



A Biodiversity Planning Assessment for the New England Tableland Bioregion

Expert Panel Report

Version 3.1



**Queensland
Government**

Prepared by: Biodiversity Assessment Team, Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation

© State of Queensland, 2024.

The Department of the Environment, Tourism, Science and Innovation acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past and present.

The department is committed to respecting, protecting and promoting human rights, and our obligations under the Human Rights Act 2019.

The Queensland Government supports and encourages the dissemination and exchange of its information. This work is licensed under a Creative Commons Attribution 4.0 International License.



Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms. You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

For more information on this licence, visit <https://creativecommons.org/licenses/by/4.0/>

Disclaimer

This document has been prepared with care, based on the best available information at the time of publication. The department holds no responsibility for any errors or omissions within this document. Any decisions made by other parties based on this document are solely the responsibility of those parties. Information contained in this document is from a number of sources and, as such, does not necessarily represent government or departmental policy.

The Queensland Government is committed to providing accessible services to Queenslanders from all culturally and linguistically diverse backgrounds. If you have difficulty in understanding or accessing this document, you can contact us for assistance and we will arrange for this publication to be made available in an alternative format.

Citation

Department of the Environment, Tourism, Science and Innovation. 2024. A Biodiversity Planning Assessment for the New England Tableland Bioregion: Expert panel report, version 3.1. Brisbane: Department of the Environment, Tourism, Science and Innovation, Queensland Government.

Acknowledgements

The report was prepared by Stephen Trent, Linda Lawrence, Chris Sanderson, Shane Chemello, Lindsey Lenneberg, Claire Runge and Steven Howell. The authors wish to thank all the participating experts for their time and knowledge at the expert panel meetings, during out-of-session discussions and in the provision of information/recommendations and data.

Cover image: Turtle rock and the Sphynx, Girraween National Park - photo taken and provided by Shane Chemello, Department of the Environment, Tourism, Science and Innovation.

December 2024

Contents

| | |
|--|----|
| Introduction | 1 |
| 1 Method..... | 3 |
| 1.1 Study area | 3 |
| 1.2 Expert panel | 6 |
| 1.3 Expert panel considerations format..... | 8 |
| 1.3.1 Taxa (Criteria A and H) | 8 |
| 1.3.2 Special area considerations (Criteria I)..... | 10 |
| 1.3.3 Corridors (Criterion J)..... | 11 |
| 1.3.4 Threatening processes: condition (Criterion K) | 11 |
| 2 Results..... | 12 |
| 2.1 Flora taxa (Criteria A, H and I) | 12 |
| 2.1.1 Habitat for critically endangered, endangered, vulnerable and near threatened flora (Criterion A) | 12 |
| 2.1.2 Habitat for priority flora taxa (Criterion H) | 18 |
| 2.1.3 Special flora area decisions (Criterion I)..... | 23 |
| 2.2 Fauna taxa (Criteria A, H and I) | 29 |
| 2.2.1 Habitat for critically endangered, endangered, vulnerable and near-threatened fauna (Criterion A) | 29 |
| 2.2.2 Habitat for priority fauna taxa (Criterion H) | 36 |
| 2.2.3 Special fauna area decisions (Criterion I)..... | 41 |
| 2.3 Landscape | 46 |
| 2.3.1 Special landscape decisions (Criterion I)..... | 46 |
| 2.3.2 Corridors (Criterion J)..... | 63 |
| 2.3.2.1 Terrestrial corridors | 63 |
| 2.3.2.2 Riparian corridors | 65 |
| 3 Discussion | 67 |
| 3.1 Expert panel recommendations..... | 67 |
| References..... | 69 |
| Appendix 1. Acronyms and abbreviations | 71 |
| Appendix 2. Datasets/themes available to the expert panel during the workshop | 72 |
| Appendix 3. Candidate flora and fauna taxa considered but not implemented as NET threatened/priority species | 73 |

