* Landholders are given a rebate on their annual rates bill in return for conserving areas of native vegetation.
- *Management assistance.* Landholders are given grant funding to assist them with the costs of managing areas of native vegetation (e.g. grant funding to assist with pest management, fire management, or grazing management).
- *Significant species and ecological community technical notes.* Landholders are given technical notes that help them to identify and manage the significant species and ecological communities on their properties.

Further information about recommended landholder incentives for Gatton and Laidley Shires can be found in Chapter 4 of the *Gatton Shire Biodiversity Strategy*.

4.2.3 Upgrading of GIS data sets

To facilitate the implementation of the measures outlined in Sections 4.2.1 and 4.2.2, both Gatton Shire Council and Laidley Shire Council will need to upgrade their Geographic Information System (GIS) data sets to include a new layer showing the known locations of all of the significant species identified in Appendix B of this recovery plan. This data should be compiled from all known sources including the Queensland Parks and Wildlife Service (QPWS) and Lockyer Catchment Centre, and updated regularly. Recovery plan Actions 10D and 10E will need to be addressed when establishing the new data set. Significant species location information from the new GIS data set should be made available to any interested landholders and development applicants on request.

4.3 Implementation work plan

Work Plan for 2003		
Implementation date	Actions	Lead responsibility
Commence immediately	10D, 10E	GSC & LSC
Commence immediately	Establish monitoring and evaluation sites in accordance with Section 4.1.2	GSC & LSC
Complete by 06/03	1A, 2C, 3A, 4A	GSC & LSC
Complete by 06/03	1B	LCA
Complete by 12/03	11A	LCA
Complete by 12/03	1C, 1H, 5A, 10B, 10C	GSC & LSC
Complete by 12/03	10A	EPA/QPWS
Commence by 12/03	1D, 1G, 2A, 3B, 4B, 5B, 6A, 7A, 8A, 8B, 9A, 9B, 9C, 9D, 10F, 10G, 10H, 10I, 11B	GSC & LSC
Ongoing	1E, 3D, 4D, 6C, 8C, 10D, 10E, 10F, 10G, 11B	GSC & LSC
Ongoing	1I, 2B, 3C, 4C, 6B, 7B	LCA

Notes:

Work Plan for 2004		
Implementation date	Actions	Lead responsibility
Complete by 02/04	Annual monitoring and evaluation, in accordance with Section 4.1	LCA
Complete by 12/04	9A, 9B, 9C, 9D	GSC & LSC
Achieve annual target by 12/04	1D, 1F, 1G, 2A, 3B, 4B, 6A, 7A, 8A, 8B	GSC & LSC
Review annually, update as required	1H, 5A	GSC & LSC
Ongoing	1E, 3D, 4D, 5B, 6C, 8C, 10D, 10E, 10F, 10G, 11B	GSC & LSC
Ongoing	1I, 2B, 3C, 4C, 6B, 7B	LCA

Notes:

Work Plan for 2005		
Implementation date	Actions	Lead responsibility
Complete by 02/05	Annual monitoring and evaluation, in accordance with Section 4.1	LCA
Complete by 12/05	10H, 10I	GSC & LSC
Achieve annual target by 12/05	1D, 1F, 1G, 2A, 3B, 4B, 6A, 7A, 8A, 8B	GSC & LSC
Review annually, update as required	1H, 5A	GSC & LSC
Ongoing	1E, 3D, 4D, 5B, 6C, 8C, 10D, 10E, 10F, 10G, 11B	GSC & LSC
Ongoing	1I, 2B, 3C, 4C, 6B, 7B	LCA

Notes:

Work Plan for 2006		
Implementation date	Actions	Lead responsibility
Complete by 02/06	Annual monitoring and evaluation, in accordance with Section 4.1	LCA
Achieve annual target by 12/06	1D, 1F, 1G, 2A, 3B, 4B, 6A, 7A, 8A, 8B	GSC & LSC
Review annually, update as required	1H, 5A	GSC & LSC
Ongoing	1E, 3D, 4D, 5B, 6C, 8C, 10D, 10E, 10F, 10G, 11B	GSC & LSC
Ongoing	1I, 2B, 3C, 4C, 6B, 7B	LCA

Notes:

Work Plan for 2007		
Implementation date	Actions	Lead responsibility
Complete by 02/07	Annual monitoring and evaluation, in accordance with Section 4.1	LCA
Achieve annual target by 12/07	1D, 1F, 1G, 2A, 3B, 4B, 6A, 7A, 8A, 8B	GSC & LSC
Review annually, update as required	1H, 5A	GSC & LSC
Ongoing	1E, 3D, 4D, 5B, 6C, 8C, 10D, 10E, 10F, 10G, 11B	GSC & LSC
Ongoing	1I, 2B, 3C, 4C, 6B, 7B	LCA

Notes:

Work Plan for 2008		
Implementation date	Actions	Lead responsibility
Complete by 02/08	Annual monitoring and evaluation, in accordance with Section 4.1	LCA
Achieve annual target by 12/08	1D, 1F, 1G, 2A, 3B, 4B, 6A, 7A, 8A, 8B	GSC & LSC
Review annually, update as required	1H, 5A	GSC & LSC
Ongoing	1E, 3D, 4D, 5B, 6C, 8C, 10D, 10E, 10F, 10G, 11B	GSC & LSC
Ongoing	1I, 2B, 3C, 4C, 6B, 7B	LCA
Complete by 12/08	Review and revise recovery plan to create a new recovery plan for 2009 - 2014	LCA
Complete by 02/09	Annual monitoring and evaluation, in accordance with Section 4.1	LCA

Notes:

Regional Ecosystem (RE) Management Principles

for

Gatton and Laidley Shires South-East Queensland

**Appendix A to the Biodiversity Recovery Plan
for Gatton and Laidley Shires
South-East Queensland 2003-2008**

Version 2, 5 March 2004

**Revised to be compatible with Version 4.0 of the
Queensland Herbarium Vegetation Mapping**



Lockyer

Catchment

Association

**A project of the Lockyer Catchment Association (LCA) Inc.
supported by funding from the Threatened Species Network (TSN)
Community Grants Program, which is a joint program of the
World Wide Fund For Nature Australia (WWF) and the
Commonwealth Government Natural Heritage Trust (NHT)**



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1. Using this document

1.1 Introduction

This document should be used in conjunction with *Descriptions, Habitat and Threats for the Significant Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland* (Appendix B to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008), which can be viewed or purchased at the Lockyer Catchment Centre.

This document has been prepared to:

- Assist landholders in Gatton and Laidley Shires to better manage the biodiversity on their properties; and
- Assist the preparation and assessment of development and vegetation clearing applications in Gatton and Laidley Shires.

This document has been prepared as Appendix A to the *Biodiversity Recovery Plan for Gatton and Laidley Shires South-East Queensland 2003-2008*. The full *Biodiversity Recovery Plan* can be viewed or purchased at the Lockyer Catchment Centre.

1.2 How to use this document

This document should be used as follows:

Step 1	Obtain <u>Version 4.0 of the Queensland Herbarium Regional Ecosystem mapping</u> for the subject land from Gatton Shire Council, Laidley Shire Council, the Lockyer Catchment Centre, or an office of the Queensland Department of Natural Resources, Mines and Energy (fees may apply for access to, or the copying of, mapping products).
Step 2	From the Queensland Herbarium Regional Ecosystem mapping, identify which Regional Ecosystems are present on the subject land.
Step 3	Refer to the relevant <u>Regional Ecosystem profiles</u> in this document.
Step 4	<p>Consult the <u>Vegetation mapping & assessment references</u> given for each Regional Ecosystem, using the following reports and accompanying maps (fees may apply for access to, or the copying of, mapping and report products):</p> <ul style="list-style-type: none">• In Gatton Shire - <i>Gatton Shire Vegetation Mapping Report</i>, which can be viewed at Gatton Shire Council or the Lockyer Catchment Centre.• In Laidley Shire - <i>An Assessment of Native Vegetation Areas within Laidley Shire</i>, which can be viewed at Laidley Shire Council or the Lockyer Catchment Centre.

Step 5	Obtain <u>Significant Species mapping</u> for the subject land from Gatton Shire Council or Laidley Shire Council (fees may apply for access to, or the copying of, mapping products).
Step 6	<p><u>Conserve known populations</u> of the significant species listed for each Regional Ecosystem. Where possible, carry out surveys to identify any <u>additional populations</u> of the significant species and conserve these populations.</p> <p>The significant species listed for each Regional Ecosystem are the species that are known to utilise that Regional Ecosystem habitat within the Gatton and Laidley Shire area. These species may or may not be present in patches of that Regional Ecosystem on a given property at a given time. However, the presence or absence of a particular species at any given time does not mean that it is not using the Regional Ecosystem habitat at other times. For example, a particular bird species may utilise several scattered patches of the same Regional Ecosystem habitat. It may be found in only one patch at a given time, but need all of the patches for its survival. In another example, a particular plant species may appear to be absent, but is actually present as seeds that will germinate after the next fire.</p> <p>Any species shown as having a ‘potential occurrence’ has not been recorded in that Regional Ecosystem habitat within the Gatton and Laidley Shire area, but is likely to be present.</p> <p>For more detailed information in regard to the conservation of particular significant species, refer to the accompanying document <i>Descriptions, Habitat and Threats for the Significant Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland</i> (Appendix B to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008).</p>
Step 7	<p><u>If development or vegetation clearing is proposed</u>, determine whether approval is required from the relevant Council, and whether the clearing is permissible under State and Commonwealth legislation. In the first instance, consult the relevant Council (either Gatton or Laidley Shire Council) and the Queensland Department of Natural Resources, Mines and Energy.</p> <p>Both Gatton and Laidley Shire Councils have policies in place that restrict vegetation clearing in certain circumstances. The Department of Natural Resources, Mines and Energy administers State land clearing legislation. Approval from the Commonwealth Government may be required prior to clearing the habitat of any nationally listed threatened species - refer to the ‘Status EPBC’ column in the tables in Section 2 of the accompanying document <i>Descriptions, Habitat and Threats for the Significant Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland</i> (Appendix B to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008).</p>

Step 8	<p>Prepare a <u>property management plan</u> that conserves the habitat of the significant species listed for each Regional Ecosystem. The property management plan should address:</p> <ul style="list-style-type: none"> • <u>Vegetation assessment reference information</u> from Step 4 above. • <u>Habitat and threat information</u> from the accompanying document <i>Descriptions, Habitat and Threats for the Significant Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland</i> (Appendix B to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008). • <u>Appropriate land use and management</u>. See (a) <i>Land Use Planning Handbook for the Lockyer Catchment</i>, (b) <i>Living in the Lockyer - A Landholders Guide to Land, Water, Wildlife and Vegetation Management in the Lockyer Catchment and Surrounds</i> and (c) <i>Living in the Lockyer - Property Management Planning Kit</i>, all of which can be viewed or purchased at the Lockyer Catchment Centre. • <u>Appropriate fire regimes</u>. See the products and materials from the South-East Queensland Fire and Biodiversity Consortium, which can be downloaded from http://www.gu.edu.au/school/asc/fire2/home.html • <u>Appropriate grazing practices</u>. See the CSIRO publication <i>Balancing Conservation and Production: Understanding and Using Landscape Thresholds in Property Planning</i>, which can be downloaded from http://www.cse.csiro.au/research/Program3/SR/Learning%20Module.PDF • <u>Appropriate timber harvesting and thinning practices</u>. Consult the Department of Natural Resources, Mines and Energy. • <u>Actions for pest plant and animal control</u>. See the Department of Natural Resources, Mines and Energy fact sheets at http://www.nrm.qld.gov.au/factsheets/index.phtml <p><u>Note:</u> Fees may apply for access to, or the copying of, some of the above information.</p>
Step 9	<p>Where possible, establish a Nature Refuge Agreement, Voluntary Conservation Covenant (VCC), Voluntary Conservation Agreement (VCA) and/or Land for Wildlife registration. For further information on these programs consult Gatton Shire Council, Laidley Shire Council, the Lockyer Catchment Centre.</p>

The Lockyer Catchment Centre is located at the corner of Hunt and Railway Streets, Forest Hill and can be contacted on 07 5465 4400. Full reference listings for the above information sources can be found in the *Biodiversity Recovery Plan for Gatton and Laidley Shires South-East Queensland 2003-2008*, which can be viewed or purchased at the Lockyer Catchment Centre.

2. Regional Ecosystem 12.3.2

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 3d • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis (Blackbutt), Eucalyptus microcorys (Tallow wood) ± <i>Eucalyptus tereticornis</i>, <i>Corymbia intermedia</i>, <i>Lophostemon confertus</i>, <i>Lophostemon suaveolens</i>, <i>Archontophoenix cunninghamiana</i> (occasional), <i>Callistemon viminalis</i> and rainforest tree and shrub species</i>
General structure Extremely/very tall open forest/woodland
Significant RE status No concern at present
Significant plants <i>Macrozamia lucida</i> (Pineapple zamia)
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog)
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala)

3. Regional Ecosystem 12.3.3

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 3b, 3c Laidley Shire vegetation code(s) 1a, 1b, 11, 11b
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum) ± <i>Eucalyptus crebra</i> ± <i>Corymbia citriodora</i> ± <i>Corymbia intermedia</i> ± <i>Angophora subvelutina/floribunda</i> ± <i>Corymbia clarksoniana</i> ± <i>Corymbia tessellaris</i>
General structure Grassy open forest to woodland
Significant RE status Endangered
Significant plants <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence) <i>Thesium australe</i> (Thesium) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog) <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk)
Significant mammals <i>Phascolarctos cinereus</i> (Koala)

4. Regional Ecosystem 12.3.7

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 3a • Laidley Shire vegetation code(s) 2
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Casuarina cunninghamiana</i> (River she-oak), <i>Callistemon viminalis</i> (Weeping bottlebrush) ± <i>Waterhousea floribunda</i> ± <i>Castanospermum australe</i> ± <i>Lomandra hystrix/longifolia</i> ± <i>Melaleuca bracteata</i> ± <i>Lophostemon suaveolens</i> ± <i>Maclura cochinchinensis</i>
General structure Shrubby open forest to woodland sometimes with closed understorey
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog) <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Rallus pectoralis</i> (Lewin's rail) <i>Rostratula benghalensis</i> (Painted snipe)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala)

5. Regional Ecosystem 12.3.8 (and other wetland areas)

Vegetation mapping & assessment references <ul style="list-style-type: none"> <i>Lockyer Wetlands Directory</i>, which can be viewed or purchased at the Lockyer Catchment Centre.
Floristic description (constant characteristic species in bold type) Natural and artificial wetlands including Regional Ecosystem 12.3.8
General structure Natural and artificial wetlands
Significant RE status Of-concern
Significant plants <i>Brasenia schreberi</i> (Watershield) <i>Carex lophocarpa</i> (A sedge) <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i> (Flecked flatsedge) <i>Cyperus squarrosus</i> (Bearded flatsedge) <i>Damasonium minus</i> (Starfruit) <i>Eryngium vesiculosum</i> (Prostrate blue devil) <i>Potamogeton pectinatus</i> (Sago pondweed)
Significant invertebrates Nil
Significant amphibians <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Ephippiorhynchus asiaticus</i> (Black-necked stork) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Falco hypoleucos</i> (Grey falcon) <i>Melithreptus gularis</i> (Black-chinned honeyeater) <i>Nettapus coromandelianus</i> (Cotton pygmy-goose) <i>Rallus pectoralis</i> (Lewin's rail) <i>Rostratula benghalensis</i> (Painted snipe) <i>Stictonetta naevosa</i> (Freckled duck)
Significant mammals Nil

6. Regional Ecosystem 12.3.11

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 3e • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Melaleuca quinquenervia</i> (Coastal paperbark) ± <i>Corymbia intermedia</i>
General structure Tall woodland to tall open forest
Significant RE status Of concern
Significant plants <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Thesium australe</i> (Thesium) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog) <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk)
Significant mammals <i>Phascolarctos cinereus</i> (Koala)

7. Regional Ecosystem 12.5.1

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 5c, 5d, 5e Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Corymbia trachyphloia</i> (Brown bloodwood), <i>Corymbia citriodora/henryi</i> (Spotted gum/Large-leaved spotted gum) ± <i>Eucalyptus helidonica</i> ± <i>Eucalyptus taurina</i> ± <i>Eucalyptus dura</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Corymbia gummifera</i> ± <i>Angophora woodsiana</i> ± <i>Eucalyptus planchoniana</i> ± <i>Lysicarpus angustifolius</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Acacia leichhardtii</i> (A shrub with no common name) <i>Caustis blakei</i> subsp. <i>macrantha</i> (Foxtails, 'Koala fern') <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany) <i>Eucalyptus taurina</i> (Helidon Hills ironbark) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Grevillea singuliflora</i> (Single-flower grevillea) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Leionema obtusifolium</i> (Helidon Hills phebalium) <i>Lysicarpus angustifolius</i> (Budgeroo) <i>Paspalidium grandispiculatum</i> (Helidon Hills panic) <i>Poranthera</i> sp. (Mt. Ballow G. Leiper AQ502886) (Mt. Beerwah poranthera)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Delma torquata</i> (Collared delma)
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

8. Regional Ecosystem 12.5.6

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 5a, 5b, 8c • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis (Blackbutt)</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus helidonica</i> ± <i>Corymbia trachyphloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Angophora woodsiana</i>
General structure Shrubby to grassy open forest
Significant RE status Endangered
Significant plants <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

9. Regional Ecosystem 12.8.1

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 8h • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus saligna</i> (Sydney blue gum), <i>Eucalyptus campanulata</i> (New England blackbutt) ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus laevopinea</i>
General structure Shrubby to grassy open forest
Significant RE status No concern at present
Significant plants <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Litoria brevipalmata</i> (Green-thighed frog) (potential occurrence) <i>Litoria pearsoniana</i> (Cascade treefrog) (potential occurrence) <i>Mixophyes fleayi</i> (Fleay's barred-frog)
Significant reptiles <i>Coeranoscincus reticulatus</i> (Three-toed snake-toothed skink) <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Climacteris erythrogastra</i> (Red-browed treecreeper) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Kerivoula papuensis</i> (Golden-tipped bat) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

10. Regional Ecosystem 12.8.4

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 8n Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Argyrodendron actinophyllum</i> (Black jack, Black booyong), <i>Sloanea woollsii</i> (Yellow carabeen), <i>Elaeocarpus kirtonii</i> (Silver quandong), <i>Ficus</i> spp. (Fig species), <i>Orites excelsa</i> (Prickly ash, White beefwood), <i>Dysoxylum fraserianum</i> (Rosewood, Rose mahogany), <i>Araucaria cunninghamii</i> (Hoop pine)
General structure Complex notophyll closed forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians <i>Kyarranus kundagungan</i> (Red-and-yellow mountain-frog) <i>Lechriodus fletcheri</i> (Black-soled frog) <i>Litoria brevipalmata</i> (Green-thighed frog) (potential occurrence) <i>Litoria pearsoniana</i> (Cascade treefrog) (potential occurrence) <i>Mixophyes fleayi</i> (Fleay's barred-frog)
Significant reptiles <i>Coeranoscincus reticulatus</i> (Three-toed snake-toothed skink) <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Atrichornis rufescens</i> (Rufous scrub-bird) (potential occurrence) <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Menura alberti</i> (Albert's lyrebird) <i>Podargus ocellatus plumiferous</i> (Plumed frogmouth) (potential occurrence) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Kerivoula papuensis</i> (Golden-tipped bat)

11. Regional Ecosystem 12.8.9

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 8e • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Lophostemon confertus (Brush box)</i> ± (<i>Eucalyptus tereticornis</i> , <i>Eucalyptus biturbinata</i> , <i>Eucalyptus eugenioides</i> , <i>Eucalyptus melliodora</i> , <i>emergents</i>) ± <i>Allocasuarina torulosa</i> , with mixed rainforest/riparian species and fern species
General structure Tall open forest
Significant RE status Of concern
Significant plants <i>Hibbertia monticola</i> (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Kyarranus kundagungan</i> (Red-and-yellow mountain-frog) <i>Lechriodus fletcheri</i> (Black-soled frog) <i>Litoria brevipalmata</i> (Green-thighed frog) (potential occurrence) <i>Litoria pearsoniana</i> (Cascade treefrog) (potential occurrence) <i>Mixophyes fleayi</i> (Fleay's barred-frog)
Significant reptiles <i>Coeranoscincus reticulatus</i> (Three-toed snake-toothed skink) <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Climacteris erythrops</i> (Red-browed treecreeper) <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Menura alberti</i> (Albert's lyrebird) <i>Podargus ocellatus plumiferous</i> (Plumed frogmouth) (potential occurrence) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Kerivoula papuensis</i> (Golden-tipped bat) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

12. Regional Ecosystem 12.8.14

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 8a, 8b, 8c, 8i • Laidley Shire vegetation code(s) 4c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus eugenioides</i> (Thin-leaved stringybark, White stringybark), <i>Eucalyptus biturbinata</i> (Grey gum), <i>Eucalyptus melliodora</i> (Yellow box, Honey box), <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum) ± <i>Eucalyptus crebra</i> ± <i>Angophora floribunda/subvelutina</i> ± <i>Eucalyptus quadrangulata</i> ± <i>Allocasuarina torulosa</i>
General structure Grassy open forest
Significant RE status No concern at present
Significant plants <i>Bothriochloa bunyensis</i> (Bunya bluegrass) <i>Dichanthium setosum</i> (Bristly bluegrass) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Climacteris erythropters</i> (Red-browed treecreeper) <i>Dasyornis brachypterus</i> (Eastern bristlebird) (potential occurrence) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Xanthomyza phrygia</i> (Regent honeyeater)
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascogale carolinensis</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

13. Regional Ecosystem 12.8.16

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 8k • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus albens (White box), Eucalyptus crebra (Narrow-leaved ironbark) ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus melliodora</i> ± <i>Eucalyptus melanophloia</i> ± <i>Angophora floribunda</i> ± <i>Corymbia clarksoniana</i></i>
General structure Grassy woodland
Significant RE status No concern at present
Significant plants <i>Callitris baileyi</i> (Bailey's cypress pine) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.)) <i>Xanthomyza phrygia</i> (Regent honeyeater)
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

14. Regional Ecosystem 12.8.17

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 8d • Laidley Shire vegetation code(s) 4c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus crebra</i> (Narrow-leaved ironbark), <i>Eucalyptus melanophloia</i> (Silver leaf ironbark, Broad leaf ironbark) ± <i>Corymbia clarksoniana</i> ± <i>Corymbia tessellaris</i> ± <i>Eucalyptus tereticornis</i> ± <i>Angophora floribunda</i> ± <i>Eucalyptus melliodora</i> ± <i>Brachychiton populneus</i>
General structure Grassy woodland
Significant RE status No concern at present
Significant plants <i>Callitris baileyi</i> (Bailey's cypress pine) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

15. Regional Ecosystem 12.8.19

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 8j Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) Heterogeneous mix of trees (stunted), shrubs, forbs and grasses including <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Eucalyptus melliodora</i> (Yellow box, Honey box), <i>Angophora floribunda</i> (Rough barked apple), <i>Acacia</i> spp., <i>Bursaria spinosa</i> var. <i>macrophylla</i> , <i>Xanthorrhoea glauca</i> , <i>Hovea</i> spp., <i>Doryanthes palmeri</i> , <i>Cassinia</i> spp., <i>Pimelia linifolia</i> , <i>Plectranthus graveolens</i> , <i>Sorghum leiocladum</i> , <i>Poa</i> spp., <i>Themeda triandra</i> , <i>Asperula conferta</i> etc.
General structure Mid-high woodland/ open woodland or tall shrubland
Significant RE status Of concern
Significant plants <i>Bothriochloa bunyensis</i> (Bunya bluegrass) <i>Dichanthium setosum</i> (Bristly bluegrass) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby) <i>Pseudomys novaehollandiae</i> (New Holland mouse) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

16. Regional Ecosystem 12.8.21

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 8m Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Brachychiton rupestris</i> (Narrow-leaved bottletree), <i>Flindersia australis</i> (Crow's ash), <i>Flindersia collina</i> (Broad-leaved leopard tree), <i>Vitex lignumvitae</i> (Lignum vitae), <i>Elattostachys xylocarpa</i> (White tamarind), <i>Ficus</i> spp. (Fig species), <i>Dendrocnide excelsa</i> (Giant stinging tree), <i>Arytera foveolata</i> (Pitted coogera) ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Erythroxylum australe</i> (<i>Araucaria cunninghamii</i> absent in Gatton & Laidley Shires)
General structure Microphyll closed forest to semi-evergreen vine thicket sometimes on boulder scree
Significant RE status Endangered
Significant plants <i>Clematis fawcettii</i> (A woody climber with no common name) <i>Floydia praealta</i> (Ball nut, Opossum nut) (potential occurrence) <i>Sarcophilus dilatatus</i> (A small epiphyte with no common name)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby)

17. Regional Ecosystem 12.9/10.2

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 9a, 9c Laidley Shire vegetation code(s) 5a, 5b
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Large-leaved spotted gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Angophora leiocarpa</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus tindaliae</i> ± <i>Eucalyptus major</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Callistemon formosus</i> (White cliff bottlebrush) <i>Mentha grandiflora</i> (Gorge pennyroyal) <i>Triplarina bancroftii</i> (A shrub with no common name)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Lathamus discolor</i> (Swift parrot) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Melithreptus gularis</i> (Black-chinned honeyeater) <i>Ninox strenua</i> (Powerful owl) <i>Psephotus pulcherrimus</i> (Paradise parrot) (potential occurrence)
Significant mammals <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

18. Regional Ecosystem 12.9/10.3

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 9d • Laidley Shire vegetation code(s) 13
Floristic description (constant characteristic species in bold type) <i>Eucalyptus moluccana</i> (Gum topped box, Grey box) ± <i>Corymbia citriodora</i> ± <i>Eucalyptus crebra</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus major</i>
General structure Grassy sometimes shrubby open forest
Significant RE status Of concern
Significant plants <i>Acacia blakei</i> subsp. <i>diphylla</i> (Blake's wattle) <i>Acacia montana</i> (A shrub with no common name) <i>Bertya opponens</i> (Broad-leaved Bertya) <i>Callistemon formosus</i> (White cliff bottlebrush) <i>Eucalyptus sideroxylon</i> (Mugga, red ironbark)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Melithreptus gularis</i> (Black-chinned honeyeater) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

19. Regional Ecosystem 12.9/10.5

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 9b, 9f, 10a, 10b, 10c Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany), <i>Corymbia trachyphloia</i> (Brown bloodwood), <i>Corymbia citriodora</i> (Spotted gum), <i>Eucalyptus taurina</i> (Helidon Hills ironbark) ± <i>Lysicarpus angustifolius</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Acacia leichhardtii</i> (A shrub with no common name) <i>Allocasuarina inophloia</i> (Thready (Woolly)-barked oak) <i>Bertya</i> sp. (Helidon Hills G. Leiper AQ457013) (A shrub with no common name) <i>Caustis blakei</i> subsp. <i>macrantha</i> (Foxtails, 'Koala fern') <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany) <i>Eucalyptus taurina</i> (Helidon Hills ironbark) <i>Gahnia clarkei</i> (Tall sawsedge) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Grevillea singuliflora</i> (Single-flower grevillea) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Leionema obtusifolium</i> (Helidon Hills phebalium) <i>Leptospermum lamellatum</i> (A shrub with no common name) <i>Lysicarpus angustifolius</i> (Budgeroo) <i>Melastoma affine</i> (Blue tongue) <i>Paspalidium grandispiculatum</i> (Helidon Hills panic) <i>Poranthera</i> sp. (Mt Ballow G. Leiper AQ502886) (Mt. Beerwah poranthera)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Delma torquata</i> (Collared delma)
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

20. Regional Ecosystem 12.9/10.6

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 9j • Laidley Shire vegetation code(s) 8
Floristic description (constant characteristic species in bold type) <i>Acacia harpophylla</i> (Brigalow) ± <i>Casuarina cristata</i> ± <i>Brachychiton rupestris</i> ± <i>Acacia fasciculifera</i> ± <i>Alectryon diversifolius</i> ± <i>Santalum lanceolatum</i> ± <i>Carissa ovata</i>
General structure Open forest
Significant RE status Endangered
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

21. Regional Ecosystem 12.9/10.7

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 9h Laidley Shire vegetation code(s) 4a, 4b
Floristic description (constant characteristic species in bold type) <i>Eucalyptus crebra (Narrow-leaved ironbark) ± Eucalyptus melanophloia ± Eucalyptus tereticornis ± Corymbia tessellaris ± Corymbia clarksoniana ± Allocasuarina luehmannii</i>
General structure Grassy woodland (sometimes with vine thicket understorey)
Significant RE status Of concern
Significant plants <i>Callitris baileyi</i> (Bailey's cypress pine) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Geophaps scripta scripta</i> (Squatter pigeon (southern subsp.)) <i>Lathamus discolor</i> (Swift parrot) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Neophema pulchella</i> (Turquoise parrot) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

22. Regional Ecosystem 12.9/10.11

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) Nil • Laidley Shire vegetation code(s) 3
Floristic description (constant characteristic species in bold type) <i>Melaleuca tamariscina</i> subsp. irbyana (Bush-house paperbark) ± <i>Eucalyptus moluccana</i> ± <i>Eucalyptus tereticornis</i>
General structure Low open forest or thicket with emergent eucalypts
Significant RE status Endangered
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk)
Significant mammals Nil

23. Regional Ecosystem 12.9/10.14

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 10d Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis</i> (Blackbutt) ± <i>Corymbia trachyphloia</i> ± <i>Eucalyptus helidonica</i> ± <i>Angophora woodsiana</i> ± <i>Eucalyptus microcorys</i> ± <i>Syncarpia verecunda</i> ± <i>Corymbia intermedia</i> ± <i>Allocasuarina torulosa</i>
General structure Shrubby to grassy open forest
Significant RE status No concern at present
Significant plants <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany) <i>Gahnia clarkei</i> (Tall sawsedge) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Macrozamia lucida</i> (Pineapple zamia) <i>Melastoma affine</i> (Blue tongue) <i>Rubus probus</i> (A native raspberry)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Calyptrorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

24. Regional Ecosystem 12.9/10.15

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 9i • Laidley Shire vegetation code(s) 9
Floristic description (constant characteristic species in bold type) <i>Flindersia australis</i> (Crow's ash), <i>Flindersia collina</i> (Broad-leaved leopard tree), <i>Brachychiton rupestris</i> (Narrow-leaved bottle tree), <i>Acacia fasciculifera</i> (Rosewood), <i>Ficus</i> spp. (Fig species) ± <i>Flindersia xanthoxyla</i> ± <i>Vitex lignumvitae</i> ± <i>Excoecaria dallachyana</i> ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Bursaria incana</i> ± <i>Croton insularis</i> ± <i>Drypetes deplanchei</i> ± <i>Owenia venosa</i> ± <i>Secamone elliptica</i>
General structure Microphyll closed forest to semi-evergreen vine thicket
Significant RE status Endangered
Significant plants <i>Eucalyptus melanoleuca</i> (Yarraman ironbark) <i>Floydia praealta</i> (Ball nut, Opossum nut) (potential occurrence) <i>Sarcophilus dilatatus</i> (A small epiphyte with no common name)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Turnix melanogaster</i> (Black-breasted button-quail)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

25. Regional Ecosystem 12.9/10.19

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 9f, 9g • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Large-leaved spotted gum), ± <i>Eucalyptus crebra</i> ± <i>Angophora woodsiana</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus major</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Acacia blakei</i> subsp. <i>diphylla</i> (Blake's wattle) <i>Acacia montana</i> (A shrub with no common name) <i>Allocasuarina inophloia</i> (Thready (Woolly)-barked oak) <i>Bertya opposens</i> (Broad-leaved Bertya) <i>Boronia splendida</i> (Splendid Boronia) <i>Callistemon formosus</i> (White cliff bottlebrush) <i>Eucalyptus bakeri</i> (Baker's mallee) <i>Eucalyptus melanoleuca</i> (Yarraman ironbark) <i>Eucalyptus sideroxylon</i> (Mugga, red ironbark) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Melaleuca groveana</i> (Grove's paperbark) <i>Mentha grandiflora</i> (Gorge pennyroyal) <i>Sophora fraseri</i> (Brush sophora) <i>Triodia</i> sp. (Porcupine grass, Spinifex) (potential occurrence)
Significant invertebrates <i>Nesolycaena albosericea</i> (Satin (blue) opal butterfly) (potential occurrence)
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

26. Regional Ecosystem 12.11.3

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 11c • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis (Blackbutt)</i> ± <i>Corymbia citriodora/henryi</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus microcorys</i>
General structure Very tall open forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

27. Regional Ecosystem 12.11.5

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 11a • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi (Spotted gum/Coarse spotted gum), Eucalyptus crebra ± <i>Corymbia intermedia</i> ± <i>Eucalyptus major</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i></i>
General structure Tall woodland to tall open forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

28. Regional Ecosystem 12.11.6

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 11d • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Angophora subvelutina</i> ± <i>Eucalyptus melanophloia</i> ± <i>Corymbia intermedia</i>
General structure Very tall open forest/woodland
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo)

29. Regional Ecosystem 12.11.9

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 11b • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Angophora subvelutina</i> ± <i>Eucalyptus melanophloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus melliodora</i> ± <i>Allocasuarina torulosa</i>
General structure Very tall open forest/woodland
Significant RE status Of concern
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo)

30. Regional Ecosystem 12.12.3

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 11a • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Coarse spotted gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Corymbia intermedia</i> ± <i>Eucalyptus major</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i>
General structure Tall woodland to tall open forest
Significant RE status Of concern
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

31. Regional Ecosystem 12.12.5

Vegetation mapping & assessment references <ul style="list-style-type: none"> Gatton Shire map unit(s) 12a Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora</i> (Spotted gum), <i>Eucalyptus moluccana</i> (Gum topped box, Grey box), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Eucalyptus eugenioides</i> ± <i>Corymbia tessellaris</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i>
General structure Very tall open forest, tall open forest, tall woodland
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

32. Regional Ecosystem 12.12.15

Vegetation mapping & assessment references <ul style="list-style-type: none"> • Gatton Shire map unit(s) 11c • Laidley Shire vegetation code(s) Nil
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis (Blackbutt)</i> ± <i>Corymbia citriodora/henryi</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus microcorys</i>
General structure Very tall open forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Descriptions, Habitat and Threats

for the

Significant Species and Ecological Communities of Gatton and Laidley Shires South-East Queensland

**Appendix B to the Biodiversity Recovery Plan
for Gatton and Laidley Shires
South-East Queensland 2003-2008**

Version 2, 5 March 2004

**Revised to be compatible with Version 4.0 of the
Queensland Herbarium Vegetation Mapping**

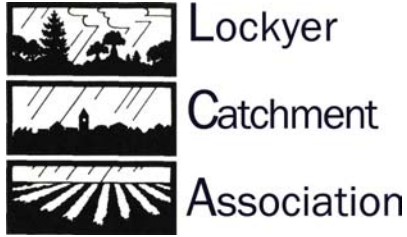


Lockyer

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Association

**A project of the Lockyer Catchment Association (LCA) Inc.
supported by funding from the Threatened Species Network (TSN)
Community Grants Program, which is a joint program of the
World Wide Fund For Nature Australia (WWF) and the
Commonwealth Government Natural Heritage Trust (NHT)**



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1. Using this document

1.1 Introduction

This document should be used in conjunction with *Regional Ecosystem Management Principles for Gatton and Laidley Shires, South-East Queensland* (Appendix A to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008), which can be viewed or purchased at the Lockyer Catchment Centre.

This document provides descriptions, habitat and threat information for the significant species and ecological communities of Gatton and Laidley Shires, comprising:

1. All of the species in Gatton and Laidley Shires listed as extinct, endangered or vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (a total of 11 flora species and 15 fauna species).
2. All of the species in Gatton and Laidley Shires listed as endangered, vulnerable or rare under the Queensland *Nature Conservation Regulation 1994*.
3. All of the ecological communities in Gatton and Laidley Shires that have a status of endangered or of-concern under the Queensland *Vegetation Management Act 1999* and Queensland *Vegetation Management (Freehold Lands) Regulation*.
4. Species in Gatton and Laidley Shires identified as having regional significance (within the South-East Queensland bioregion). Included are species where biologists have expressed concern about decline or potential decline, species that have recently been removed (downgraded) from Commonwealth and/or Queensland threatened species lists and species with a restricted or disjunct occurrence in the South-East Queensland bioregion.

In addition to the threats listed in Sections 3 to 9, all of the significant species and ecological communities in this document have been identified as facing the common threat of “A lack of awareness by landholders, community members and decision-makers in regard to the significant species and ecological communities of Gatton and Laidley Shires and their conservation requirements”.

This document has been prepared as Appendix A to the *Biodiversity Recovery Plan for Gatton and Laidley Shires South-East Queensland 2003-2008*. The full *Biodiversity Recovery Plan* can be viewed or purchased at the Lockyer Catchment Centre.

1.2 How to use this document

For information on how to use this document, refer to Section 1 of *Regional Ecosystem Management Principles for Gatton and Laidley Shires, South-East Queensland* (Appendix A to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008).

2. Summary lists of significant species and ecological communities

The *Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008* covers 48 flora species, 50 fauna species, and 13 ecological communities. The significant species and ecological communities and their conservation status at a Commonwealth, State (Queensland) and regional level are listed in Tables 1 to 7 below.

Table 1. Significant plant species - Gatton and Laidley Shires.				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Acacia blakei</i> subsp. <i>diphylla</i>	Blake's wattle			S
<i>Acacia leichhardtii</i>	No common name			S
<i>Acacia montana</i>	No common name			S
<i>Allocasuarina inophloia</i>	Thready (Woolly)-barked oak			S
<i>Bertya</i> sp. (Helidon Hills G. Leiper AQ457013) now includes <i>B.</i> sp. (Oakey Creek B. O'Keefe 822)	No common name			S
<i>Bertya opposens</i>	Broad-leaved Bertya			S
<i>Boronia splendida</i> also includes <i>B.</i> sp. (Kogan L.S. Smith 14102)	Splendid Boronia			S
<i>Bothriochloa bunyensis</i>	Bunya bluegrass	V	V	
<i>Brasenia schreberi</i>	Watershield		R	
<i>Callistemon formosus</i>	White cliff bottlebrush		R	
<i>Callitris baileyi</i>	Bailey's cypress pine		R	
<i>Carex lophocarpa</i>	A sedge			S
<i>Caustis blakei</i> subsp. <i>macrantha</i> (Restricted species in trade)	Foxtails, 'Koala fern'		PV	

Table 1 (continued).				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Clematis fawcettii</i>	No common name	V	V	
<i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i>	Flecked flatsedge			S
<i>Cyperus squarrosus</i>	Bearded flatsedge			S
<i>Damasonium minus</i>	Starfruit			S
<i>Dichanthium setosum</i>	Bristly bluegrass	V	R	
<i>Eryngium vesiculosum</i>	Prostrate blue devil			S
<i>Eucalyptus bakeri</i>	Baker's mallee			S
<i>Eucalyptus helidonica</i>	Helidon Hills white mahogany			S
<i>Eucalyptus melanoleuca</i> (recently downgraded from R)	Yarraman ironbark			S
<i>Eucalyptus sideroxylon</i>	Mugga, red ironbark			S
<i>Eucalyptus taurina</i>	Helidon Hills ironbark		PV	
<i>Floydia praealta</i>	Ball nut, Opossum nut	V	V	
<i>Gahnia clarkei</i>	Tall sawsedge			S
<i>Grevillea quadricauda</i>	No common name	V	PV	
<i>Grevillea singuliflora</i>	Single-flower grevillea		R	
<i>Hibbertia monticola</i>	Mountain guinea flower		R	
<i>Leionema obtusifolium</i>	Helidon Hills phebalium	V	V	
<i>Leptospermum lamellatum</i>	No common name			S
<i>Lysicarpus angustifolius</i>	Budgeroo			S
<i>Macrozamia lucida</i>	Pineapple zamia			S
<i>Melaleuca groveana</i>	Grove's paperbark		R	
<i>Melastoma affine</i>	Blue tongue			S
<i>Mentha grandiflora</i>	Gorge pennyroyal			S
<i>Paspalidium grandispiculatum</i>	Helidon Hills panic	V	V	
<i>Picris evae</i>	Hawk weed	V	V	
<i>Poranthera</i> sp. (Mt Ballow G. Leiper AQ502886) includes <i>P.</i> sp. (Beerwah D. Hassall DH7431)	Mt Beerwah poranthera			S