List of tables

| | |
|--|----|
| Table 1. Expert panel participants | 7 |
| Table 2. Summary of flora taxa identified by the expert panel for Criteria A and H | 12 |
| Table 3. NET – Critically Endangered, Endangered, Vulnerable and Near-Threatened flora taxa (Criterion A) | 12 |
| Table 4. Number of priority flora taxa listed for each eligibility criterion. | 18 |
| Table 5. NET - priority flora taxa (Criterion H) | 19 |
| Table 6. Priority taxa value rating rules | 22 |
| Table 7. Areas of special flora biodiversity value (Criterion I) | 23 |
| Table 8. Summary of fauna taxa considered by the expert panel for Criteria A and H | 29 |
| Table 9. NET – Critically endangered, endangered, vulnerable and near threatened fauna taxa (Criterion A) | 29 |
| Table 10. Number of priority fauna taxa listed for each eligibility criteria | 36 |
| Table 11. NET - priority fauna taxa (Criterion H) | 37 |
| Table 12. Areas of special fauna biodiversity value (Criterion I) | 42 |
| Table 13. Areas of special landscape biodiversity value (Criterion I) | 46 |
| Table 14. Terrestrial bioregional corridors (landscape connections) identified by the landscape expert panel | 63 |
| Table 15. Riparian bioregional corridors | 65 |

List of figures

| | |
|--|----|
| Figure 1. Biodiversity Assessment and Mapping Methodology (BAMM) process | 2 |
| Figure 2. Subregions of the NET | 4 |
| Figure 3. Broad vegetation groups across the NET | 5 |
| Figure 4. Bioregional Corridors | 66 |

Note. This report should be read in conjunction with the accompanying summary report - A Biodiversity Planning Assessment for the New England Tableland Bioregion: Summary report, version 3.1 (DETSI 2024).

Introduction

The New England Tableland bioregion straddles the New South Wales (NSW) and Queensland (QLD) border and consists of an elevated plateau of hills and plains on Palaeozoic sediments, granites and basalts; dominated by stringy bark/peppermint/box species, including *Eucalyptus caliginosa*, *Eucalyptus nova-anglica*, *Eucalyptus melliodora* and *Eucalyptus blakelyi* (Thackway and Cresswell 1995).

This report details the results of expert panels used to produce a Biodiversity Planning Assessment (BPA) for the New England Tableland bioregion. To date, BPA results have been used to inform a wide range of assessment, planning and referral activities including:

- regional plans and local planning schemes
- government advice under the *Planning Act 2016*
- State government tenure dealings including identification of protected areas.

Biodiversity Planning Assessment results have also been used by environmental consultants, environmental non-government organisations and natural resource management groups to:

- identify priorities for protection, regulation or rehabilitation of ecosystems
- contribute to impact assessment of large-scale development
- provide input to socio-economic evaluation and prioritisation processes
- inform natural resource management plans.

The Biodiversity Assessment and Mapping Methodology version 2.2 (BAMM) (EHP 2014) was developed to provide a consistent approach for assessing biodiversity values at the landscape scale using vegetation mapping data generated or approved by the Queensland Herbarium and Biodiversity Science. The BAMM is used by the Department of the Environment, Tourism, Science and Innovation (DETSI) to generate BPAs for all bioregions across Queensland. The BAMM is published on the DETSI website at <https://www.qld.gov.au/environment/plants-animals/biodiversity/planning/>. The methodology was modified from an approach initially developed by Chenoweth EPLA (2001) and the results can be used by DETSI staff, other government departments, local governments or members of the community to advise on a range of decision-making processes.

The methodology is applied in two stages (Figure 1). The first stage uses existing data to assess seven diagnostic criteria. These account for ecological concepts including rarity, diversity, fragmentation, habitat condition, resilience, threats and ecosystem processes. They are diagnostic in that they are used to filter available data and provide a 'first-cut' determination of significance. This initial assessment is generated in a geographic information system (GIS) and is then refined using a second group of expert panel criteria. These criteria rely more upon expert opinion than on quantitative data and focus on information that may not be available uniformly across the bioregion. A generalised terms of reference for the expert panels is provided in EHP (2014).

This project was led by the Department of the Environment, Tourism, Science and Innovation with significant contributions from regional stakeholders and experts. This report should be read in conjunction with the accompanying Summary Report (DETSI, 2024). For convenience, the New England Tableland bioregion is hereafter referred to as NET. [Appendix 1](#) provides details of any other abbreviations included in the report.