Table 1 (continued).				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Potamogeton pectinatus</i>	Sago pondweed			S
<i>Rubus probus</i>	A native raspberry			S
<i>Sarcophilus dilatatus</i> (recently downgraded from R)	No common name			S
<i>Sophora fraseri</i>	Brush sophora	V	V	
<i>Stemmacantha australis</i>	Native thistle	V	V	
<i>Thesium australe</i>	Thesium	V	V	
<i>Triodia</i> sp.	Porcupine grass, Spinifex			S
<i>Triplarina bancroftii</i>	No common name		PR	
<i>Wahlenbergia scopulicola</i>	No common name		R	

Table 2. Significant fauna species, invertebrates - Gatton and Laidley Shires.				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Nesolycaena albosericea</i>	Satin (blue) opal butterfly		V	

Table 3. Significant fauna species, amphibians - Gatton and Laidley Shires.				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Adelotus brevis</i>	Tusked frog			S
<i>Cyclorana alboguttata</i>	Greenstripe frog			S
<i>Cyclorana brevipes</i>	Superb collared-frog			S
<i>Cyclorana verrucosa</i>	Warty water-holding frog, Rough frog			S
<i>Kyarranus kundagungan</i>	Red-and-yellow mountain-frog		V	
<i>Lechriodus fletcheri</i>	Black-soled frog		V	
<i>Limnodynastes salmini</i>	Salmon-striped frog			S
<i>Litoria brevipalmata</i>	Green-thighed frog		R	
<i>Litoria pearsoniana</i>	Cascade treefrog		E	
<i>Mixophyes fleayi</i>	Fleay's barred-frog	E	E	

Table 4. Significant fauna species, reptiles - Gatton and Laidley Shires.				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Coeranoscincus reticulatus</i>	Three-toed snake-toothed skink	V	R	
<i>Delma torquata</i>	Collared delma	V	V	
<i>Hoplocephalus stephensii</i>	Stephen's banded snake		R	

Table 5. Significant fauna species, birds - Gatton and Laidley Shires.				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Accipiter novaehollandiae</i>	Grey goshawk		R	
<i>Atrichornis rufescens</i>	Rufous scrub-bird		V	
<i>Calyptorhynchus lathami</i>	Glossy black-cockatoo		V	
<i>Climacteris erythrops</i>	Red-browed treecreeper		R	
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	E	E	
<i>Dasyornis brachypterus</i>	Eastern bristlebird	E	E	
<i>Ephippiorhynchus asiaticus</i>	Black-necked stork		R	
<i>Erythrorhynchus radiatus</i>	Red goshawk	V	E	
<i>Falco hypoleucos</i>	Grey falcon		R	
<i>Geophaps scripta scripta</i>	Squatter pigeon (southern subsp.)	V	V	
<i>Grantiella picta</i>	Painted honeyeater		R	
<i>Lathamus discolor</i>	Swift parrot	E		
<i>Lophoictinia isura</i>	Square-tailed kite		R	
<i>Melithreptus gularis</i>	Black-chinned honeyeater		R	
<i>Menura alberti</i>	Albert's lyrebird		R	
<i>Neophema pulchella</i>	Turquoise parrot		R	
<i>Nettapus coromandelianus</i>	Cotton pygmy-goose		R	
<i>Ninox strenua</i>	Powerful owl		V	
<i>Podargus ocellatus plumiferous</i>	Plumed frogmouth		V	
<i>Psephotus pulcherrimus</i>	Paradise parrot	X	PX	
<i>Rallus pectoralis</i>	Lewin's rail		R	
<i>Rostratula benghalensis</i>	Painted snipe		R	
<i>Stictonetta naevosa</i>	Freckled duck		R	
<i>Turnix melanogaster</i>	Black-breasted button-quail	V	V	
<i>Tyto novaehollandiae</i>	Masked owl (southern subsp.)			S
<i>Tyto tenebricosa</i>	Sooty owl		R	
<i>Xanthomyza phrygia</i>	Regent honeyeater	E	E	

Table 6. Significant fauna species, mammals - Gatton and Laidley Shires.				
Status legend: X = Extinct; PX = Presumed Extinct; E = Endangered; V = Vulnerable; R = Rare; P = Pending; S = Regionally Significant				
Scientific Name	Common Name	Status EPBC (Commonwealth)	Status QNCR (Queensland)	Status Regional (South-East Qld)
<i>Chalinolobus dwyeri</i>	Large-eared pied bat		R	
<i>Chalinolobus picatus</i>	Little pied bat		R	
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed quoll (southern subsp.)	V	V	
<i>Kerivoula papuensis</i>	Golden-tipped bat		R	
<i>Petrogale penicillata</i>	Brush-tailed rock wallaby	V	V	
<i>Phascolarctos cinereus</i>	Koala			S
<i>Potorous tridactylus tridactylus</i>	Long-nosed potoroo	V	V	
<i>Pseudomys novaehollandiae</i>	New Holland mouse			S
<i>Pseudomys oralis</i>	Hasting's River mouse	E	V	

Table 7. Significant ecological communities - Gatton and Laidley Shires.			
<ol style="list-style-type: none"> 1. <u>Regional Ecosystem</u> (RE) descriptions follow Sattler, P.S. & Williams, R.D. (eds) 1999. <i>The Conservation Status of Queensland's Bioregional Ecosystems</i>. Queensland Environmental Protection Agency, Brisbane. 2. <u>Conservation status</u> is the status under the Queensland <i>Vegetation Management Act 1999</i> and Queensland <i>Vegetation Management (Freehold Lands) Regulation</i>. 			
Regional Ecosystem	Floristic description (constant characteristic species in bold type)	General structure	Conservation status
RE 12.3.3	<i>Eucalyptus tereticornis</i> ± <i>Eucalyptus crebra</i> ± <i>Corymbia citriodora</i> ± <i>Corymbia intermedia</i> ± <i>Angophora subvelutina/floribunda</i> ± <i>Corymbia clarksoniana</i> ± <i>Corymbia tessellaris</i>	Grassy open forest to woodland	Endangered
RE 12.3.11	<i>Eucalyptus tereticornis</i> , <i>Melaleuca quinquenervia</i> ± <i>Corymbia intermedia</i>	Tall woodland to tall open forest	Of concern
RE 12.5.6	<i>Eucalyptus pilularis</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus helidonica</i> ± <i>Corymbia trachyphloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Angophora woodsiana</i>	Shrubby to grassy open forest	Endangered

Table 7 (continued).			
<p>1. <u>Regional Ecosystem</u> (RE) descriptions follow Sattler, P.S. & Williams, R.D. (eds) 1999. <i>The Conservation Status of Queensland's Bioregional Ecosystems</i>. Queensland Environmental Protection Agency, Brisbane.</p> <p>2. <u>Conservation status</u> is the status under the Queensland <i>Vegetation Management Act 1999</i> and Queensland <i>Vegetation Management (Freehold Lands) Regulation</i>.</p>			
Regional Ecosystem	Floristic description (constant characteristic species in bold type)	General structure	Conservation status
RE 12.8.9	<i>Lophostemon confertus</i> ± (<i>Eucalyptus tereticornis</i> , <i>Eucalyptus biturbinata</i> , <i>Eucalyptus eugenioides</i> , <i>Eucalyptus melliodora</i> , emergents) ± <i>Allocasuarina torulosa</i> , with mixed rainforest/riparian species and fern species.	Tall open forest	Of concern
RE 12.8.19	Heterogeneous mix of trees (stunted), shrubs, forbs and grasses including <i>Eucalyptus tereticornis</i> , <i>Eucalyptus melliodora</i> , <i>Angophora floribunda</i> , <i>Acacia</i> spp., <i>Bursaria spinosa</i> var. <i>macrophylla</i> , <i>Xanthorrhoea glauca</i> , <i>Hovea</i> spp., <i>Doryanthes palmeri</i> , <i>Cassinia</i> spp., <i>Pimelia linifolia</i> , <i>Plectranthus graveolens</i> , <i>Sorghum leiocladum</i> , <i>Poa</i> spp., <i>Themeda triandra</i> , <i>Asperula conferta</i> etc.	Mid-high woodland/ open woodland or tall shrubland	Of concern
RE 12.8.21	<i>Brachychiton rupestris</i> , <i>Flindersia australis</i> , <i>Flindersia collina</i> , <i>Vitex lignumvitae</i> , <i>Elattostachys xylocarpa</i> , <i>Ficus</i> spp. , <i>Dendrocnide excelsa</i> , <i>Arytera foveolata</i> ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Erythroxylum australe</i> . (<i>Araucaria cunninghamii</i> absent in Gatton & Laidley Shires)	Microphyll closed forest to semi-evergreen vine thicket sometimes on boulder scree	Endangered
RE 12.9/10.3	<i>Eucalyptus moluccana</i> ± <i>Corymbia citriodora</i> ± <i>Eucalyptus crebra</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus major</i> .	Grassy sometimes shrubby open forest	Of concern
RE 12.9/10.6	<i>Acacia harpophylla</i> ± <i>Casuarina cristata</i> ± <i>Brachychiton rupestris</i> ± <i>Acacia fasciculifera</i> ± <i>Alectryon diversifolius</i> ± <i>Santalum lanceolatum</i> ± <i>Carissa ovata</i> .	Open forest	Endangered

Table 7 (continued).			
<p>1. <u>Regional Ecosystem</u> (RE) descriptions follow Sattler, P.S. & Williams, R.D. (eds) 1999. <i>The Conservation Status of Queensland's Bioregional Ecosystems</i>. Queensland Environmental Protection Agency, Brisbane.</p> <p>2. <u>Conservation status</u> is the status under the Queensland <i>Vegetation Management Act 1999</i> and Queensland <i>Vegetation Management (Freehold Lands) Regulation</i>.</p>			
Regional Ecosystem	Floristic description (constant characteristic species in bold type)	General structure	Conservation status
RE 12.9/10.7	<i>Eucalyptus crebra</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Corymbia tessellaris</i> ± <i>Corymbia clarksoniana</i> ± <i>Allocasuarina luehmannii</i> .	Grassy woodland (sometimes with vine thicket understorey)	Of concern
RE 12.9/10.11	<i>Melaleuca tamariscina</i> subsp. <i>irbyana</i> ± <i>Eucalyptus moluccana</i> ± <i>Eucalyptus tereticornis</i> .	Low open forest or thicket with emergent eucalypts	Endangered
RE 12.9/10.15	<i>Flindersia australis</i> , <i>Flindersia collina</i> , <i>Brachychiton rupestris</i> , <i>Acacia fasciculifera</i> , <i>Ficus</i> spp. ± <i>Flindersia xanthoxyla</i> ± <i>Vitex lignumvitae</i> ± <i>Excoecaria dallachyana</i> ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Bursaria incana</i> ± <i>Croton insularis</i> ± <i>Drypetes deplanchei</i> ± <i>Owenia venosa</i> ± <i>Secamone elliptica</i> .	Microphyll closed forest to semi-evergreen vine thicket	Endangered
RE 12.11.9	<i>Eucalyptus tereticornis</i> , <i>Eucalyptus crebra</i> ± <i>Angophora subvelutina</i> ± <i>Eucalyptus melanophloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus melliodora</i> ± <i>Allocasuarina torulosa</i> .	Very tall open forest/ woodland	Of concern
RE 12.12.3	<i>Corymbia citriodora</i> subsp. <i>variegata</i> / <i>Corymbia henryi</i> , <i>Eucalyptus crebra</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus major</i> ± <i>Eucalyptus melanophloia</i>	Tall woodland to tall open forest	Of concern

3. Significant plant species

3.1 *Acacia blakei* subsp. *diphylla*, Blake's wattle

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Acacia blakei* subsp. *diphylla* is a shrub or small tree that occurs in Regional Ecosystems 12.9/10.3 and 12.9/10.19 in the south of Gatton Shire. The populations of *Acacia blakei* subsp. *diphylla* in Gatton Shire are a disjunct South-East Queensland occurrence, with the species normally found in sandstone communities further inland.

Threats within Gatton and Laidley Shires: Threats to *Acacia blakei* subsp. *diphylla* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.

3.2 *Acacia leichhardtii*

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Acacia leichhardtii* is a shrub that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. The populations of *Acacia leichhardtii* in the Helidon Hills are a disjunct South-East Queensland occurrence, with the species normally found in sandstone communities further west and north.

Threats within Gatton and Laidley Shires: Threats to *Acacia leichhardtii* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.3 *Acacia montana*

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Acacia montana* is a shrub that occurs in Regional Ecosystems 12.9/10.3 and 12.9/10.19 in the south of Gatton Shire. The populations of *Acacia montana* in Gatton Shire are a disjunct South-East Queensland occurrence, with the species normally found in sandstone communities further inland.

Threats within Gatton and Laidley Shires: Threats to *Acacia montana* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.4 *Allocasuarina inophloia*, Thready/Woolly-barked oak

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Allocasuarina inophloia* is a tree that occurs in Regional Ecosystem 12.9/10.19 in the south of Gatton Shire and Regional Ecosystem 12.9/10.5 in the Helidon Hills. *Allocasuarina inophloia* has a restricted occurrence in South-East Queensland, being usually associated with sandstone and other acidic substrates further west.

Threats within Gatton and Laidley Shires: Threats to *Allocasuarina inophloia* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.5 *Bertya* sp. (Helidon Hills G. Leiper AQ457013)

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Bertya* sp. (Helidon Hills G. Leiper AQ457013) is a shrub that occurs in Regional Ecosystem 12.9/10.5 on the rim of the Alice Creek Gorge in the Helidon Hills. *Bertya* sp. (Helidon Hills G. Leiper AQ457013) is a newly identified species that has been found to be the same as another newly identified species, *Bertya* sp. (Oakey Creek B. O'Keefe 822). Oakey Creek is located in inland Central Queensland, making the Alice Creek Gorge population of *Bertya* sp. (Helidon Hills G. Leiper AQ457013) a very disjunct South-East Queensland occurrence.

Threats within Gatton and Laidley Shires: Threats to *Bertya* sp. (Helidon Hills G. Leiper AQ457013) include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.

3.6 *Bertya opposens*, Broad-leaved Bertya

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Bertya opposens* is a shrub that occurs in Regional Ecosystems 12.9/10.3 and 12.9/10.19 in the south of Gatton Shire. *Bertya opposens* has a restricted occurrence in South-East Queensland, and is typically restricted to the ecotones between Regional Ecosystem 12.9/10.3 or 12.9/10.19 and Regional Ecosystem 12.9/10.15.

Threats within Gatton and Laidley Shires: Threats to *Bertya opposens* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing, the construction of firebreaks in ecotones and the absence of high-intensity fire in ecotones is likely to have a detrimental impact on this shrubby understorey species.

3.7 *Boronia splendida*, Splendid Boronia

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Boronia splendida* is a shrub that occurs in Regional Ecosystem 12.9/10.19 in the south of Gatton Shire. *Boronia splendida* is a newly described species with a restricted occurrence in South-East Queensland.

Threats within Gatton and Laidley Shires: Threats to *Boronia splendida* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.

3.8 *Bothriochloa bunyensis*, Bunya bluegrass

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Bothriochloa bunyensis* is a grass that occurs in Regional Ecosystems 12.8.14 and 12.8.19 in the Mt. Lowe and Mistake Range area.

Threats within Gatton and Laidley Shires: Threats to *Bothriochloa bunyensis* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Infrequent burning is likely to have a detrimental impact on this grassy understorey species.
- Invasion of habitat by the weed species *Lantana camara*.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.9 *Brasenia schreberi*, Watershield

Conservation status: Rare (Queensland).

Description and habitat: *Brasenia schreberi* occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Brasenia schreberi* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.10 *Callistemon formosus*, White cliff bottlebrush

Conservation status: Rare (Queensland).

Description and habitat: *Callistemon formosus* is a shrub that occurs in Regional Ecosystems 12.9/10.2, 12.9/10.3 and 12.9/10.19 in the south of Gatton Shire.

Threats within Gatton and Laidley Shires: Threats to *Callistemon formosus* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Invasion of habitat by the weed species *Lantana camara*.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.11 *Callitris baileyi*, Bailey's cypress pine

Conservation status: Rare (Queensland).

Description and habitat: *Callitris baileyi* is a tree that occurs in Regional Ecosystems 12.8.16, 12.8.17 and 12.9/10.7 in the south of Gatton and Laidley Shires.

Threats within Gatton and Laidley Shires: Threats to *Callitris baileyi* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Invasion of habitat by the weed species *Lantana camara*.

- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.12 *Carex lophocarpa*, A sedge

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Carex lophocarpa* is a wetland species regarded uncommon in the South-East Queensland region. It occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Carex lophocarpa* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.13 *Caustis blakei* subsp. *macrantha*, Foxtails/Koala fern

Conservation status: Pending Vulnerable (Queensland).

Description and habitat: *Caustis blakei* subsp. *macrantha* is a shrub that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. *Caustis blakei* subsp. *macrantha* has a very restricted distribution, occurring only in the Helidon Hills and on Helidon sandstone near Perseverance Dam.

Threats within Gatton and Laidley Shires: Threats to *Caustis blakei* subsp. *macrantha* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Over-harvesting for flora trade.

3.14 *Clematis fawcettii*

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Clematis fawcettii* is a woody climber that occurs in Regional Ecosystem 12.8.21 in the south of Gatton Shire.

Threats within Gatton and Laidley Shires: Threats to *Clematis fawcettii* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Invasion of habitat, particularly of remnant margins, by the weed species *Lantana camara* (lantana) and the exotic pasture grass species *Panicum maximum* (green panic).
- Invasion of habitat by the weed species *Anredera cordifolia* (madeira vine), *Rivina humilis* (coral berry), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Habitat degradation through inappropriate grazing practices.

3.15 *Cyperus gunnii* subsp. *novae-hollandiae*, Flecked flatsedge

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Cyperus gunnii* subsp. *novae-hollandiae* is a wetland species regarded as uncommon in the South-East Queensland region. It occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Cyperus gunnii* subsp. *novae-hollandiae* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.16 *Cyperus squarrosus*, Bearded flatsedge

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Cyperus squarrosus* is a wetland species regarded as uncommon in the South-East Queensland region. It occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Cyperus squarrosus* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.17 *Damasonium minus*, Starfruit

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Damasonium minus* is a wetland species regarded as uncommon in the South-East Queensland region. It occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Damasonium minus* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.18 *Dichanthium setosum*, Bristly bluegrass

Conservation status: Vulnerable (Commonwealth), Rare (Queensland).

Description and habitat: *Dichanthium setosum* is a grass that occurs in Regional Ecosystems 12.8.14 and 12.8.19 in the Mt. Lowe - Mt. Mistake Range area and the Murphy's Creek area.

Threats within Gatton and Laidley Shires: Threats to *Dichanthium setosum* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Infrequent burning is likely to have a detrimental impact on this grassy understorey species.
- Invasion of habitat by the weed species *Lantana camara*.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.19 *Eryngium vesiculosum*, Prostrate blue devil

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Eryngium vesiculosum* is a wetland species regarded as uncommon in the South-East Queensland region. It occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Eryngium vesiculosum* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.20 *Eucalyptus bakeri*, Baker's mallee

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Eucalyptus bakeri* is a small tree that occurs in Regional Ecosystem 12.9/10.19 in the south of Gatton Shire. The populations of *Eucalyptus bakeri* in Gatton Shire are a disjunct South-East Queensland occurrence, with the species normally found further inland.

Threats within Gatton and Laidley Shires: Threats to *Eucalyptus bakeri* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate road maintenance activities.
- Habitat degradation through inappropriate grazing practices.

3.21 *Eucalyptus helidonica*, Helidon Hills white mahogany

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Eucalyptus helidonica* is a tree that occurs in Regional Ecosystems 12.5.1, 12.9/10.5 and 12.9/10.14 in the Helidon Hills. *Eucalyptus helidonica* has a very restricted distribution, occurring only in the Helidon Hills and Crows Nest areas.

Threats within Gatton and Laidley Shires: Threats to *Eucalyptus helidonica* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing, inappropriate timber harvesting practices or inappropriate timber thinning practices.

3.22 *Eucalyptus melanoleuca*, Yarraman ironbark

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Eucalyptus melanoleuca* is a tree that occurs in Regional Ecosystems 12.9/10.15 and 12.9/10.19 in the south of Gatton Shire. *Eucalyptus melanoleuca* has a restricted occurrence in South-East Queensland, being normally found further north and west.

Threats within Gatton and Laidley Shires: Threats to *Eucalyptus melanoleuca* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing, inappropriate timber harvesting practices or inappropriate timber thinning practices.

3.23 *Eucalyptus sideroxylon*, Mugga/red ironbark

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Eucalyptus sideroxylon* is a tree that occurs in Regional Ecosystems 12.9/10.3 and 12.9/10.19 in the south of Gatton Shire. *Eucalyptus sideroxylon* has a restricted occurrence in South-East Queensland, being normally found further inland.

Threats within Gatton and Laidley Shires: Threats to *Eucalyptus sideroxylon* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing, inappropriate timber harvesting practices or inappropriate timber thinning practices.

3.24 *Eucalyptus taurina*, Helidon Hills ironbark

Conservation status: Pending Vulnerable (Queensland).

Description and habitat: *Eucalyptus taurina* is tree that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 throughout the Helidon Hills. *Eucalyptus taurina* has a very limited distribution, occurring only in the Helidon Hills and Crows Nest areas.

Threats within Gatton and Laidley Shires: Threats to *Eucalyptus taurina* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing, inappropriate timber harvesting practices or inappropriate timber thinning practices.

3.25 *Floydia praealta*, Ball nut/Opossum nut

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Floydia praealta* is a tree that occurs in riverine and lowland rainforest from Gympie southwards. The species has been recorded from rainforest in Cambooya Shire, just outside the Gatton and Laidley Shire area. *Floydia praealta* has not yet been recorded within the Gatton and Laidley Shire area, but Regional Ecosystems 12.8.21 and 12.9/10.15 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to *Floydia praealta* include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Invasion of habitat, particularly of remnant margins, by the weed species *Lantana camara* (lantana) and the exotic pasture grass species *Panicum maximum* (green panic).

- Invasion of habitat by the weed species *Anredera cordifolia* (madeira vine), *Rivina humilis* (coral berry), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Habitat degradation through inappropriate grazing practices.

3.26 *Gahnia clarkei*, Tall sawsedge

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Gahnia clarkei* is a sedge that occurs in Regional Ecosystems 12.9/10.5 and 12.9/10.14 in the Helidon Hills. The populations of *Gahnia clarkei* in the Helidon Hills are a disjunct occurrence, with the species usually found in coastal swamps or wallum.

Threats within Gatton and Laidley Shires: Threats to *Gahnia clarkei* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.27 *Grevillea quadricauda*

Conservation status: Vulnerable (Commonwealth), Pending Vulnerable (Queensland).

Description and habitat: *Grevillea quadricauda* is a shrub that occurs in Regional Ecosystems 12.5.1, 12.9/10.5, 12.9/10.7, and 12.9/10.19 in the Flagstone Creek area in the south of Gatton Shire and in the Helidon Hills. *Grevillea quadricauda* has a very restricted distribution, occurring only in the Flagstone Creek and Helidon Hills areas. The Flagstone Creek population occurs mostly on a roadside.

Threats within Gatton and Laidley Shires: Threats to *Grevillea quadricauda* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Inappropriate road maintenance activities.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.28 *Grevillea singuliflora*, Single-flower grevillea

Conservation status: Rare (Queensland).

Description and habitat: *Grevillea singuliflora* is a shrub that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. *Grevillea singuliflora* has a very restricted distribution in the Helidon Hills, and the Helidon Hills population is also an easterly disjunct population with the species usually found considerably further west.

Threats within Gatton and Laidley Shires: Threats to *Grevillea singuliflora* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.29 *Hibbertia monticola*, Mountain guinea flower

Conservation status: Rare (Queensland).

Description and habitat: *Hibbertia monticola* is a shrub that occurs in mountainous areas above 300m. In the Gatton and Laidley Shire area, the species has been recorded in the Helidon Hills, with an additional unconfirmed record in the Mt Mistake area. The habitat requirements of *Hibbertia monticola* in the Gatton and Laidley Shire area are poorly understood, but Regional Ecosystems 12.5.1, 12.5.6, 12.8.1, 12.8.9, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9/10.5, 12.9/10.14 and 12.9/10.19 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to *Hibbertia monticola* include:

- Lack of knowledge in regard to habitat requirements.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.

3.30 *Leionema obtusifolium*, Helidon Hills phebalium

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Leionema obtusifolium* is a shrub that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. *Leionema obtusifolium* has a very restricted distribution, occurring only in the Helidon Hills and Crows Nest areas.

Threats within Gatton and Laidley Shires: Threats to *Leionema obtusifolium* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.31 *Leptospermum lamellatum*

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Leptospermum lamellatum* is a shrub that occurs in Regional Ecosystem 12.9/10.5 in the Helidon Hills. The Helidon Hills population of *Leptospermum lamellatum* is an isolated disjunct population, with the species predominantly occurring in sandstone communities further west or north.

Threats within Gatton and Laidley Shires: Threats to *Leptospermum lamellatum* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.32 *Lysicarpus angustifolius*, Budgeroo

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Lysicarpus angustifolius* is a tree that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. The Helidon Hills population of *Lysicarpus angustifolius* is a disjunct population, with the species usually associated with sandstone tablelands and escarpments considerably further west and north.

Threats within Gatton and Laidley Shires: Threats to *Lysicarpus angustifolius* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing, inappropriate timber harvesting practices or inappropriate timber thinning practices.

3.33 *Macrozamia lucida*, Pineapple zamia

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Macrozamia lucida* is a small palm-like plant that occurs in Regional Ecosystems 12.3.2 and 12.9/10.14 in the Helidon Hills. The Helidon Hills population of *Macrozamia lucida* is a disjunct population, with the species usually occurring in coastal and near-coastal districts further north.

Threats within Gatton and Laidley Shires: Threats to *Macrozamia lucida* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.34 *Melaleuca groveana*, Grove's paperbark

Conservation status: Rare (Queensland).

Description and habitat: *Melaleuca groveana* is a shrub or small tree that occurs in Regional Ecosystem 12.9/10.19 in the south of Gatton Shire. *Melaleuca groveana* has a restricted distribution, being found in only a few locations in South-East Queensland.

Threats within Gatton and Laidley Shires: Threats to *Melaleuca groveana* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate grazing practices.

3.35 *Melastoma affine*, Blue tongue

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Melastoma affine* is a shrub that occurs in Regional Ecosystems 12.9/10.5 and 12.9/10.14 in the Helidon Hills. The Helidon Hills population of *Melastoma affine* is a disjunct occurrence, with the species usually found in coastal heaths, wallum woodlands and open forests.

Threats within Gatton and Laidley Shires: Threats to *Melastoma affine* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.36 *Mentha grandiflora*, Gorge pennyroyal

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Mentha grandiflora* is a small herb that occurs in Regional Ecosystems 12.9/10.2 and 12.9/10.19 in the south of Gatton Shire. The Gatton Shire population of *Mentha grandiflora* is a very disjunct occurrence, with the species normally found considerably further north and west.

Threats within Gatton and Laidley Shires: Threats to *Mentha grandiflora* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.

- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate grazing practices.

3.37 *Paspalidium grandispiculatum*, Helidon Hills panic

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Paspalidium grandispiculatum* is a large grass that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. *Paspalidium grandispiculatum* is found only in the Helidon Hills and Crows Nest areas.

Threats within Gatton and Laidley Shires: Threats to *Paspalidium grandispiculatum* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.38 *Picris evae*, Hawk weed

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Picris evae* is an annual that grows up to 1.7m tall. The species has been recorded in Cambooya Shire, just outside the Gatton and Laidley Shire area. *Picris evae* has not yet been recorded within the Gatton and Laidley Shire area, but Regional Ecosystems 12.3.3, 12.3.11, 12.8.14, 12.8.17 and 12.8.19 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to *Picris evae* include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Infrequent burning is likely to have a detrimental impact on this grassy understorey species.
- Habitat degradation through inappropriate grazing practices.

3.39 *Poranthera* sp. (Mt Ballow G. Leiper AQ502886)

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Poranthera* sp. (Mt Ballow G. Leiper AQ502886) is a woody herb that occurs in Regional Ecosystems 12.5.1 and 12.9/10.5 in the Helidon Hills. *Poranthera* sp. (Mt Ballow G. Leiper AQ502886) is a newly identified species currently known only from the Mt. Barney area and the Helidon Hills.

Threats within Gatton and Laidley Shires: Threats to *Poranthera* sp. (Mt Ballow G. Leiper AQ502886) include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.40 *Potamogeton pectinatus*, Sago pondweed

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Potamogeton pectinatus* is a wetland species regarded uncommon in the South-East Queensland region. It occurs in Regional Ecosystem 12.3.8 and other wetland areas.

Threats within Gatton and Laidley Shires: Threats to *Potamogeton pectinatus* include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

3.41 *Rubus probus*, A native raspberry

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Rubus probus* is a large scrambling shrub that occurs in Regional Ecosystem 12.9/10.14 in the Helidon Hills. The Helidon Hills population of *Rubus probus* is a disjunct southern occurrence, with the species usually found further north extending to New Guinea.

Threats within Gatton and Laidley Shires: Threats to *Rubus probus* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.42 *Sarcochilus dilatatus*

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Sarcochilus dilatatus* is a small epiphyte that occurs in Regional Ecosystems 12.8.21 and 12.9/10.15 in the south of Gatton and Laidley Shires. *Sarcochilus dilatatus* has a restricted distribution in South-East Queensland.

Threats within Gatton and Laidley Shires: Threats to *Sarcochilus dilatatus* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Invasion of habitat, particularly of remnant margins, by the weed species *Lantana camara* (lantana) and the exotic pasture grass species *Panicum maximum* (green panic).
- Invasion of habitat by the weed species *Anredera cordifolia* (madeira vine), *Rivina humilis* (coral berry), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Illegal collection.
- Habitat degradation through inappropriate grazing practices.

3.43 *Sophora fraseri*, Brush sophora

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Sophora fraseri* is a shrub that occurs in Regional Ecosystem 12.9/10.19 in the south of Gatton Shire. *Sophora fraseri* is widespread but uncommon in South-East Queensland.

Threats within Gatton and Laidley Shires: Threats to *Sophora fraseri* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.

3.44 *Stemmacantha australis*, Native thistle

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Stemmacantha australis* is an annual that has been recorded in Regional Ecosystems 12.3.3 and 12.8.17 in the Gatton and Laidley Shire area. *Stemmacantha australis* was last recorded in Regional Ecosystem 12.3.3 in 1971. Most of the alluvial plains and lowlands where Regional Ecosystem 12.3.3 originally occurred are now subject to intensive agriculture. Remaining areas of Regional Ecosystem 12.3.3 heavily invaded by weeds and exotic pasture species, in particular the grass *Panicum maximum*

(green panic). For these reasons *Stemmacantha australis* may now be locally extinct within Regional Ecosystem 12.3.3. *Stemmacantha australis* was only recently recorded in Regional Ecosystem 12.8.17, and may also occur in Regional Ecosystems 12.8.14, 12.8.19, and 12.9/10.7.

Threats within Gatton and Laidley Shires: Threats to *Stemmacantha australis* include:

- A lack of knowledge in regard to the presence/absence of the species in Regional Ecosystems 12.3.3, 12.8.14, 12.8.19 and 12.9/10.7.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Infrequent burning is likely to have a detrimental impact on this grassy understorey species.
- Invasion of habitat by the exotic pasture grass *Panicum maximum* (green panic) and the weed species *Lantana camara* (lantana) and *Bryophyllum tubiflorum* (mother of millions).
- Habitat degradation through inappropriate grazing practices.

3.45 *Thesium australe*, Thesium

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: *Thesium australe* is a herb that has been recorded in Regional Ecosystem 12.3.3 in the Gatton and Laidley Shire area. *Thesium australe* was last recorded in the area in 1985. The alluvial plains and lowlands where the species was recorded are subject to intensive agriculture with remaining areas of Regional Ecosystem 12.3.3 heavily invaded by weeds and exotic pasture species, in particular the grass *Panicum maximum* (green panic). For these reasons *Thesium australe* may now be locally extinct. Regional Ecosystem 12.3.11 is also potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to *Thesium australe* include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Infrequent burning is likely to have a detrimental impact on this grassy understorey species.
- Invasion of habitat by the exotic pasture grass *Panicum maximum* (green panic) and the weed species *Lantana camara* (lantana) and *Bryophyllum tubiflorum* (mother of millions).
- Habitat degradation through inappropriate grazing practices.

3.46 *Triodia* sp., Porcupine grass/Spinifex

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: *Triodia* sp. is a grass-like plant that occurs in Regional Ecosystem 12.9/10.19 in Cambooya Shire, just outside the Gatton and Laidley Shire area. The

Cambooya Shire population of *Triodia* sp. is a disjunct occurrence, with *Triodia* sp. normally found further inland. It is not yet known which species of *Triodia* is present in Cambooya Shire. *Triodia* sp. has not yet been recorded within the Gatton and Laidley Shire area, but Regional Ecosystem 12.9/10.19 in the south of Gatton Shire is potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to *Triodia* sp. include:

- A lack of knowledge in regard to which species of *Triodia* is present in Cambooya Shire.
- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.

3.47 *Triplarina bancroftii*

Conservation status: Pending Rare (Queensland).

Description and habitat: *Triplarina bancroftii* is a shrub that occurs in Regional Ecosystem 12.9/10.2 in the Helidon Hills. The Helidon Hills population of *Triplarina bancroftii* is a disjunct southern occurrence, with other known populations located considerably further north in the Burnett district.

Threats within Gatton and Laidley Shires: Threats to *Triplarina bancroftii* include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on this shrubby understorey species.
- Invasion of habitat by the weed species *Lantana camara* (lantana).
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate grazing practices.
- Inappropriate road maintenance activities.

3.48 *Wahlenbergia scopulicola*

Conservation status: Rare (Queensland).

Description and habitat: *Wahlenbergia scopulicola* is a herb that has been recorded in Cambooya Shire, just outside the Gatton and Laidley Shire area. *Wahlenbergia scopulicola* has not yet been recorded within the Gatton and Laidley Shire area, but Regional Ecosystems 12.3.3, 12.3.11, 12.8.14, 12.8.17 and 12.8.19 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to *Wahlenbergia scopulicola* include:

- A lack of knowledge in regard to the presence/absence of the species in the area.

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Infrequent burning is likely to have a detrimental impact on this grassy understorey species.
- Invasion of habitat by the weed species *Lantana camara*.
- Habitat degradation through inappropriate grazing practices.

4. Significant invertebrate species

4.1 *Nesolycaena albosericea*, Satin blue butterfly

Conservation status: Vulnerable (Queensland).

Description and habitat: The satin blue butterfly is hosted by *Boronia* plant species. The satin blue butterfly has not yet been recorded in Gatton or Laidley Shires but may be present, particularly in areas where *Boronia splendida* and *Boronia bipinnata* occur. *Boronia splendida* and *Boronia bipinnata* occur in Regional Ecosystem 12.9/10.19 in the south of Gatton Shire, which is potential habitat for the satin blue butterfly.

Threats within Gatton and Laidley Shires: Threats to the satin blue butterfly include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of *Boronia* species populations or species habitat through vegetation clearing.
- Inappropriate fire regimes. Frequent low-intensity burning to reduce fuel loads or promote grass growth for cattle grazing is likely to have a detrimental impact on shrubby understorey *Boronia* species.

5. Significant amphibian species

5.1 *Adelotus brevis*, Tusked frog

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The tusked frog is a medium-sized pond or stream dwelling frog. Although common in some parts of South-East Queensland, possible decline in areas of its range is raising concern amongst biologists. In the Gatton and Laidley Shire area, the tusked frog has been recorded in several locations and its habitat is Regional Ecosystems 12.3.2, 12.3.3, 12.3.7 and 12.3.11.

Threats within Gatton and Laidley Shires: Threats to the tusked frog include:

- Siltation, pollution or exotic water-weed invasion of streams and ponds.
- Alteration of stream flows.
- Clearance or fragmentation of riparian vegetation.
- Modification of riparian vegetation through inappropriate fire regimes, inappropriate grazing practices or weed invasion.

5.2 *Cyclorana alboguttata*, Greenstripe frog

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The greenstripe frog breeds in ephemeral ponds and wetlands, burrowing into the moist earth during dry periods. Possible decline of the greenstripe frog in areas east of the Great Dividing Range is raising concern amongst biologists. In the Gatton and Laidley Shire area, the greenstripe frog has been recorded in several locations and its habitat is ephemeral wetlands and Regional Ecosystems 12.3.3, 12.3.7, 12.3.8, 12.3.11 and 12.9/10.7.

Threats within Gatton and Laidley Shires: Threats to the greenstripe frog include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands and ponds.
- Alteration of stream flows and alteration of the wet/dry cycles of ephemeral wetlands and ponds.
- Modification of the vegetation fringing ephemeral wetlands and ponds through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands and ponds during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

5.3 *Cyclorana brevipes*, Superb collared-frog

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The superb collared-frog breeds in ephemeral ponds and wetlands, burrowing into the moist earth during dry periods. Possible decline of the superb collared-frog in areas east of the Great Dividing Range is raising concern amongst biologists. In the Gatton and Laidley Shire area, the superb collared-frog has been recorded in several locations and its habitat is ephemeral wetlands and Regional Ecosystems 12.3.3, 12.3.7, 12.3.8, 12.3.11 and 12.9/10.7.

Threats within Gatton and Laidley Shires: Threats to the superb collared-frog include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands and ponds.
- Alteration of stream flows and alteration of the wet/dry cycles of ephemeral wetlands and ponds.
- Modification of the vegetation fringing ephemeral wetlands and ponds through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands and ponds during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

5.4 *Cyclorana verrucosa*, Warty water-holding frog/Rough frog

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The warty water-holding frog breeds in ephemeral ponds and wetlands, burrowing into the moist earth during dry periods. Possible decline of the warty water-holding frog in areas east of the Great Dividing Range is raising concern amongst biologists. In the Gatton and Laidley Shire area, the warty water-holding frog was last recorded in the 1960's and its habitat is ephemeral wetlands and Regional Ecosystems 12.3.3, 12.3.7, 12.3.8, 12.3.11 and 12.9/10.7.

Threats within Gatton and Laidley Shires: Threats to the warty water-holding frog the include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands and ponds.
- Alteration of stream flows and alteration of the wet/dry cycles of ephemeral wetlands and ponds.
- Modification of the vegetation fringing ephemeral wetlands and ponds through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands and ponds during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

5.5 *Kyarranus kundagungan*, Red-and-yellow mountain-frog

Conservation status: Vulnerable (Queensland).

Description and habitat: The red-and-yellow mountain-frog occurs in rainforest and thick forest adjacent to streams. In the Gatton and Laidley Shire area, the red-and-yellow mountain-frog has been recorded in the Mistake Range area and its habitat is streams and adjacent vegetation in Regional Ecosystems 12.8.4 and 12.8.9.

Threats within Gatton and Laidley Shires: Threats to the red-and-yellow mountain-frog include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Degradation of water quality and riparian vegetation arising from inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices, weed invasion, pollution and feral animal disturbance.

5.6 *Lechriodus fletcheri*, Black-soled frog

Conservation status: Vulnerable (Queensland).

Description and habitat: The black-soled frog occurs in rainforest and wet sclerophyll forest and breeds in small ephemeral waterbodies. In the Gatton and Laidley Shire area, the black-soled frog has been recorded in the Mistake Range area and its habitat is Regional Ecosystems 12.8.4 and 12.8.9.

Threats within Gatton and Laidley Shires: Threats to the black-soled frog include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices, weed invasion and pollution.
- Possible predation by feral animals.
- Disease.

5.7 *Limnodynastes salmini*, Salmon-striped frog

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The salmon-striped frog breeds in ephemeral ponds and wetlands, burrowing into the moist earth during dry periods. Possible decline of the salmon-striped frog in areas east of the Great Dividing Range is raising concern amongst biologists. In the Gatton and Laidley Shire area, the salmon-striped frog was last recorded in the 1960's and its habitat is ephemeral wetlands and Regional Ecosystems 12.3.3, 12.3.7, 12.3.8, 12.3.11 and 12.9/10.7.

Threats within Gatton and Laidley Shires: Threats to the salmon-striped frog include:

- Cultivation.
- Siltation, pollution or exotic water-weed invasion of wetlands and ponds.

- Alteration of stream flows and alteration of the wet/dry cycles of ephemeral wetlands and ponds.
- Modification of the vegetation fringing ephemeral wetlands and ponds through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands and ponds during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

5.8 *Litoria brevipalmata*, Green-thighed frog

Conservation status: Rare (Queensland).