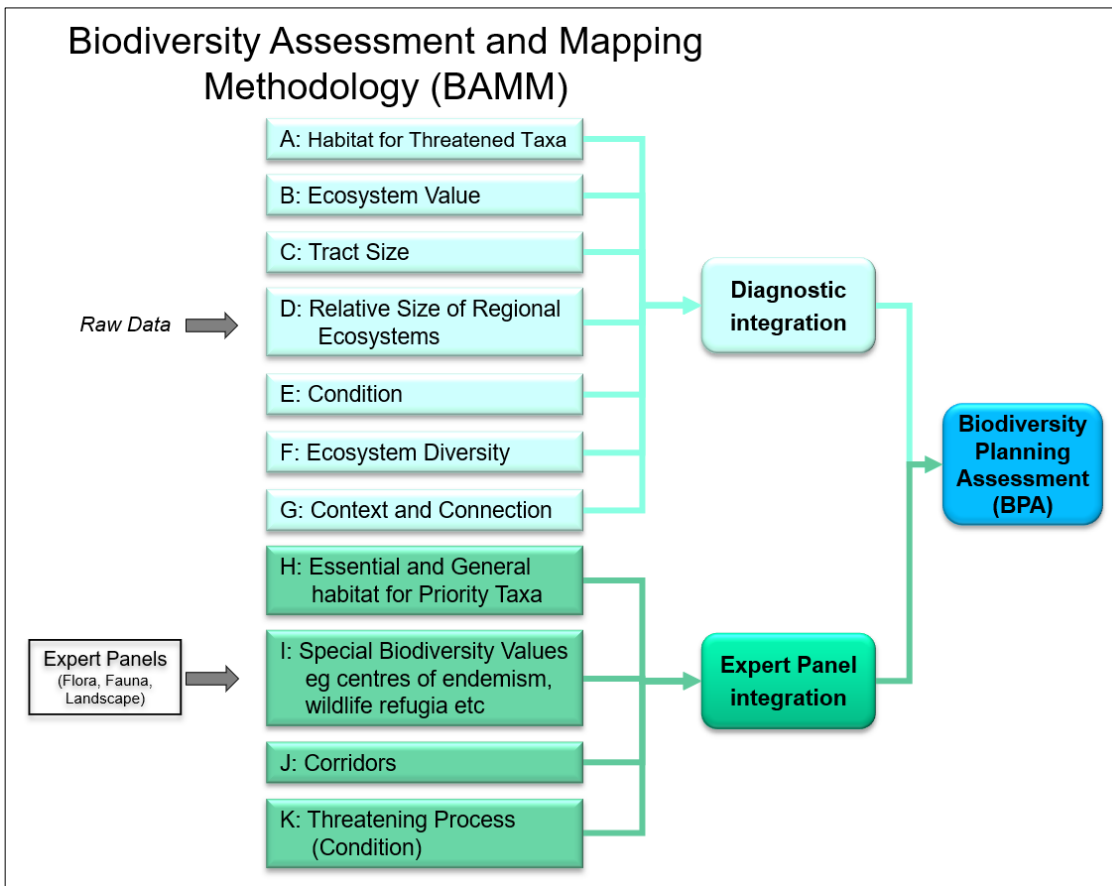


Figure 1. Biodiversity Assessment and Mapping Methodology (BAMM) process

1 Method

1.1 Study area

The New England Tableland bioregion comprises the Queensland sections of the Stanthorpe Plateau and Tenterfield Plateau subregions, as well as the Nandewar subregion (Figure 2). Using the national bioregion classification according to IBRA (Thackway and Cresswell 1995), 14 per cent of the combined NET and Nandewar bioregions fall within Queensland. The Stanthorpe Plateau and northern section of the Tenterfield Plateau comprises 5 per cent of the NET IBRA bioregion, while the Queensland section of the Nandewar bioregion comprises 23 per cent of the entire IBRA bioregion.

The former two subregions are characterised by a high altitude (>800m) granite (adamellite) batholith geologically contiguous with NSW, often with ridgelines characterised by granite tors. Interaction between geology, altitude and the pronounced moisture gradient from southeast to northwest results in shrublands, mountain heaths, rock pavement gardens and sedgeland with a diverse heathland / woodland flora with affinities to southern states or coastal areas. Additionally, there are many endemic species.

The Nandewar subregion is characterised by metamorphosed sandstone known as 'traprock' and supports many similar granite flora species (Sattler and Williams 1999). It supports a mixture of temperate woodland fauna species (Garnett and Crowley 2000) as well as Brigalow Belt bioregion fauna and those from the Granite Belt.

The major land uses in the New England Tableland include fruit and vegetable production, wool growing and cattle grazing (Sattler and Williams 1999). The temperate climate and proximity to the major market of Brisbane has made growing of stone fruit, apples, grapes and vegetables the major agricultural industry of the region. Wine production and tourism are other important local industries.