Description and habitat: The green-thighed frog occurs in lowland areas east of the Great Dividing Range and coastal ranges, from near Gosford in New South Wales to South-East Queensland. It breeds in ephemeral pools and flooded areas in, or adjacent to, dry forest. The green-thighed frog has been recorded in Ravensbourne National Park, which is just outside Gatton and Laidley Shire area. The green-thighed frog may also occur in the Gatton and Laidley Shire area, where Regional Ecosystems 12.8.1, 12.8.4 and 12.8.9 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to the green-thighed frog include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Degradation of water quality and riparian vegetation arising from inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices, weed invasion and pollution.
- Possible predation by feral animals, including the possible predation of eggs and tadpoles by exotic fish species.
- Disease.

5.9 *Litoria pearsoniana*, Cascade treefrog

Conservation status: Endangered (Queensland).

Description and habitat: The cascade treefrog is endemic to southeast Queensland and northeast NSW. It occurs in rainforest and thickly forested gullies, in association with flowing rocky streams. In winter it is known to aggregate under rocks, or in cracks in rocks or wooden bridge girders. However, it is relatively conspicuous in spring and summer, when males call from overhanging riparian vegetation or from rocks in or near streams. The cascade treefrog suffered a major population decline in the late 1970s to early 1980s, the reasons for which are poorly understood. The cascade treefrog has been recorded from the Dalrymple Creek area, just outside the Gatton and Laidley Shire area. The cascade treefrog may also occur within the Gatton and Laidley Shire area, where Regional Ecosystems 12.8.1, 12.8.4 and 12.8.9 are potential habitat for the species.

Threats within Gatton and Laidley Shires: The reasons for the decline of the cascade treefrog are poorly understood. However, threats to the cascade treefrog may include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Disease.
- Localised habitat loss or fragmentation through vegetation clearing.
- Degradation of water quality and riparian vegetation arising from inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices, weed invasion and pollution.
- Possible predation by feral animals.

5.10 *Mixophyes fleayi*, Fleay's barred-frog

Conservation status: Endangered (Commonwealth), Endangered (Queensland).

Description and habitat: Fleay's barred-frog is a large ground-dwelling frog that is restricted to wet forests in far northeast NSW and southeast Queensland. In southeast Queensland it is known from the Conondale, McPherson and Main ranges, usually in association with permanent rocky streams. Fleay's barred-frog appears to have declined for as yet unknown reasons, and remaining populations may be affected by habitat alteration or loss (such as from cattle grazing) and the impacts of feral plants and animals. In the Gatton and Laidley Shire area, Fleay's barred-frog has been recorded from the Mistake Range and its habitat is permanent rocky streams and associated riparian vegetation in Regional Ecosystems 12.8.1, 12.8.4 and 12.8.9.

Threats within Gatton and Laidley Shires: The reasons for the decline of Fleay's barred-frog are poorly understood. However, threats to Fleay's barred-frog may include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Degradation of water quality and riparian vegetation arising from inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices, weed invasion and pollution.
- Predation by feral animals.
- Disease.

6. Significant reptile species

6.1 *Coeranoscincus reticulatus*, Three-toed snake-toothed skink

Conservation status: Vulnerable (Commonwealth), Rare (Queensland).

Description and habitat: The three-toed snake-toothed skink inhabits rainforests and wet sclerophyll forests, where it typically dwells in leaf litter or rotten logs. In the Gatton and Laidley Shire area, the three-toed snake-toothed skink has been recorded in the Mistake Range area and its habitat is Regional Ecosystems 12.8.1, 12.8.4 and 12.8.9.

Threats within Gatton and Laidley Shires: Threats to the three-toed snake-toothed skink include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss or degradation of leaf litter through inappropriate grazing practices, inappropriate fire regimes or weed invasion.
- Predation by feral animals.

6.2 *Delma torquata*, Collared delma

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland)

Description and habitat: The collared delma is a small legless lizard that inhabits open woodland and woodland fringing semi evergreen vine thicket, where it shelters in mats of leaf litter, surface rocks and logs, and below the ground surface. When the collared delma shelters below the ground surface, it is not known whether the species is using natural earth cracks or true burrows. In the Gatton and Laidley Shire area, the collared delma has been recorded in the Helidon Hills and its habitat is Regional Ecosystems 12.5.1 and 12.9/10.5.

Threats within Gatton and Laidley Shires: Threats to the collared delma include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss, degradation or modification of leaf litter, surface rocks and logs or subsurface features through inappropriate grazing practices, inappropriate fire regimes or weed invasion.
- Predation by feral animals.

6.3 *Hoplocephalus stephensii*, Stephen's banded snake

Conservation status: Rare (Queensland).

Description and habitat: Stephen's banded snake occurs in a wide range of habitats including dry rainforest, sub-tropical rainforest, wet and dry sclerophyll forests and rocky outcrops. The species is typically found in old-growth forests. Stephen's banded snake is an arboreal

species that uses gaps between decorticated bark (bark that is separating and peeling) and tree trunks for daytime shelter. It is predominantly nocturnal, feeding on small vertebrates such as small mammals, lizards, frogs and possibly birds. Stephen's banded snake has been recorded from the Cunningham's Gap area, which is close to the Gatton and Laidley Shire area. Although not yet recorded in Gatton or Laidley Shires, Stephen's banded snake may also occur further north along the Main Range and in the Mistake Range area where Regional Ecosystems 12.8.1, 12.8.4, 12.8.9, 12.8.14, 12.8.16, 12.8.17, and 12.8.21 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Potential threats to Stephen's banded snake include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss of trees with decorticated bark through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.
- Predation by feral animals.

7. Significant bird species

7.1 *Accipiter novaehollandiae*, Grey goshawk

Conservation status: Rare (Queensland).

Description and habitat: The grey goshawk is a bird of prey that typically occurs in forests. In the Gatton and Laidley Shire area, the grey goshawk occurs in Regional Ecosystems 12.3.8, 12.5.6, 12.8.4, 12.9/10.14 and wetlands and has been recorded in the several locations.

Threats within Gatton and Laidley Shires: Threats to the grey goshawk include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.
- Deliberate shooting.
- Possible reduction in breeding success caused by pesticide residues in the food chain.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

7.2 *Atrichornis rufescens*, Rufous scrub-bird

Conservation status: Vulnerable (Queensland).

Description and habitat: Rufous scrub-birds are small, ground-dwelling birds that feed in thick leaf litter in upland temperate rainforests. Within its rainforest habitat, the rufous scrub-bird is restricted to areas of dense ground cover where it occurs in low densities, with birds occupying large territories. The species has been recorded from the head of Dalrymple Creek and at Mt. Cordeaux, which are just outside the Gatton and Laidley Shire area. The rufous scrub-bird has not yet been recorded within Gatton or Laidley Shires, but Regional Ecosystem 12.8.4 in the Mistake Range area is potential habitat.

Threats within Gatton and Laidley Shires: Threats to the rufous scrub-bird include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.

- Loss, degradation or modification of leaf litter through inappropriate grazing practices, inappropriate fire regimes or weed invasion.
- Predation by feral animals.

7.3 *Calyptorhynchus lathamii*, Glossy black-cockatoo

Conservation status: Vulnerable (Queensland).

Description and habitat: The glossy black-cockatoo is a wide-ranging specialist seed-eater that feeds on fruiting *Allocasuarina* plant species. The glossy black-cockatoo nests in tree hollows, which are often in the form of hollow limbs or cavities within dead trees. In the Gatton and Laidley Shire area, the glossy black-cockatoo occurs in Regional Ecosystems 12.5.6, 12.8.9, 12.8.14, 12.9/10.5, 12.9/10.14, and 12.9/10.19 which feature populations of *Allocasuarina* plant species, and has been recorded in the Helidon Hills and parts of the south of Gatton Shire.

Threats within Gatton and Laidley Shires: Threats to the glossy black-cockatoo include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss of, or damage to, *Allocasuarina* food plant species or trees with suitable nesting sites through vegetation clearing, inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.
- Illegal collection of eggs.

7.4 *Climacteris erythrops*, Red-browed treecreeper

Conservation status: Rare (Queensland).

Description and habitat: The red-browed treecreeper is an ecological specialist, gleaning insects from the bark of eucalypt trees, particularly smooth-barked species with long ribbons of decortivating bark (bark that is separating and peeling from the trunk and branches). In South-East Queensland the species occurs in upland wet sclerophyll forests and rainforests with emergent eucalypts. In the Gatton and Laidley Shire area, the red-browed treecreeper has been recorded in the Glen Rock, Black Duck Creek, Blackfellow Creek and Mistake Range areas and its habitat is Regional Ecosystems 12.8.1, 12.8.9 and 12.8.14.

Threats within Gatton and Laidley Shires: Threats to the red-browed treecreeper include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss of trees with decortivating bark through inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.

7.5 *Cyclopsitta diophthalma coxeni*, Coxen's fig-parrot

Conservation status: Endangered (Commonwealth), Endangered (Queensland).

Description and habitat: Coxen's fig-parrot is one of Australia's most endangered birds. Once numerous in the subtropical rainforests of South-East Queensland and northern New

South Wales, the species has declined dramatically due to the extensive clearance of its habitat. Coxen's fig-parrot occurs in or near remnant stands of subtropical rainforest, in strips of rainforest along rivers and creeks, and in any other forest type where there is an abundance of fruiting figs. Typical food trees are the Moreton Bay fig *Ficus macrophylla*, various sandpaper figs such as *Ficus coronata* and *Ficus watkinsiana*. Other types of fig trees are also known to be important food sources. There are no recent records of Coxen's fig-parrot within the Gatton or Laidley Shire area, but Regional Ecosystems 12.8.4, 12.8.9, 12.8.21, and 12.9/10.15 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to Coxen's fig-parrot include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss of, or damage to, fig tree food species through vegetation clearing, inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.
- Illegal collection of eggs.

7.6 *Dasyornis brachypterus*, Eastern bristlebird

Conservation status: Endangered (Commonwealth), Endangered (Queensland).

Description and habitat: The eastern bristlebird is seriously endangered, with only 21 birds known to remain in Queensland in 1997. In South-East Queensland, the preferred habitat for the mostly ground-dwelling species appears to be open eucalypt forest with a grassy understorey, although eastern bristlebirds have also been located in high altitude heath. The eastern bristlebird has been recorded at Cunningham's Gap, which is close to the Gatton and Laidley Shire area. The eastern bristlebird has not been recorded within the Gatton and Laidley Shire area, but Regional Ecosystem 12.8.14 in the Mistake Range area is potential habitat.

Threats within Gatton and Laidley Shires: Threats to the eastern bristlebird include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate grazing practices and disturbance by feral pigs.
- Predation by feral animals.

7.7 *Ephippiorhynchus asiaticus*, Black-necked stork

Conservation status: Rare (Queensland).

Description and habitat: The black-necked stork is a large nomadic waterbird that frequents Regional Ecosystem 12.3.8 and other wetland areas. The species nests in a large stick nest in the crown of a tall tree, particularly a tree where the top has broken off. In the Gatton and Laidley Shire area, the black-necked stork has been recorded at several locations.

Threats within Gatton and Laidley Shires: Threats to the black-necked stork include:

- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Loss of trees suitable for nesting.

7.8 *Erythrorhynchus radiatus*, Red goshawk

Conservation status: Vulnerable (Commonwealth), Endangered (Queensland).

Description and habitat: The red goshawk is Australia's rarest bird of prey. The species' preferred habitat comprises forest and woodland with a mosaic of vegetation types, permanent water, and large populations of birds, which are its main prey. Prey is typically captured by ambush-hunting from concealed perch sites, and as a result the red goshawk prefers forests of intermediate density, or the ecotones between habitats of differing densities. Such habitats are open enough to allow aerial pursuits to occur, but also provide enough cover for ambush hunting. The red goshawk often prefers to nest in riparian forests. The nest is normally high in the crown of a living tree taller than 20 m, within 1 km of, but often directly beside, a permanent waterway of wetland. In the Gatton and Laidley Shire area, the red goshawk has been recorded in several locations, with its habitat comprising remnant eucalypt forest/woodland throughout the area, the ecotones between eucalypt forest/woodland and adjacent vegetation communities such as rainforest, and wetlands and permanent waterways.

Threats within Gatton and Laidley Shires: Threats to the red goshawk include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Reductions in the availability of prey species caused by the loss or modification of wetlands.
- Deliberate shooting.
- Illegal collection of eggs.
- Loss of trees suitable for nesting.
- Reduction in breeding success caused by pesticide residues in the food chain.
- Abandonment of nest sites caused by humans coming too close to nest sites.

7.9 *Falco hypoleucos*, Grey falcon

Conservation status: Rare (Queensland).

Description and habitat: The grey falcon occurs on tree-scattered plains or along desert watercourses, mainly in the Australian interior. The grey falcon has been recorded as a nomadic vagrant at wetlands in the Gatton and Laidley Shire area, with the area outside the normal habitat range of the species.

Threats within Gatton and Laidley Shires: Threats to the grey falcon include:

- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

7.10 *Geophaps scripta scripta*, Squatter pigeon (southern subsp.)

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: The squatter pigeon is a ground-feeding bird that occurs in open woodland and nests in grass-lined scrape on the ground. In the Gatton and Laidley Shire area, the squatter pigeon occurs in Regional Ecosystem 12.9/10.7 and has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the squatter pigeon include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Predation by feral animals.

7.11 *Grantiella picta*, Painted honeyeater

Conservation status: Rare (Queensland).

Description and habitat: The painted honeyeater is a nomad or irregular migrant in mistletoes in woodland and open forest in eastern Australia. The painted honeyeater has been recorded as a nomadic vagrant in the Gatton and Laidley Shire area, with the area outside the normal habitat range of the species.

Threats within Gatton and Laidley Shires: Within the Gatton and Laidley Shire area there are no known threats to the painted honeyeater.

7.12 *Lathamus discolor*, Swift parrot

Conservation status: Endangered (Commonwealth).

Description and habitat: The swift parrot breeds in Tasmania. From March to November the species is a nomadic visitor to sclerophyll forests and woodlands on the Australian mainland,

including those in South-East Queensland. It feeds on blossoming trees, and also on psyllids (a leaf-dwelling insect) and lerps (the casing of psyllids). In the Gatton and Laidley Shire area, the swift parrot occurs in Regional Ecosystems 12.9/10.2 and 12.9/10.7 and has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the swift parrot include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.

7.13 *Lophoictinia isura*, Square-tailed kite

Conservation status: Rare (Queensland).

Description and habitat: The square-tailed kite is a bird of prey that occurs in open woodland, with each pair of the species occupying a very large territory (in excess of 100 km²). The species nests in a large stick cup on a horizontal branch. In the Gatton and Laidley Shire area, the square-tailed kite occurs in Regional Ecosystems 12.9/10.2, 12.9/10.5, 12.9/10.7 and 12.9/10.19 and has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the square-tailed kite include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Deliberate shooting.
- Loss of trees suitable for nesting.

7.14 *Melithreptus gularis*, Black-chinned honeyeater

Conservation status: Rare (Queensland).

Description and habitat: The black-chinned honeyeater occurs in dry forest and woodland, particularly along watercourses. The species nests in a deep cup of bark, grass, down and fur suspended in outer foliage. In the Gatton and Laidley Shire area, the black-chinned honeyeater occurs in Regional Ecosystems 12.3.8, 12.9/10.2, 12.9/10.3 and wetlands and has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the black-chinned honeyeater include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Siltation, pollution or exotic water-weed invasion of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.

- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

7.15 *Menura alberti*, Albert's lyrebird

Conservation status: Rare (Queensland).

Description and habitat: Albert's lyrebird occurs in rainforest and nests in a large stick dome lined with feathers. In the Gatton and Laidley Shire area, Albert's lyrebird occurs in Regional Ecosystems 12.8.4 and 12.8.9 and has been recorded in the Mistake Range area.

Threats within Gatton and Laidley Shires: Threats to Albert's lyrebird include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Predation by feral animals.

7.16 *Neophema pulchella*, Turquoise parrot

Conservation status: Rare (Queensland).

Description and habitat: The turquoise parrot occurs in open woodland or grassland and nests in hollows in eucalypt trees. In the Gatton and Laidley Shire area, the turquoise parrot occurs in Regional Ecosystem 12.9/10.7 and has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the turquoise parrot include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees suitable for nesting.

7.17 *Nettapus coromandelianus*, Cotton pygmy-goose

Conservation status: Rare (Queensland).

Description and habitat: The cotton pygmy-goose is a small duck that occurs on lily-covered lagoons, dams and ponds, including areas of Regional Ecosystem 12.3.8. The species nests in an unlined tree hollow. In the Gatton and Laidley Shire area, the cotton pygmy-goose has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the cotton pygmy-goose include:

- Siltation, pollution or exotic water-weed invasion of wetlands.

- Alteration of the wet/dry cycles of ephemeral wetlands.
- Drainage of wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Loss of trees suitable for nesting.

7.18 *Ninox strenua*, Powerful owl

Conservation status: Vulnerable (Queensland).

Description and habitat: The powerful owl is a very large owl that occurs in sclerophyll forest and nests in tree hollows. In the Gatton and Laidley Shire area, the powerful owl has been recorded in several locations, and potential habitat for the species includes all large areas of remnant vegetation throughout the area, particularly in the uplands and where there are gullies with good canopy cover.

Threats within Gatton and Laidley Shires: Threats to the powerful owl include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees suitable for nesting.

7.19 *Podargus ocellatus plumiferous*, Plumed frogmouth

Conservation status: Vulnerable (Queensland).

Description and habitat: The plumed frogmouth occurs in rainforest and nests on a scant platform of twigs in a tree. The species has been recorded in Ravensbourne National Park and the Dalrymple Creek area, which are just outside the Gatton and Laidley Shire area. The plumed frogmouth has not yet been recorded within Gatton or Laidley Shires, but Regional Ecosystems 12.8.4 and 12.8.9 in the Mistake Range area are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to the plumed frogmouth include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate timber harvesting practices or inappropriate timber thinning practices.

7.20 *Psephotus pulcherrimus*, Paradise parrot

Conservation status: Extinct (Commonwealth), Presumed Extinct (Queensland).

Description and habitat: The paradise parrot occurs in woodlands and nests in tunnels in termite mounds or earth banks. Named after Paradise Creek in the Helidon Hills, the paradise parrot has been driven to probable extinction through habitat clearance and grazing.

The species may still exist in isolated areas of southern Queensland where the species' habitat has not been altered by grazing. In the Gatton and Laidley Shire area, there have been unconfirmed sightings of the paradise parrot in the Murphy's Creek area, and Regional Ecosystem 12.9/10.2 in the Murphy's Creek area is potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to the paradise parrot include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate grazing practices.

7.21 *Rallus pectoralis*, Lewin's rail

Conservation status: Rare (Queensland).

Description and habitat: Lewin's rail occurs in wetlands and riparian areas, including areas of Regional Ecosystem 12.3.8. The species nests in a well-hidden cup made from grass and reeds with the surrounding vegetation pulled overhead in a canopy, and often with a 'walkway' of flattened grass or reeds. In the Gatton and Laidley Shire area, Lewin's rail has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to Lewin's rail include:

- Siltation, pollution or exotic water-weed invasion of wetlands.
- Drainage of wetlands.
- Modification of riparian vegetation and the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Predation by feral animals.

7.22 *Rostratula benghalensis*, Painted snipe

Conservation status: Rare (Queensland).

Description and habitat: The painted snipe is a nomadic waterbird that frequents wetlands and areas of Regional Ecosystem 12.3.8. The species nests in a lined scrape on the ground, under a tussock or inside a bush. In the Gatton and Laidley Shire area, the painted snipe has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the painted snipe include:

- Siltation, pollution or exotic water-weed invasion of wetlands.
- Drainage of wetlands.
- Modification of riparian vegetation and the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Predation by feral animals.

7.23 *Stictonetta naevosa*, Freckled duck

Conservation status: Rare (Queensland).

Description and habitat: The freckled duck occurs in wetlands and areas of Regional Ecosystem 12.3.8. In the Gatton and Laidley Shire area, the freckled duck has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the freckled duck include:

- Siltation, pollution or exotic water-weed invasion of wetlands.
- Drainage of wetlands.
- Alteration of the wet/dry cycles of ephemeral wetlands.
- Modification of the vegetation fringing wetlands through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.
- Modification of the vegetation covering the floor of ephemeral wetlands during the dry stage of the wet/dry cycle through clearance, inappropriate fire regimes, weed invasion or exotic pasture grass invasion.

7.24 *Turnix melanogaster*, Black-breasted button-quail

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: The black-breasted button-quail is a ground-dwelling bird that occurs in dry rainforest. In the Gatton and Laidley Shire area, the black-breasted button-quail occurs in Regional Ecosystem 12.9/10.15 and has been recorded in several locations.