The rugged granite topography of the Stanthorpe Plateau has resulted in the retention of a greater proportion of natural vegetation cover comparative to adjacent parts of the bioregion in New South Wales which have been heavily cleared for pasture. However, most of the flatter country including alluvial plains has been cleared, and much of the remaining natural vegetation is along ridgelines.

National parks in the region include Girraween National Park and Sundown National Park. Approximately 4.5 percent of the QLD bioregion is incorporated as protected area estate (inclusive of Nature Refuges) under the Queensland *Nature Conservation Act 1992*.

Key threats to biodiversity values within the bioregion include:

- direct habitat loss, including from rural residential development, and indirect habitat loss from agricultural practices and intensive grazing.
- invasion by exotic and non-local plants and animals, and control measures such as use of herbicides.
- climate change: predicted increases in temperature and reduced precipitation is envisaged to impact both flora, fauna, as well as ecosystem composition with the region.
- inappropriate fire regimes (which vary in frequency and timing across the region) are recognised as the main threat to plants in the region, and similarly pose a threat to many fauna. Further research is needed to determine optimal fire regimes across the region. Expected longer term rises in temperatures and reduced rainfall will increase the risk of destructive wildfires (Low 2011).

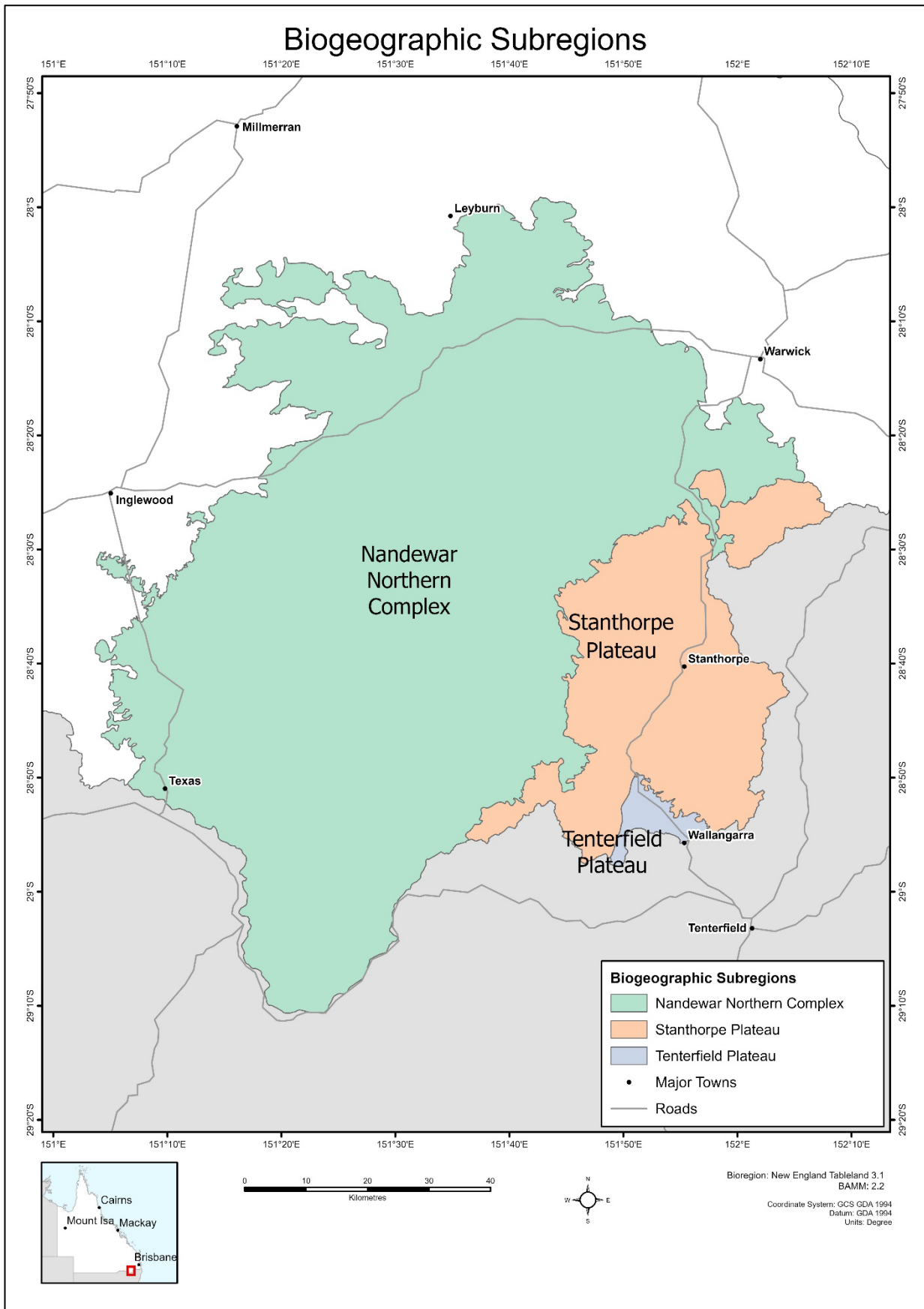


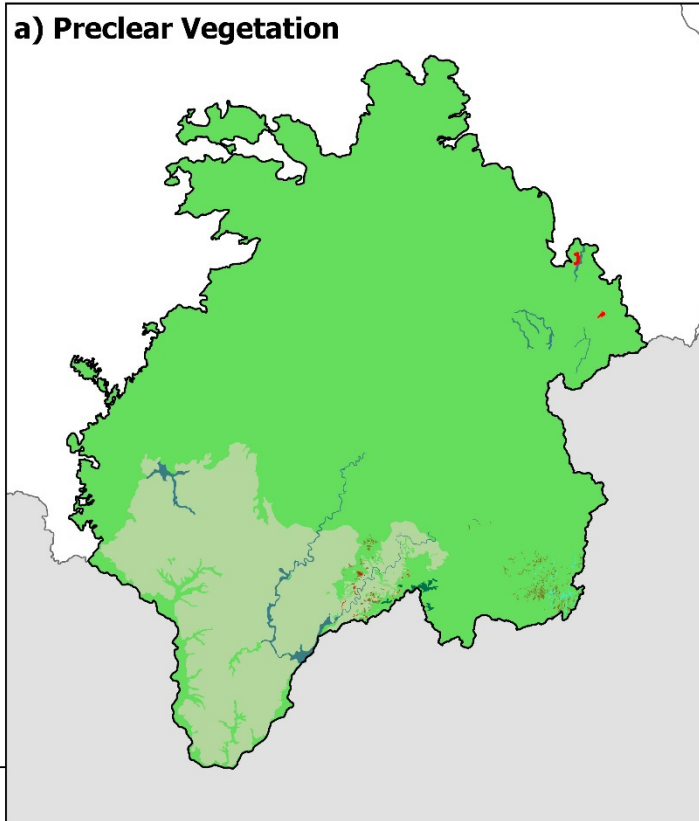
Figure 2. Subregions of the NET

Regional Ecosystem Broad Vegetation Groups

Broad vegetation groups 1:5 Million

- 1. Rainforests and scrubs
- 2. Wet eucalypt open forests
- 3. Eucalypt woodlands to open forests (mainly Eastern)
- 4. Eucalypt open forests to woodlands on floodplains
- 5. Eucalypt dry woodlands on inland depositional plains
- 6. Eucalypt low open woodlands usually with spinifex understorey
- 7. Callitris woodland - open forests
- 8. Melaleuca open-woodlands on depositional plains
- 9. Acacia aneura dominated open forests, woodlands and shrublands
- 10. Other acacia dominated open forests, woodlands and shrublands
- 11. Mixed species woodlands - open woodlands (inland bioregions) includes wooded downs
- 12. Other coastal communities or heaths
- 13. Tussock grasslands, forblands
- 14. Hummock grasslands
- 15. Wetlands (swamps and lakes)
- 16. Mangroves and saltmarshes