Threats within Gatton and Laidley Shires: Threats to the black-breasted button-quail include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Loss or degradation of leaf litter.
- Invasion of habitat, particularly of remnant margins, by the weed species *Lantana camara* (lantana) and the exotic pasture grass species *Panicum maximum* (green panic).
- Invasion of habitat by the weed species *Anredera cordifolia* (madeira vine), *Rivina humilis* (coral berry), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Habitat degradation through inappropriate grazing practices.
- Predation by feral animals.

7.25 *Tyto novaehollandiae*, Masked owl (southern subsp.)

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The masked owl (southern subsp.) occurs in forest or woodland and nests in tree hollows or caves. In the Gatton and Laidley Shire area, the masked owl

(southern subsp.) occurs in Regional Ecosystems 12.5.6, 12.8.16, 12.8.17, 12.9/10.5, 12.9/10.14 and 12.9/10.19 and has been recorded at several locations.

Threats within Gatton and Laidley Shires: Threats to the masked owl include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees suitable for nesting.
- Possible reduction in prey availability.
- Traffic.

7.26 *Tyto tenebricosa*, Sooty owl

Conservation status: Rare (Queensland).

Description and habitat: The sooty owl occurs in rainforest and wet sclerophyll forest and nests in hollows in tall eucalypts. The species has been recorded in the Ravensbourne National Park, Goomburra State Forest and Redwood Park areas, which are just outside the Gatton and Laidley Shire area. The sooty owl has not yet been recorded within Gatton or Laidley Shires, but Regional Ecosystems 12.8.1, 12.8.4, 12.8.9 and 12.8.21 in the Mistake Range area are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to the sooty owl include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees suitable for nesting.

7.27 *Xanthomyza phrygia*, Regent honeyeater

Conservation status: Endangered (Commonwealth), Endangered (Queensland).

Description and habitat: The regent honeyeater occurs mainly in box-ironbark open forests. A large proportion of their time is spent feeding on ‘key’ eucalypt species, including *Eucalyptus sideroxylon* (Mugga ironbark/red ironbark) and *Eucalyptus melliodora* (yellow box). Populations of the species have fallen to a critically low level - perhaps fewer than 1000 birds remain. The regent honeyeater occurs in Regional Ecosystems 12.8.14 and 12.8.16 and was recently recorded in the Glen Rock area.

Threats within Gatton and Laidley Shires: Threats to the regent honeyeater include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.

- Habitat degradation through inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Possible competition for nectar from some larger species of honeyeater which have benefited from habitat fragmentation.

8. Significant mammal species

8.1 *Chalinolobus dwyeri*, Large-eared pied bat

Conservation status: Rare (Queensland).

Description and habitat: The large-eared pied bat primarily occurs in dry forest, and in particular dry forest adjacent to rainforest or wet sclerophyll forest with a rainforest sub-canopy. Little is known about the roosting requirements of the species, though it has been recorded utilising disused mine tunnels, caves, rock overhangs and abandoned fairy martin (*Hirundo ariel*) nests. In the Gatton and Laidley Shire area, the large-eared pied bat has been recorded in the Shingle Hut Creek area of the Mistake Range and its habitat is Regional Ecosystems 12.8.1, 12.8.14, 12.8.16, and 12.8.17.

Threats within Gatton and Laidley Shires: Threats to the large-eared pied bat include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.

8.2 *Chalinolobus picatus*, Little pied bat

Conservation status: Rare (Queensland).

Description and habitat: The little pied bat occurs in a wide range of drier vegetation communities including eucalypt woodland and open forest. The species is known to roost in caves, mines, rock shelters and tree hollows. In the Gatton and Laidley Shire area, the little pied bat has been recorded in the Helidon Hills and its habitat is Regional Ecosystems 12.8.16, 12.8.17, 12.9/10.2, 12.9/10.5 and 12.9/10.19.

Threats within Gatton and Laidley Shires: Threats to the little pied bat include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees suitable for roosting.

8.3 *Dasyurus maculatus maculatus*, Spotted-tailed quoll (southern subsp.)

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: The spotted-tailed quoll (southern subsp.) occurs in rainforests and dense forests where it nests in hollow logs, trees, caves and rock crevices. The species has declined over the last 20 years and is no longer found in the greater Brisbane area. The species has been recorded at Dalrymple Creek, which is just outside the Gatton and Laidley

Shire area. The spotted-tailed quoll (southern subsp.) has not yet been formally recorded within Gatton or Laidley Shires, but large vegetation remnants in remote parts of the area are potential habitat.

Threats within Gatton and Laidley Shires: Threats to the spotted-tailed quoll (southern subsp.) include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees and hollow logs suitable for nesting.
- Predation by, and competition from, feral animals.
- Being caught in traps set for animals such as rabbits and foxes.
- Possible poisoning from the ingestion of cane toads (*Bufo marinus*).
- Possible poisoning from the ingestion of baits set for wild dogs and dingoes.

8.4 *Kerivoula papuensis*, Golden-tipped bat

Conservation status: Rare (Queensland).

Description and habitat: The golden-tipped bat occurs in a variety of rainforest types. The species is known to roost in the disused suspended nests of the yellow-throated scrubwren (*Sericornis citreogularis*) and to a lesser extent the brown gerygone (*Gerygone mouki*), and also in the hollows of rainforest trees. In the Gatton and Laidley Shire area, the golden-tipped bat has been recorded in the Shingle Hut Creek area of the Mistake Range and its habitat is Regional Ecosystems 12.8.1, 12.8.4 and 12.8.9.

Threats within Gatton and Laidley Shires: Threats to the golden-tipped bat include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Loss of trees suitable for roosting.

8.5 *Petrogale penicillata*, Brush-tailed rock wallaby

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: The brush-tailed rock wallaby inhabits rocky outcrops with deep fissures and caves, adjacent to a range of vegetation types including forest, woodland and rainforest. The species feeds mainly on grasses and forbs, with some opportunistic feeding on seeds, fruits and flowers. In the Gatton and Laidley Shire area, the brush-tailed rock wallaby has been recorded in the Helidon Hills, Heifer Creek and Mistake Range areas and its habitat is Regional Ecosystems 12.8.19, 12.8.21, 12.9/10.5 and 12.9/10.19.

Threats within Gatton and Laidley Shires: Threats to the brush-tailed rock wallaby include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through weed invasion, inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Predation by, and competition from, feral animals.

8.6 *Phascolarctos cinereus*, Koala

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The koala occurs in eucalypt forest and woodlands. In the Gatton and Laidley Shire area, the koala has been recorded in several locations and its habitat is Regional Ecosystems 12.3.2, 12.3.3, 12.3.7, 12.3.11, 12.5.1, 12.5.6, 12.8.14, 12.8.16 and 12.8.17.

Threats within Gatton and Laidley Shires: Threats to the koala include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through weed invasion, inappropriate fire regimes, inappropriate grazing practices, inappropriate timber harvesting practices or inappropriate timber thinning practices.
- Predation by domestic dogs and feral animals.
- Traffic.

8.7 *Potorous tridactylus tridactylus*, Long-nosed potoroo

Conservation status: Vulnerable (Commonwealth), Vulnerable (Queensland).

Description and habitat: The long-nosed potoroo occurs in wet and dry sclerophyll forests with an annual rainfall exceeding 760 mm, and requires a dense understorey of grass and shrubs for shelter. This nocturnal species prefers forests on lighter soils, where it digs for the fungi, roots, tubers and invertebrates that make up its diet. In the Gatton and Laidley Shire area, the long-nosed potoroo has been recorded in the Helidon Hills and its habitat is Regional Ecosystems 12.5.1, 12.5.6, 12.8.1, 12.8.9, 12.8.14, 12.8.16, 12.8.17, 12.11.6 and 12.11.9.

Threats within Gatton and Laidley Shires: Threats to the long-nosed potoroo include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through weed invasion, inappropriate fire regimes or inappropriate grazing practices.
- Competition from introduced herbivores.

8.8 *Pseudomys novaehollandiae*, New Holland mouse

Conservation status: Regionally Significant (South-East Queensland).

Description and habitat: The New Holland mouse was thought to be extinct until rediscovered in 1967 in Ku-ring-gai Chase National Park in New South Wales. Records since then indicate that the species is distributed from Tasmania along the east coast of mainland Australia to South-East Queensland. The habitat preference in South-East Queensland appears to be limited to tall dry open forest communities with an understorey of heath dominated by *Xanthorrhoea* species. In the Gatton and Laidley Shire area, the New Holland mouse has been recorded in the Blackfellow Creek and Helidon Hills areas and its habitat is Regional Ecosystems 12.5.1, 12.5.6, 12.8.14, 12.8.17, 12.8.19, 12.9/10.5 and 12.9/10.19.

Threats within Gatton and Laidley Shires: Threats to the New Holland mouse include:

- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Habitat degradation through inappropriate fire regimes.
- Competition from introduced house mice.
- Predation by feral animals.

8.9 *Pseudomys oralis*, Hasting's River mouse

Conservation status: Endangered (Commonwealth), Vulnerable (Queensland).

Description and habitat: Hasting's River mouse feeds on leaves, seeds and insects and inhabits open forests with a well developed layer of shrubs, herbs, sedges and ferns as well as sites with a more open understorey. The species has been recorded in the Hirstglen, Main Range, and Crow's Nest Falls areas, which are located close to the Gatton and Laidley Shire area. Hasting's River mouse has not yet been recorded in the Gatton and Laidley Shire area, but Regional Ecosystems 12.8.1, 12.8.9, 12.8.14, 12.8.16, 12.8.17 and 12.8.19 are potential habitat for the species.

Threats within Gatton and Laidley Shires: Threats to Hasting's River mouse include:

- A lack of knowledge in regard to the presence/absence of the species in the area.
- Loss or fragmentation of species populations or species habitat through vegetation clearing.
- Competition from introduced house mice.
- Predation by feral animals.

9. Significant ecological communities

9.1 Regional Ecosystem 12.3.3

Conservation status: Endangered (Queensland *Vegetation Management Act 1999*).

Description: Grassy open forest to woodland of *Eucalyptus tereticornis* ± *Eucalyptus crebra* ± *Eucalyptus moluccana* ± *Corymbia intermedia* ± *Angophora subvelutina/floribunda* ± *Corymbia clarksoniana* ± *Corymbia tessellaris*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.3.3 include:

- Loss or fragmentation through vegetation clearing.
- Lack of recruitment of new trees caused by inappropriate grazing practices, inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.
- Invasion by the exotic pasture grass *Panicum maximum* (green panic) and the weed species *Lantana camara* (lantana) and *Bryophyllum tubiflorum* (mother of millions).

9.2 Regional Ecosystem 12.3.11

Conservation status: Of concern (Queensland *Vegetation Management Act 1999*).

Description: Tall woodland to tall open forest of *Eucalyptus tereticornis*, *Melaleuca quinquenervia* ± *Corymbia intermedia*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.3.11 include:

- Loss or fragmentation through vegetation clearing.
- Lack of recruitment of new trees caused by inappropriate grazing practices, inappropriate timber harvesting practices, inappropriate timber thinning practices or inappropriate fire regimes.

9.3 Regional Ecosystem 12.5.6

Conservation status: Endangered (Queensland *Vegetation Management Act 1999*).

Description: Shrubby to grassy open forest of *Eucalyptus pilularis* ± *Eucalyptus microcorys* ± *Eucalyptus helidonica* ± *Corymbia trachyphloia* ± *Corymbia intermedia* ± *Eucalyptus biturbinata* ± *Angophora woodsiana*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.5.6 include:

- Loss or fragmentation through vegetation clearing.
- Degradation caused by inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices or inappropriate fire regimes.

9.4 Regional Ecosystem 12.8.9

Conservation status: Of-concern (Queensland *Vegetation Management Act 1999*).

Description: Tall open forest of *Lophostemon confertus* ± (*Eucalyptus tereticornis*, *Eucalyptus biturbinata*, *Eucalyptus eugenioides*, *Eucalyptus melliodora*, emergents) ± *Allocasuarina torulosa*, with mixed rainforest/riparian species and fern species.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.8.9 include:

- Loss or fragmentation through vegetation clearing.
- Degradation caused by inappropriate timber harvesting practices, inappropriate timber thinning practices, inappropriate grazing practices or inappropriate fire regimes.

9.5 Regional Ecosystem 12.8.19

Conservation status: Of-concern (Queensland *Vegetation Management Act 1999*).

Description: Mid-high woodland/ open woodland or tall shrubland with heterogeneous mix of trees (stunted), shrubs, forbs and grasses including *Eucalyptus tereticornis*, *Eucalyptus melliodora*, *Angophora floribunda*, *Acacia* spp., *Bursaria spinosa* var. *macrophylla*, *Xanthorrhoea glauca*, *Hovea* spp., *Doryanthes palmeri*, *Cassinia* spp., *Pimelia linifolia*, *Plectranthus graveolens*, *Sorghum leiocladum*, *Poa* spp., *Themeda triandra*, *Asperula conferta* etc.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.8.19 include:

- Loss or fragmentation through vegetation clearing.
- Degradation caused by inappropriate fire regimes.

9.6 Regional Ecosystem 12.8.21

Conservation status: Endangered (Queensland *Vegetation Management Act 1999*).

Description: Microphyll closed forest to semi-evergreen vine thicket, sometimes on boulder scree, of *Brachychiton rupestris*, *Flindersia australis*, *Flindersia collina*, *Vitex lignumvitae*, *Elattostachys xylocarpa*, *Ficus* spp., *Dendrocnide excelsa*, *Arytera foveolata* ± *Pouteria cotinifolia* var. *cotinifolia* ± *Erythroxylum australe*. (*Araucaria cunninghamii* absent in Gatton & Laidley Shires)

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.8.21 include:

- Loss or fragmentation through vegetation clearing.
- Invasion, particularly of remnant margins, by the weed species *Lantana camara* (lantana) and the exotic pasture grass *Panicum maximum* (green panic).
- Invasion by the weed species *Anredera cordifolia* (madeira vine), *Rivina humilis* (coral berry), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Degradation through inappropriate grazing practices.

9.7 Regional Ecosystem 12.9/10.3

Conservation status: Of-concern (Queensland *Vegetation Management Act 1999*).

Description: Grassy sometimes shrubby open forest of *Eucalyptus moluccana* ± *Corymbia citriodora* ± *Eucalyptus crebra* ± *Eucalyptus tereticornis* ± *Eucalyptus carnea* ± *Eucalyptus fibrosa* subsp. *fibrosa* ± *Eucalyptus major*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.9/10.3 include:

- Loss or fragmentation through vegetation clearing.
- Invasion by the weed species *Lantana camara* (lantana).
- Degradation caused by inappropriate timber harvesting practices or inappropriate timber thinning practices.

9.8 Regional Ecosystem 12.9/10.6

Conservation status: Endangered (Queensland *Vegetation Management Act 1999*).

Description: Open forest of *Acacia harpophylla* ± *Casuarina cristata* ± *Brachychiton rupestris* ± *Acacia fasciculifera* ± *Alectryon diversifolius* ± *Santalum lanceolatum* ± *Carissa ovata*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.9/10.6 include:

- Loss or fragmentation through vegetation clearing.
- Invasion by the exotic pasture grass *Panicum maximum* (green panic) and the weed species *Lantana camara* (lantana), *Opuntia tomentosa* (tree pear), *Anredera cordifolia* (madeira vine), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Degradation through inappropriate grazing practices.

9.9 Regional Ecosystem 12.9/10.7

Conservation status: Of-concern (Queensland *Vegetation Management Act 1999*).

Description: Grassy woodland (sometimes with vine thicket understorey) of *Eucalyptus crebra* ± *Eucalyptus melanophloia* ± *Eucalyptus tereticornis* ± *Corymbia tessellaris* ± *Corymbia clarksoniana* ± *Allocasuarina luehmannii*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.9/10.7 include:

- Loss or fragmentation through vegetation clearing.
- Invasion by the weed species *Lantana camara* (lantana) and the exotic pasture grass species *Panicum maximum* (green panic).

9.10 Regional Ecosystem 12.9/10.11

Conservation status: Endangered (Queensland *Vegetation Management Act 1999*).

Description: Low open forest or thicket with emergent eucalypts of *Melaleuca tamariscina* subsp. *irbyana* ± *Eucalyptus moluccana* ± *Eucalyptus tereticornis*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.9/10.11 include:

- Loss or fragmentation through vegetation clearing.

9.11 Regional Ecosystem 12.9/10.15

Conservation status: Endangered (Queensland *Vegetation Management Act 1999*).

Description: Microphyll closed forest to semi-evergreen vine thicket of *Flindersia australis*, *Flindersia collina*, *Brachychiton rupestris*, *Acacia fasciculifera*, *Ficus* spp. ± *Flindersia xanthoxyla* ± *Vitex lignumvitae* ± *Excoecaria dallachyana* ± *Pouteria cotinifolia* var. *cotinifolia* ± *Bursaria incana* ± *Croton insularis* ± *Drypetes deplanchei* ± *Owenia venosa* ± *Secamone elliptica*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.9/10.15 include:

- Loss or fragmentation through vegetation clearing.
- Invasion, particularly of remnant margins, by the weed species *Lantana camara* (lantana) and the exotic pasture grass species *Panicum maximum* (green panic).
- Invasion by the weed species *Anredera cordifolia* (madeira vine), *Rivina humilis* (coral berry), *Macfadyena unguis-cati* (cat's claw creeper) and *Protasparagus* spp. (asparagus fern).
- Fire incursion as a result of weed or exotic pasture grass invasion.
- Degradation through inappropriate grazing practices.

9.12 Regional Ecosystem 12.11.9

Conservation status: Of-concern (Queensland *Vegetation Management Act 1999*).

Description: Very tall open forest/woodland of *Eucalyptus tereticornis*, *Eucalyptus crebra* ± *Angophora subvelutina* ± *Eucalyptus melanophloia* ± *Corymbia intermedia* ± *Eucalyptus biturbinata* ± *Eucalyptus eugenoides* ± *Eucalyptus melliodora* ± *Allocasuarina torulosa*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.11.9 include:

- Loss or fragmentation through vegetation clearing.
- Invasion by the weed species *Lantana camara* (lantana).

9.13 Regional Ecosystem 12.12.3

Conservation status: Of-concern (Queensland *Vegetation Management Act 1999*).

Description: Tall woodland to tall open forest of *Corymbia citriodora* subsp. *variegata*/*Corymbia henryi*, *Eucalyptus crebra* ± *Corymbia intermedia* ± *Eucalyptus major* ± *Eucalyptus melanophloia*.

Threats within Gatton and Laidley Shires: Threats to Regional Ecosystem 12.11.9 include:

- Loss or fragmentation through vegetation clearing.
- Degradation caused by inappropriate timber harvesting practices.
- Invasion by the weed species *Lantana camara* (lantana).

Notes

5.2.1 Biodiversity

5.2.1.1 Purpose of the Code

The purpose of this code is to protect and enhance the Shire's ecosystems and the species they support in a manner that ensures their long term viability. In this regard, this code is intended to support the adopted Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008.

5.2.1.2 Application of the Code

The provisions of this code apply to code or impact assessable development which is:

- a) material change of use for any purpose;
- b) building work;
- c) operational work; or
- d) reconfiguring a lot;

on land which is within or adjacent to a significant habitat area shown on Regulatory Map No. 1 – Significant Habitat Areas.

Significant habitat areas include areas of endangered regional ecosystems, of-concern regional ecosystems, and not of concern regional ecosystems which provide or potentially provide habitat for significant species, including threatened species, as well as wetland habitat areas.

Further information on the regional ecosystems and Gatton Shire vegetation map units applicable to each parcel can be obtained from Planning Scheme Policy No. 1 and the Gatton Shire Council Planning and Environment Department.