a) Preclear Vegetation



b) Remnant Vegetation

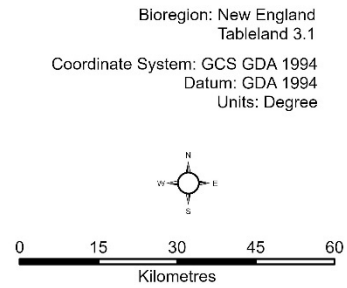
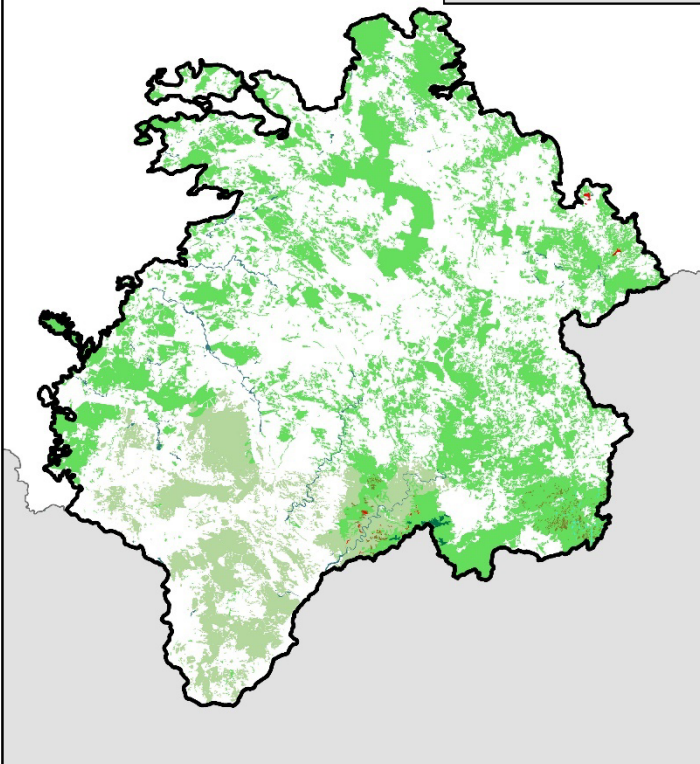


Figure 3. Broad vegetation groups across the NET

1.2 Expert panel

A series of expert panel workshops were held in Brisbane (Queensland Herbarium) from 6 to 8 June 2023. Expert panels play a significant role in the development of a BPA. The aim of the expert panel process is to:

- identify additional information sources including expert knowledge, technical reports and papers
- elicit expert opinion where quantitative data is not available uniformly across the bioregion.

Biodiversity values and issues addressed at the expert panel workshops include:

- evaluating point records and habitat models for critically endangered (CE), endangered (E), vulnerable (V) and near threatened (NT) taxa to improve spatial accuracy and precision
- identifying non-CEVNT taxa to be treated as priority species under Criterion H
- capturing any additional records available from expert panel members for use in Criterion A and H
- identifying areas with special biodiversity values (Criterion I)
- identifying terrestrial and riparian landscape connections (Criterion J)
- identifying data gaps.

The NET expert panels comprised invited persons with knowledge of the biodiversity of the bioregion and a sound understanding of ecological conservation and management principles. As far as possible, the combined expertise of participants covered the whole NET and a range of key stakeholders (e.g. local government, regional Natural Resource Management (NRM) bodies, state government, educational institutions). The terms of reference for expert panels are provided in EHP (2014). All NET BPA v3.1 expert panel participants are listed in Table 1.

The output of the panel process aims to be justifiable and transparent. Data that is captured digitally and mapped is a result of consensus within the panel and ratified by the Manager, Biodiversity Assessment, DETSI.

Significance ratings of State, Regional or Local are attributed to the decisions produced at the expert panels. In general, ratings are only attributed by the panel to areas of remnant/regrowth vegetation, however, in some instances panel identified special areas have incorporated other areas.

The ratings used by the panel were described as:

State significance - areas assessed as being significant for biodiversity at the bioregional or state scales. Includes areas assessed as being significant at national or international scales.

Regional significance - areas assessed as being significant for biodiversity at the sub-bioregional scale. These areas have lower significance for biodiversity than areas assessed as being of State significance.

Local significance - areas assessed as being significant for biodiversity at a local scale. These areas have lower significance for biodiversity than areas assessed as being of Regional significance.