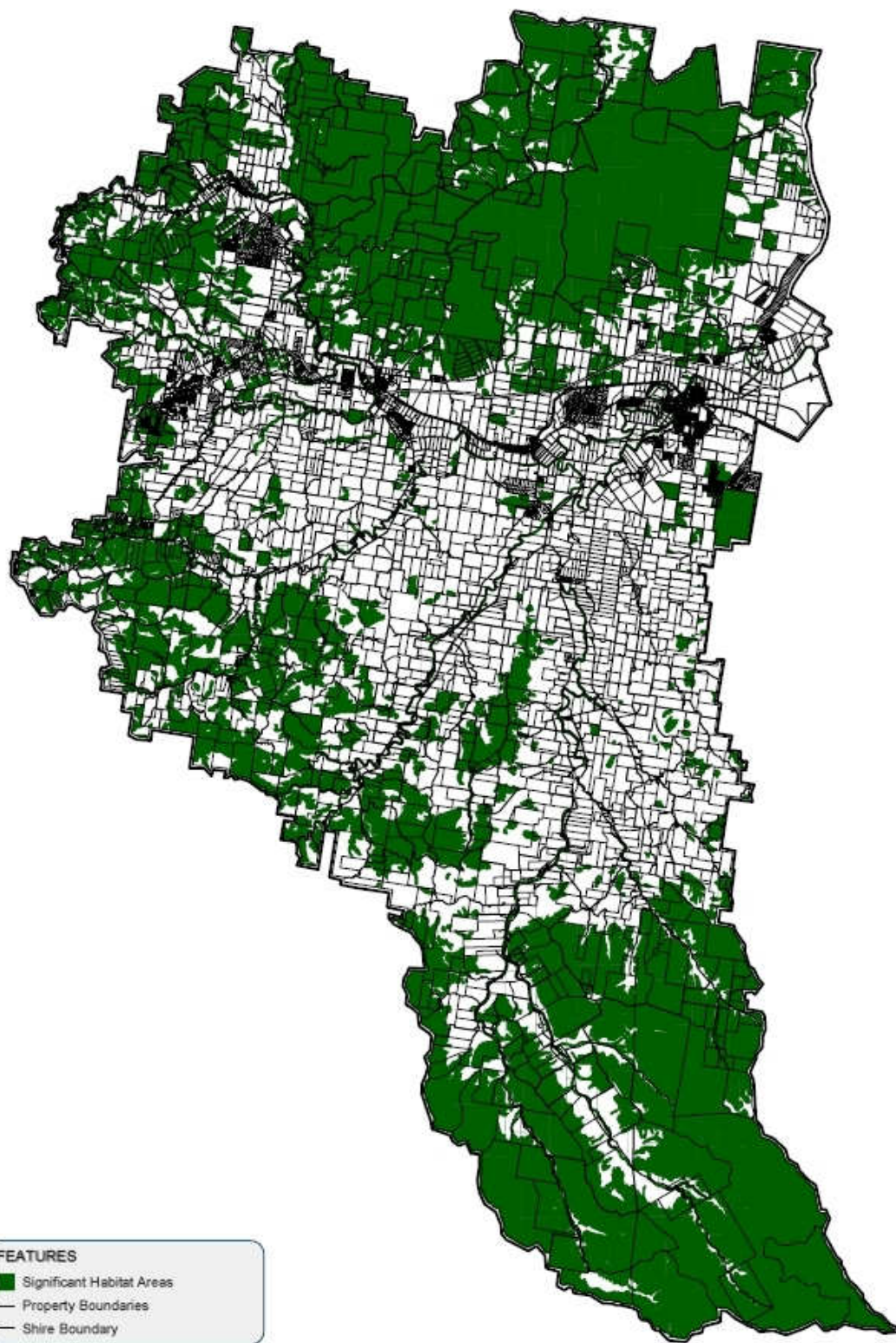
5.2.1.3 Performance Criteria and Acceptable Measures

Performance Criteria	Acceptable Measures
P1. Populations of significant species and their habitats and other identified significant habitat areas are retained, or where degraded, rehabilitated, and the impacts of development are minimized.	<p>A1.1 Known populations of significant species that occur in the area are conserved.</p> <p>A1.2 A comprehensive flora and fauna assessment and/or ecological assessment is undertaken to determine the conservation values of any ecologically significant vegetation and flora and fauna habitat on site.</p> <p>A1.3 An environmental management plan is prepared and implemented which addresses matters identified in Planning Scheme Policies Nos. 1 and 2.</p> <p>A1.4 Where applicable, a fire management plan is prepared as part of an environmental management plan, that demonstrates fire regimes suitable for conserving significant species and ecological communities.</p> <p>A1.5 Biodiversity assessment information accompanying applications is comprehensive, competent and adequate.</p>
P2. The relatively unfragmented nature of native vegetation areas is maintained.	<p>A2.1 Development occurs within existing cleared areas on a site.</p> <p>A2.2 There is no or minimal clearance of</p>

Performance Criteria	Acceptable Measures
	vegetation in identified significant habitat areas.
P3. Ecological corridors are identified and retained or re-established to maintain, improve or create connectivity between habitat areas and to allow wildlife movement between habitat areas.	<p>A3.1 Development does not occur in locations that would preclude or significantly diminish the retention or re-establishment of ecological corridors linking with identified significant habitat areas.</p> <p>A3.2 Degraded ecological corridors are rehabilitated or re-established.</p>
<p>P4. Development layout, planning and construction minimizes impacts on the edges of native vegetation ("edge effects") as a result of:</p> <ul style="list-style-type: none"> a) garden plants that are potential bushland weeds; b) domestic animals that could prey on native wildlife; c) rubbish dumping that could cause pollution of habitat or pose a risk to wildlife that may forage rubbish for food; d) light pollution that may pose a risk to wildlife, in particular nocturnal wildlife; e) noise pollution that may pose a risk to wildlife; and f) vandalism that may pose a risk to native vegetation and wildlife. 	<p>A4.1 Appropriate separation or buffering is provided to minimise the impact of edge effects</p> <p>A4.2 Landscaping predominantly involves the use of native species typical of the particular ecosystem.</p> <p>A4.3 Landscaping does not involve any species known to invade or that could potentially invade significant habitat areas.</p> <p>A4.4 An environmental management plan is prepared and implemented which addresses measures to control edge effects.</p>
<p>P5. Development layout, planning and construction minimizes impacts on waterways and wetlands, with regard to:</p> <ul style="list-style-type: none"> a) surface and ground water flow patterns of waterways and wetlands; b) the effects of siltation or pollution; and c) the wet/dry cycles of seasonally inundated (ephemeral) wetlands. 	<p>A5.1 Appropriate separation or buffering is provided to minimise impacts on waterways or wetlands.</p> <p>A5.2 Riparian or wetland vegetation and habitat is retained or, where in a degraded state, rehabilitated.</p> <p>A5.3 Specific management principles outlined in Planning Scheme Policy No 1. are implemented.</p>
P6. Significant habitat areas have secure protection.	A6.1 Significant habitat areas are subject to a conservation agreement (such as a Nature Refuge, Land for Wildlife or Statutory Covenant Agreement, refer Planning Scheme Policy No 2) or are transferred to community ownership or control (such as Council or community group trusteeship).

5.2.1.4 Matters Relevant to the Assessment of Alternative Solutions

- a) As listed in section 5.1.2.



FEATURES

- Significant Habitat Areas
- Property Boundaries
- Shire Boundary



OVERLAY MAP 1
BIODIVERSITY AREAS

DATA FOR SHIRE PLANNING SCHEME 2017

PLANNING SCHEME POLICY No. 1

BIODIVERSITY

- (1) *In the planning scheme, overarching policy direction with regard to the protection of the natural environment is provided by Desired Environmental Outcome 2.1.1, which states:*
Gatton Shire's natural environment is protected, so that biodiversity, ecological processes and air, land and water quality are maintained.
- (2) The planning scheme incorporates several measures intended to support this desired environmental outcome, including:
 - (a) The identification of significant habitat areas on Regulatory Map No. 1, which include areas of endangered regional ecosystems, of-concern regional ecosystems, and regional ecosystems that are not of concern but provide, or potentially provide habitat for significant species, including threatened species, as well as wetland habitat areas (NOTE: You will need to refer to Council for advice on the regional ecosystems and Gatton Shire vegetation map units applicable to your land).
 - (b) The inclusion of the Biodiversity Code No. 5.2.1 to manage development in a way that protects and enhances the Shire's ecosystems and the species they support in a manner that ensures their long term viability.
- (3) This policy supports the implementation and interpretation of the Biodiversity Code, and is based on the recommendations contained in the *Biodiversity Recovery Plan for the Gatton and Laidley Shires South-East Queensland 2003-2008* and Appendix A and Appendix B to that Recovery Plan.

Council may adopt other, non-planning scheme, measures and incentives to support the objectives of the Biodiversity Code and the Recovery Plan, recognising that the clearance of native vegetation in Gatton and Laidley Shires is now at a very low level, with most landholders valuing and appreciating their native vegetation. In this context, the best outcomes will be achieved through cooperative processes that recognise the willingness of most landholders to conserve their native vegetation and the often very significant management costs involved.

(4) Regional ecosystem management principles

Land management activities and proposed development in Gatton Shire should respond to the regional ecosystem management principles identified in Schedules 1 and 2 to this policy and the significant habitat areas shown on Regulatory Map No.1.

More detailed vegetation descriptions for each of the Regional Ecosystems can be found in the *Gatton Shire Vegetation Mapping Report* (Grimshaw, 2000) and in the *Biodiversity Recovery Plan for the Gatton and Laidley Shires South-East Queensland 2003-2008* and Appendix A and Appendix B to that Recovery Plan. Further information can be obtained from the Gatton Shire Council Planning and Environment Department.

The management principles are the base measures that are considered necessary for the continued survival and progressive recovery of the significant species and ecological communities.

SCHEDULE 1: Regional Ecosystem Management Principles

- 1.1 Obtain Queensland Herbarium regional ecosystem mapping for the subject land. Consult with the Gatton Shire Council Planning and Environment Department to determine if updated Queensland Herbarium regional ecosystem mapping and corresponding regional ecosystem profiles have been produced. The most recent regional ecosystem profile update should be used.
- 1.2 From the Queensland Herbarium regional ecosystem mapping, identify which Regional Ecosystems are present on the subject land.
- 1.3 Refer to the relevant regional ecosystem profiles in Schedule 2 of this policy. Consult with the Gatton Shire Council Planning and Environment Department to determine if updated Queensland Herbarium regional ecosystem mapping and corresponding regional ecosystem profiles have been produced. The most recent regional ecosystem profile update should be used.
- 1.4 Consult the Vegetation mapping & assessment references given for each regional ecosystem, using the *Gatton Shire Vegetation Mapping Report* (Grimshaw 2000) and accompanying maps, and other references where given. For further information consult the Gatton Shire Council Planning and Environment Department.
- 1.5 Obtain significant species location records for the subject land from the Gatton Shire Council Planning and Environment Department and the Queensland Environmental Protection Agency (EPA)/Queensland Parks and Wildlife Service (QPWS).
- 1.6 Conserve known populations of the significant species listed for each regional ecosystem present on the subject land or parcel. Carry out surveys to identify any additional populations of the significant species and conserve these populations. If available, Council may issue fact sheets or other information materials to assist with significant species surveys and conservation.

The significant species listed for each regional ecosystem are the species that are known to utilise that regional ecosystem habitat within the Gatton Shire area. These species may or may not be present in patches of that regional ecosystem on a given property at a given time. However, the presence or absence of a particular species at any given time does not mean that it is not using the regional ecosystem habitat at other times. For example, a particular bird species may utilise several scattered patches of the same regional ecosystem habitat. It may be found in only one patch at a given time, but need all of the patches for its survival. In another example, a particular plant species may appear to be absent, but is actually present as seeds that will germinate after the next fire.

Any species shown as having a 'potential occurrence' has not been recorded in that regional ecosystem habitat within the Gatton Shire area, but is likely to be present.

For more detailed information in regard to the conservation of particular significant species, refer to *Descriptions, Habitat and Threats for the Significant Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland* (Appendix B to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008). For further information consult the Gatton Shire Council Planning and Environment Department.

- 1.7** Determine if State and/or Commonwealth legislative requirements apply. The Queensland Department of Natural Resources, Mines and Energy administers State land clearing and other relevant legislation. Approval from the Commonwealth Government may also be required prior to carrying out activities which could impact on the habitat of any nationally listed threatened species. In the first instance consult the Gatton Shire Council Planning and Environment Department.
- 1.8** Prepare a property management plan that conserves the habitat of the significant species listed for each regional ecosystem. The property management plan should address:
- (a) Vegetation assessment reference information from the *Gatton Shire Vegetation Mapping Report* (Grimshaw 2000) and accompanying maps, and other references where given in Schedule 2. For further information consult the Gatton Shire Council Planning and Environment Department.
 - (b) Habitat and threat information from *Descriptions, Habitat and Threats for the Significant Species and Ecological Communities of Gatton and Laidley Shires, South-East Queensland* (Appendix B to the Biodiversity Recovery Plan for Gatton and Laidley Shires, South-East Queensland 2003-2008). For further information consult the Gatton Shire Council Planning and Environment Department.
 - (c) Appropriate land use and management, as identified in (a) *Land Use Planning Handbook for the Lockyer Catchment*, (b) *Living in the Lockyer - A Landholders Guide to Land, Water, Wildlife and Vegetation Management in the Lockyer Catchment and Surrounds* and (c) *Living in the Lockyer - Property Management Planning Kit*. For further information consult the Gatton Shire Council Planning and Environment Department.
 - (d) Appropriate fire regimes, as identified in the products and materials from the South-East Queensland Fire and Biodiversity Consortium. For further information consult the Gatton Shire Council Planning and Environment Department.
 - (e) Appropriate grazing practices, as identified in the CSIRO publication *Balancing Conservation and Production: Understanding and Using Landscape Thresholds in Property Planning*. For further information consult the Gatton Shire Council Planning and Environment Department.
 - (f) Appropriate timber harvesting and thinning practices. For further information consult the Queensland Department of Natural Resources, Mines and Energy.
 - (g) Actions for pest plant and animal control. For further information consult the Queensland Department of Natural Resources, Mines and Energy.
- 1.9** Where possible, protect significant habitat areas through a conservation agreement (such as a Nature Refuge, Land for Wildlife or Statutory Covenant Agreement, refer Planning Scheme Policy No 2) or transfer to community ownership or control (such as Council or community group trusteeship).

SCHEDULE 2: Regional Ecosystem Profiles

The regional ecosystem profiles in this schedule are compatible with Version 4.0 of the Queensland Herbarium regional ecosystem mapping.

Regional Ecosystem 12.3.2

Regional Ecosystem 12.3.2
Vegetation mapping & assessment references Gatton Shire map unit(s) 3d
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis</i> (Blackbutt), <i>Eucalyptus microcorys</i> (Tallow wood) ± <i>Eucalyptus tereticornis</i> , <i>Corymbia intermedia</i> , <i>Lophostemon confertus</i> , <i>Lophostemon suaveolens</i> , <i>Archontophoenix cunninghamiana</i> (occasional), <i>Callistemon viminalis</i> and rainforest tree and shrub species
General structure Extremely/very tall open forest/woodland
Significant RE status No concern at present
Significant plants <i>Macrozamia lucida</i> (Pineapple zamia)
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog)
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala)

Regional Ecosystem 12.3.3

Regional Ecosystem 12.3.3
Vegetation mapping & assessment references Gatton Shire map unit(s) 3b, 3c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum) ± <i>Eucalyptus crebra</i> ± <i>Corymbia citriodora</i> ± <i>Corymbia intermedia</i> ± <i>Angophora subvelutina/floribunda</i> ± <i>Corymbia clarksoniana</i> ± <i>Corymbia tessellaris</i>
General structure Grassy open forest to woodland
Significant RE status Endangered
Significant plants <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence) <i>Thesium australe</i> (Thesium) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog) <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk)
Significant mammals <i>Phascolarctos cinereus</i> (Koala)

Regional Ecosystem 12.3.7

Regional Ecosystem 12.3.7
Vegetation mapping & assessment references Gatton Shire map unit(s) 3a
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Casuarina cunninghamiana</i> (River she-oak), <i>Callistemon viminalis</i> (Weeping bottlebrush) ± <i>Waterhousea floribunda</i> ± <i>Castanospermum australe</i> ± <i>Lomandra hystrix/longifolia</i> ± <i>Melaleuca bracteata</i> ± <i>Lophostemon suaveolens</i> ± <i>Maclura cochinchinensis</i>
General structure Shrubby open forest to woodland sometimes with closed understorey
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog) <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Rallus pectoralis</i> (Lewin's rail) <i>Rostratula benghalensis</i> (Painted snipe)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala)

Regional Ecosystem 12.3.8 (and other wetland areas)

Regional Ecosystem 12.3.8 (and other wetland areas)
Vegetation mapping & assessment references <i>Lockyer Wetlands Directory</i> . For more information contact the Gatton Shire Council Planning and Environment Department.
Floristic description (constant characteristic species in bold type) Natural and artificial wetlands including Regional Ecosystem 12.3.8
General structure Natural and artificial wetlands
Significant RE status Of-concern (areas of Regional Ecosystem 12.3.8 only)
Significant plants <i>Brasenia schreberi</i> (Watershield) <i>Carex lophocarpa</i> (A sedge) <i>Cyperus gunnii</i> subsp. <i>novae-hollandiae</i> (Flecked flatsedge) <i>Cyperus squarrosus</i> (Bearded flatsedge) <i>Damasonium minus</i> (Starfruit) <i>Eryngium vesiculosum</i> (Prostrate blue devil) <i>Potamogeton pectinatus</i> (Sago pondweed)
Significant invertebrates Nil
Significant amphibians <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Ephippiorhynchus asiaticus</i> (Black-necked stork) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Falco hypoleucos</i> (Grey falcon) <i>Melithreptus gularis</i> (Black-chinned honeyeater) <i>Nettapus coromandelianus</i> (Cotton pygmy-geese) <i>Rallus pectoralis</i> (Lewin's rail) <i>Rostratula benghalensis</i> (Painted snipe) <i>Stictonetta naevosa</i> (Freckled duck)
Significant mammals Nil

Regional Ecosystem 12.3.11

Regional Ecosystem 12.3.11
Vegetation mapping & assessment references Gatton Shire map unit(s) 3e
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Melaleuca quinquenervia</i> (Coastal paperbark) ± <i>Corymbia intermedia</i>
General structure Tall woodland to tall open forest
Significant RE status Of concern
Significant plants <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Thesium australe</i> (Thesium) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Adelotus brevis</i> (Tusked frog) <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrorchis radiatus</i> (Red goshawk)
Significant mammals <i>Phascolarctos cinereus</i> (Koala)

Regional Ecosystem 12.5.1

Regional Ecosystem 12.5.1
Vegetation mapping & assessment references Gatton Shire map unit(s) 5c, 5d, 5e
Floristic description (constant characteristic species in bold type) <i>Corymbia trachyphloia</i> (Brown bloodwood), <i>Corymbia citriodora/henryi</i> (Spotted gum/Large-leaved spotted gum) ± <i>Eucalyptus helidonica</i> ± <i>Eucalyptus taurina</i> ± <i>Eucalyptus dura</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Corymbia gummifera</i> ± <i>Angophora woodsiana</i> ± <i>Eucalyptus planchoniana</i> ± <i>Lysicarpus angustifolius</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Acacia leichhardtii</i> (A shrub with no common name) <i>Caustis blakei</i> subsp. <i>macrantha</i> (Foxtails, 'Koala fern') <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany) <i>Eucalyptus taurina</i> (Helidon Hills ironbark) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Grevillea singuliflora</i> (Single-flower grevillea) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Leonema obtusifolium</i> (Helidon Hills phebalium) <i>Lysicarpus angustifolius</i> (Budgeroo) <i>Paspalidium grandispiculatum</i> (Helidon Hills panic) <i>Poranthera</i> sp. (Mt. Ballow G. Leiper AQ502886) (Mt. Beerwah poranthera)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Delma torquata</i> (Collared delma)
Significant birds <i>Erythroriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

Regional Ecosystem 12.5.6

Regional Ecosystem 12.5.6
Vegetation mapping & assessment references Gatton Shire map unit(s) 5a, 5b, 8c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis (Blackbutt)</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus helidonica</i> ± <i>Corymbia trachyphloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Angophora woodsiana</i>
General structure Shrubby to grassy open forest
Significant RE status Endangered
Significant plants <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

Regional Ecosystem 12.8.1

Regional Ecosystem 12.8.1
Vegetation mapping & assessment references Gatton Shire map unit(s) 8h
Floristic description (constant characteristic species in bold type) <i>Eucalyptus saligna</i> (Sydney blue gum), <i>Eucalyptus campanulata</i> (New England blackbutt) ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus laevopinea</i>
General structure Shrubby to grassy open forest
Significant RE status No concern at present
Significant plants <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Litoria brevipalmata</i> (Green-thighed frog) (potential occurrence) <i>Litoria pearsoniana</i> (Cascade treefrog) (potential occurrence) <i>Mixophyes fleayi</i> (Fleay's barred-frog)
Significant reptiles <i>Coeranoscincus reticulatus</i> (Three-toed snake-toothed skink) <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Climacteris erythroptera</i> (Red-browed treecreeper) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Kerivoula papuensis</i> (Golden-tipped bat) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

Regional Ecosystem 12.8.4

Regional Ecosystem 12.8.4
Vegetation mapping & assessment references Gatton Shire map unit(s) 8n
Floristic description (constant characteristic species in bold type) <i>Argyrodendron actinophyllum</i> (Black jack, Black booyong), <i>Sloanea woollsii</i> (Yellow carabeen), <i>Elaeocarpus kirtonii</i> (Silver quandong), <i>Ficus</i> spp. (Fig species), <i>Orites excelsa</i> (Prickly ash, White beefwood), <i>Dysoxylum fraserianum</i> (Rosewood, Rose mahogany), <i>Araucaria cunninghamii</i> (Hoop pine)
General structure Complex notophyll closed forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians <i>Kyarranus kundagungan</i> (Red-and-yellow mountain-frog) <i>Lechriodus fletcheri</i> (Black-soled frog) <i>Litoria brevipalmata</i> (Green-thighed frog) (potential occurrence) <i>Litoria pearsoniana</i> (Cascade treefrog) (potential occurrence) <i>Mixophyes fleayi</i> (Fleay's barred-frog)
Significant reptiles <i>Coeranoscincus reticulatus</i> (Three-toed snake-toothed skink) <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Atrichornis rufescens</i> (Rufous scrub-bird) (potential occurrence) <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Menura alberti</i> (Albert's lyrebird) <i>Podargus ocellatus plumiferous</i> (Plumed frogmouth) (potential occurrence) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Kerivoula papuensis</i> (Golden-tipped bat)

Regional Ecosystem 12.8.9

Regional Ecosystem 12.8.9
Vegetation mapping & assessment references Gatton Shire map unit(s) 8e
Floristic description (constant characteristic species in bold type) <i>Lophostemon confertus (Brush box)</i> ± (<i>Eucalyptus tereticornis</i> , <i>Eucalyptus biturbinata</i> , <i>Eucalyptus eugenioides</i> , <i>Eucalyptus melliodora</i> , emergents) ± <i>Allocasuarina torulosa</i> , with mixed rainforest/riparian species and fern species
General structure Tall open forest
Significant RE status Of concern
Significant plants <i>Hibbertia monticola</i> (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Kyarranus kundagungan</i> (Red-and-yellow mountain-frog) <i>Lechriodus fletcheri</i> (Black-soled frog) <i>Litoria brevipalmata</i> (Green-thighed frog) (potential occurrence) <i>Litoria pearsoniana</i> (Cascade treefrog) (potential occurrence) <i>Mixophyes fleayi</i> (Fleay's barred-frog)
Significant reptiles <i>Coeranoscincus reticulatus</i> (Three-toed snake-toothed skink) <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Climacteris erythrops</i> (Red-browed treecreeper) <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Menura alberti</i> (Albert's lyrebird) <i>Podargus ocellatus plumiferous</i> (Plumed frogmouth) (potential occurrence) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Kerivoula papuensis</i> (Golden-tipped bat) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

Regional Ecosystem 12.8.14

Regional Ecosystem 12.8.14
Vegetation mapping & assessment references Gatton Shire map unit(s) 8a, 8b, 8c, 8i
Floristic description (constant characteristic species in bold type) <i>Eucalyptus eugenioides</i> (Thin-leaved stringybark, White stringybark), <i>Eucalyptus biturbinata</i> (Grey gum), <i>Eucalyptus melliodora</i> (Yellow box, Honey box), <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum) ± <i>Eucalyptus crebra</i> ± <i>Angophora floribunda/subvelutina</i> ± <i>Eucalyptus quadrangulata</i> ± <i>Allocasuarina torulosa</i>
General structure Grassy open forest
Significant RE status No concern at present
Significant plants <i>Bothriochloa bunyensis</i> (Bunya bluegrass) <i>Dichanthium setosum</i> (Bristly bluegrass) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Climacteris erythrops</i> (Red-browed treecreeper) <i>Dasyornis brachypterus</i> (Eastern bristlebird) (potential occurrence) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Xanthomyza phrygia</i> (Regent honeyeater)
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

Regional Ecosystem 12.8.16

Regional Ecosystem 12.8.16
Vegetation mapping & assessment references Gatton Shire map unit(s) 8k
Floristic description (constant characteristic species in bold type) <i>Eucalyptus albens</i> (White box), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus melliodora</i> ± <i>Eucalyptus melanophloia</i> ± <i>Angophora floribunda</i> ± <i>Corymbia clarksoniana</i>
General structure Grassy woodland
Significant RE status No concern at present
Significant plants <i>Callitris baileyi</i> (Bailey's cypress pine) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.)) <i>Xanthomyza phrygia</i> (Regent honeyeater)
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

Regional Ecosystem 12.8.17

Regional Ecosystem 12.8.17
Vegetation mapping & assessment references Gatton Shire map unit(s) 8d
Floristic description (constant characteristic species in bold type) <i>Eucalyptus crebra</i> (Narrow-leaved ironbark), <i>Eucalyptus melanophloia</i> (Silver leaf ironbark, Broad leaf ironbark) ± <i>Corymbia clarksoniana</i> ± <i>Corymbia tessellaris</i> ± <i>Eucalyptus tereticornis</i> ± <i>Angophora floribunda</i> ± <i>Eucalyptus melliodora</i> ± <i>Brachychiton populneus</i>
General structure Grassy woodland
Significant RE status No concern at present
Significant plants <i>Callitris baileyi</i> (Bailey's cypress pine) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Chalinolobus dwyeri</i> (Large-eared pied bat) <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Phascolarctos cinereus</i> (Koala) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo) <i>Pseudomys novaehollandiae</i> (New Holland mouse) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

Regional Ecosystem 12.8.19

Regional Ecosystem 12.8.19
Vegetation mapping & assessment references Gatton Shire map unit(s) 8j
Floristic description (constant characteristic species in bold type) Heterogeneous mix of trees (stunted), shrubs, forbs and grasses including <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Eucalyptus melliodora</i> (Yellow box, Honey box), <i>Angophora floribunda</i> (Rough barked apple), <i>Acacia</i> spp., <i>Bursaria spinosa</i> var. <i>macrophylla</i> , <i>Xanthorrhoea glauca</i> , <i>Hovea</i> spp., <i>Doryanthes palmeri</i> , <i>Cassinia</i> spp., <i>Pimelia linifolia</i> , <i>Plectranthus graveolens</i> , <i>Sorghum leiocladum</i> , <i>Poa</i> spp., <i>Themeda triandra</i> , <i>Asperula conferta</i> etc.
General structure Mid-high woodland/ open woodland or tall shrubland
Significant RE status Of concern
Significant plants <i>Bothriochloa bunyensis</i> (Bunya bluegrass) <i>Dichanthium setosum</i> (Bristly bluegrass) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Picris evae</i> (Hawk weed) (potential occurrence) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence) <i>Wahlenbergia scopulicola</i> (A herb with no common name) (potential occurrence)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby) <i>Pseudomys novaehollandiae</i> (New Holland mouse) <i>Pseudomys oralis</i> (Hasting's River mouse) (potential occurrence)

Regional Ecosystem 12.8.21

Regional Ecosystem 12.8.21
Vegetation mapping & assessment references Gatton Shire map unit(s) 8m
Floristic description (constant characteristic species in bold type) <i>Brachychiton rupestris</i> (Narrow-leaved bottle tree), <i>Flindersia australis</i> (Crow's ash), <i>Flindersia collina</i> (Broad-leaved leopard tree), <i>Vitex lignumvitae</i> (Lignum vitae), <i>Elattostachys xylocarpa</i> (White tamarind), <i>Ficus</i> spp. (Fig species), <i>Dendrocnide excelsa</i> (Giant stinging tree), <i>Arytera foveolata</i> (Pitted coogera) ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Erythroxylum australe</i> (<i>Araucaria cunninghamii</i> absent in Gatton & Laidley Shires)
General structure Microphyll closed forest to semi-evergreen vine thicket sometimes on boulder scree
Significant RE status Endangered
Significant plants <i>Clematis fawcettii</i> (A woody climber with no common name) <i>Floydia praealta</i> (Ball nut, Opossum nut) (potential occurrence) <i>Sarcochilus dilatatus</i> (A small epiphyte with no common name)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Hoplocephalus stephensii</i> (Stephen's banded snake) (potential occurrence)
Significant birds <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Tyto tenebricosa</i> (Sooty owl) (potential occurrence)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby)

Regional Ecosystem 12.9/10.2

Regional Ecosystem 12.9/10.2
Vegetation mapping & assessment references Gatton Shire map unit(s) 9a, 9c
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Large-leaved spotted gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Angophora leiocarpa</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus tindaliae</i> ± <i>Eucalyptus major</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Callistemon formosus</i> (White cliff bottlebrush) <i>Mentha grandiflora</i> (Gorge pennyroyal) <i>Triplarina bancroftii</i> (A shrub with no common name)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Lathamus discolor</i> (Swift parrot) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Melithreptus gularis</i> (Black-chinned honeyeater) <i>Ninox strenua</i> (Powerful owl) <i>Psephotus pulcherrimus</i> (Paradise parrot) (potential occurrence)
Significant mammals <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.9/10.3

Regional Ecosystem 12.9/10.3
Vegetation mapping & assessment references Gatton Shire map unit(s) 9d
Floristic description (constant characteristic species in bold type) <i>Eucalyptus moluccana</i> (Gum topped box, Grey box) ± <i>Corymbia citriodora</i> ± <i>Eucalyptus crebra</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus major</i>
General structure Grassy sometimes shrubby open forest
Significant RE status Of concern
Significant plants <i>Acacia blakei</i> subsp. <i>diphylla</i> (Blake's wattle) <i>Acacia montana</i> (A shrub with no common name) <i>Bertya opposens</i> (Broad-leaved Bertya) <i>Callistemon formosus</i> (White cliff bottlebrush) <i>Eucalyptus sideroxylon</i> (Mugga, red ironbark)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Melithreptus gularis</i> (Black-chinned honeyeater) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.9/10.5

Regional Ecosystem 12.9/10.5
Vegetation mapping & assessment references Gatton Shire map unit(s) 9b, 9f, 10a, 10b, 10c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany), <i>Corymbia trachyphloia</i> (Brown bloodwood), <i>Corymbia citriodora</i> (Spotted gum), <i>Eucalyptus taurina</i> (Helidon Hills ironbark) ± <i>Lysicarpus angustifolius</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Acacia leichhardtii</i> (A shrub with no common name) <i>Allocasuarina inophloia</i> (Thready (Woolly)-barked oak) <i>Bertya</i> sp. (Helidon Hills G. Leiper AQ457013) (A shrub with no common name) <i>Caustis blakei</i> subsp. <i>macrantha</i> (Foxtails, 'Koala fern') <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany) <i>Eucalyptus taurina</i> (Helidon Hills ironbark) <i>Gahnia clarkei</i> (Tall sawsedge) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Grevillea singuliflora</i> (Single-flower grevillea) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Leonema obtusifolium</i> (Helidon Hills phebalium) <i>Leptospermum lamellatum</i> (A shrub with no common name) <i>Lysicarpus angustifolius</i> (Budgeroo) <i>Melastoma affine</i> (Blue tongue) <i>Paspalidium grandispiculatum</i> (Helidon Hills panic) <i>Poranthera</i> sp. (Mt Ballow G. Leiper AQ502886) (Mt. Beerwah poranthera)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles <i>Delma torquata</i> (Collared delma)
Significant birds <i>Calyptorhynchus lathamii</i> (Glossy black-cockatoo) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

Regional Ecosystem 12.9/10.6

Regional Ecosystem 12.9/10.6
Vegetation mapping & assessment references Gatton Shire map unit(s) 9j
Floristic description (constant characteristic species in bold type) <i>Acacia harpophylla (Brigalow) ± Casuarina cristata ± Brachychiton rupestris ± Acacia fasciculifera ± Alectryon diversifolius ± Santalum lanceolatum ± Carissa ovata</i>
General structure Open forest
Significant RE status Endangered
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.9/10.7

Regional Ecosystem 12.9/10.7
Vegetation mapping & assessment references Gatton Shire map unit(s) 9h
Floristic description (constant characteristic species in bold type) <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Corymbia tessellaris</i> ± <i>Corymbia clarksoniana</i> ± <i>Allocasuarina luehmannii</i>
General structure Grassy woodland (sometimes with vine thicket understorey)
Significant RE status Of concern
Significant plants <i>Callitris baileyi</i> (Bailey's cypress pine) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Stemmacantha australis</i> (Native thistle) (potential occurrence)
Significant invertebrates Nil
Significant amphibians <i>Cyclorana alboguttata</i> (Greenstripe frog) <i>Cyclorana brevipes</i> (Superb collared-frog) <i>Cyclorana verrucosa</i> (Warty water-holding frog, Rough frog) <i>Limnodynastes salmini</i> (Salmon-striped frog)
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Geophaps scripta scripta</i> (Squatter pigeon (southern subsp.)) <i>Lathamus discolor</i> (Swift parrot) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Neophema pulchella</i> (Turquoise parrot) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.9/10.14

Regional Ecosystem 12.9/10.14
Vegetation mapping & assessment references Gatton Shire map unit(s) 10d
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis</i> (Blackbutt) ± <i>Corymbia trachyphloia</i> ± <i>Eucalyptus helidonica</i> ± <i>Angophora woodsiana</i> ± <i>Eucalyptus microcorys</i> ± <i>Syncarpia verecunda</i> ± <i>Corymbia intermedia</i> ± <i>Allocasuarina torulosa</i>
General structure Shrubby to grassy open forest
Significant RE status No concern at present
Significant plants <i>Eucalyptus helidonica</i> (Helidon Hills white mahogany) <i>Gahnia clarkei</i> (Tall sawsedge) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Macrozamia lucida</i> (Pineapple zamia) <i>Melastoma affine</i> (Blue tongue) <i>Rubus probus</i> (A native raspberry)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Accipiter novaehollandiae</i> (Grey goshawk) <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrorhynchus radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.9/10.15

Regional Ecosystem 12.9/10.15
Vegetation mapping & assessment references Gatton Shire map unit(s) 9i
Floristic description (constant characteristic species in bold type) <i>Flindersia australis</i> (Crow's ash), <i>Flindersia collina</i> (Broad-leaved leopard tree), <i>Brachychiton rupestris</i> (Narrow-leaved bottle tree), <i>Acacia fasciculifera</i> (Rosewood), <i>Ficus</i> spp. (Fig species) ± <i>Flindersia xanthoxyla</i> ± <i>Vitex lignumvitae</i> ± <i>Excoecaria dallachyana</i> ± <i>Pouteria cotinifolia</i> var. <i>cotinifolia</i> ± <i>Bursaria incana</i> ± <i>Croton insularis</i> ± <i>Drypetes deplanchei</i> ± <i>Owenia venosa</i> ± <i>Secamone elliptica</i>
General structure Microphyll closed forest to semi-evergreen vine thicket
Significant RE status Endangered
Significant plants <i>Eucalyptus melanoleuca</i> (Yarraman ironbark) <i>Floydia praealta</i> (Ball nut, Opossum nut) (potential occurrence) <i>Sarcochilus dilatatus</i> (A small epiphyte with no common name)
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot) (potential occurrence) <i>Turnix melanogaster</i> (Black-breasted button-quail)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.9/10.19

Regional Ecosystem 12.9/10.19
Vegetation mapping & assessment references Gatton Shire map unit(s) 9f, 9g
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Large-leaved spotted gum), ± <i>Eucalyptus crebra</i> ± <i>Angophora woodsiana</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>Eucalyptus major</i>
General structure Shrubby open forest to woodland
Significant RE status No concern at present
Significant plants <i>Acacia blakei</i> subsp. <i>diphylla</i> (Blake's wattle) <i>Acacia montana</i> (A shrub with no common name) <i>Allocasuarina inophloia</i> (Thready (Woolly)-barked oak) <i>Bertya opposens</i> (Broad-leaved Bertya) <i>Boronia splendida</i> (Splendid Boronia) <i>Callistemon formosus</i> (White cliff bottlebrush) <i>Eucalyptus bakeri</i> (Baker's mallee) <i>Eucalyptus melanoleuca</i> (Yarraman ironbark) <i>Eucalyptus sideroxylon</i> (Mugga, red ironbark) <i>Grevillea quadricauda</i> (A shrub with no common name) <i>Hibbertia monticola</i> (Mountain guinea flower) (potential occurrence) <i>Melaleuca groveana</i> (Grove's paperbark) <i>Mentha grandiflora</i> (Gorge pennyroyal) <i>Sophora fraseri</i> (Brush sophora) <i>Triodia</i> sp. (Porcupine grass, Spinifex) (potential occurrence)
Significant invertebrates <i>Nesolycaena albosericea</i> (Satin (blue) opal butterfly) (potential occurrence)
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Calyptorhynchus lathami</i> (Glossy black-cockatoo) <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Lophoictinia isura</i> (Square-tailed kite) <i>Ninox strenua</i> (Powerful owl) <i>Tyto novaehollandiae</i> (Masked owl (southern subsp.))
Significant mammals <i>Chalinolobus picatus</i> (Little pied bat) <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Petrogale penicillata</i> (Brush-tailed rock wallaby) <i>Pseudomys novaehollandiae</i> (New Holland mouse)

Regional Ecosystem 12.11.3

Regional Ecosystem 12.11.3
Vegetation mapping & assessment references Gatton Shire map unit(s) 11c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis (Blackbutt) ± <i>Corymbia citriodora/henryi</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus microcorys</i></i>
General structure Very tall open forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.11.5

Regional Ecosystem 12.11.5
Vegetation mapping & assessment references Gatton Shire map unit(s) 11a
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Coarse spotted gum), <i>Eucalyptus crebra</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus major</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i>
General structure Tall woodland to tall open forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.11.6

Regional Ecosystem 12.11.6
Vegetation mapping & assessment references Gatton Shire map unit(s) 11d
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Angophora subvelutina</i> ± <i>Eucalyptus melanophloia</i> ± <i>Corymbia intermedia</i>
General structure Very tall open forest/woodland
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo)

Regional Ecosystem 12.11.9

Regional Ecosystem 12.11.9
Vegetation mapping & assessment references Gatton Shire map unit(s) 11b
Floristic description (constant characteristic species in bold type) <i>Eucalyptus tereticornis</i> (Queensland blue gum, Forest red gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Angophora subvelutina</i> ± <i>Eucalyptus melanophloia</i> ± <i>Corymbia intermedia</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus melliodora</i> ± <i>Allocasuarina torulosa</i>
General structure Very tall open forest/woodland
Significant RE status Of concern
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence) <i>Potorous tridactylus tridactylus</i> (Long-nosed potoroo)

Regional Ecosystem 12.12.3

Regional Ecosystem 12.12.3
Vegetation mapping & assessment references Gatton Shire map unit(s) 11a
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora/henryi</i> (Spotted gum/Coarse spotted gum), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Corymbia intermedia</i> ± <i>Eucalyptus major</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i> ± <i>Eucalyptus microcorys</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus carnea</i> ± <i>Eucalyptus eugenioides</i> ± <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i>
General structure Tall woodland to tall open forest
Significant RE status Of concern
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.12.5

Regional Ecosystem 12.12.5
Vegetation mapping & assessment references Gatton Shire map unit(s) 12a
Floristic description (constant characteristic species in bold type) <i>Corymbia citriodora</i> (Spotted gum), <i>Eucalyptus moluccana</i> (Gum topped box, Grey box), <i>Eucalyptus crebra</i> (Narrow-leaved ironbark) ± <i>Eucalyptus eugenioides</i> ± <i>Corymbia tessellaris</i> ± <i>Eucalyptus melanophloia</i> ± <i>Eucalyptus tereticornis</i>
General structure Very tall open forest, tall open forest, tall woodland
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)

Regional Ecosystem 12.12.15

Regional Ecosystem 12.12.15
Vegetation mapping & assessment references Gatton Shire map unit(s) 11c
Floristic description (constant characteristic species in bold type) <i>Eucalyptus pilularis</i> (Blackbutt) ± <i>Corymbia citriodora/henryi</i> ± <i>Eucalyptus biturbinata</i> ± <i>Eucalyptus microcorys</i>
General structure Very tall open forest
Significant RE status No concern at present
Significant plants Nil
Significant invertebrates Nil
Significant amphibians Nil
Significant reptiles Nil
Significant birds <i>Erythrotriorchis radiatus</i> (Red goshawk) <i>Ninox strenua</i> (Powerful owl)
Significant mammals <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll (southern subsp.)) (potential occurrence)