Table 1. Expert panel participants

| Name | Organisation | Panel Attendance |
|---|---|-------------------------|
| Liz Bourne | Stanthorpe Rare Wildflower Consortium | Attended |
| Gillian Brown | Queensland Herbarium and Biodiversity Science | Attended |
| Jarrad Cousin | CO2 Australia | Attended |
| Steve Cupitt | Crossroads Rural/Environmental | Attended |
| Paul Donatiu | Healthy Land and Water | Attended |
| Paul Grimshaw | Birdlife SEQ | Attended |
| Darren Fielder | Redleaf Group | Out of panel |
| Greg Keith | Queensland Parks and Wildlife Service | Attended |
| Simone Maynard | National Parks Association of Queensland | Attended |
| Bill McDonald | Queensland Herbarium and Biodiversity Science | Attended |
| Shannon Mooney | Southern Queensland Landscapes | Attended |
| Andrew Pengelly | Stanthorpe Rare Wildflower Consortium | Attended |
| Paul Revie | Quoll Society of Australia | Attended |
| Chris Sanderson | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |
| Jessica Lovegrove-Walsh | Quoll Society of Australia | Attended |
| Peter Young | Consultant, Previously Department of Environment and Heritage | Attended |
| Targeted out of panel consultation | | |
| Greg Ford | Balance Environmental | Out of panel |
| Ian Gynther | QPWS and Partnerships, Department of the Environment, Tourism, Science and Innovation | Out of panel |
| James Furse | Department of Regional Development Manufacturing and Water | Out of panel |
| Cliff Meyer | Butterflies Australia | Out of panel |
| Don Sands | CSIRO | Out of panel |
| Steve Wilson | Consultant/Queensland Museum | Out of panel |
| Support staff | | |
| Stephen Trent | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |
| Linda Lawrence | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |
| Shane Chemello | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |
| Chris Sanderson | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |
| Jeremy Anderson | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |
| Lindsey Lenneberg | Queensland Herbarium and Biodiversity Science, Department of the Environment, Tourism, Science and Innovation | Attended |

1.3 Expert panel considerations format

The expert panel workshops used an interactive approach of GIS software, spreadsheets, reports, laptops and data projectors. Prior to the panel being convened, relevant information was collated and disseminated to the workshop participants.

Resources made available to the participants during the workshop proceedings included:

- copy of the BAMB (EHP 2014)
- information from databases such as HerbreCs, Corveg, Queensland Historical Fauna Database (QHFD) and WildNet
- available regional ecosystem mapping and 1:100,000 topographic maps
- relevant reports and published literature
- ancillary GIS layers provided for local reference including roads and cadastral information, drainage, protected areas including nature refuges and recently captured high resolution imagery.

Appendix 2 provides a full list of the resources made available at the panel workshops.

1.3.1 Taxa (Criteria A and H)

Flora and fauna taxa considered by the expert panel were threatened and near-threatened (CEVNT) species (Criterion A) listed under the Queensland *Nature Conservation Act 1992* (NCA) or the Australian Government *Environment Protection and Biodiversity Conservation Act 1999* (EPBC), priority (non-CEVNT) taxa (Criterion H). Records were compiled using WildNet, Corveg, HerbreCs, QFD and from project specific data sets obtained from other sources. Other species were nominated, discussed and either added or discarded from the priority taxa list by workshop participants prior to and during the panel workshops. Experts were asked to identify known preferences of species for particular habitat features, e.g. specific regional ecosystems (REs), geology or landscape position.

Selected species records were interactively reviewed using GIS commencing with CEVNT species then priority species. Participants were asked to accept, add, shift or exclude records based upon their expert knowledge. Panel participants accepted records located within their known distributions, at known locations or if collected by a reliable source. They identified records that were incorrectly located and added records either during the workshop proceedings or with follow-up consultation.

Records were excluded for the following reasons:

- incorrect coordinates - a mismatch between location description and coordinates
- is a cultivated plant
- duplicate records which had been cited by a number of sources
- records with a precision > 2,000m
- records collected before 1950 (flora) or 1975 (fauna).

For most BPAs, priority taxa are identified for each bioregion on the basis of one or more values and the written opinion of experts.

Nomination Criteria

1. **Taxa at risk** - taxa that, from a bioregional perspective or greater, are under threat and consequently have had significant population and/or range declines based on scientific evidence and/or expert opinion. Can be used to nominate Type A and B priority taxa. Type A may include taxa which experts consider to be treated as Near threatened/Threatened across their range. Type B taxa may include those taxa that are not necessarily threatened across their broader range, however, are undergoing declines within the bioregion of interest.
2. **Taxa of scientific interest as “Relictual” (ancient or primitive)** – taxon that largely retains their ancient or primitive form and are representative of a formerly diverse group. Some flora and fauna taxa have been linked with important stages in the earth’s evolutionary history. Can only be used to nominate Type B priority taxa. Historical criterion, retained more for information purposes.
3. **Endemic taxa** – taxa which have at least 75 per cent of their geographical range within one bioregion (Commonwealth of Australia 1995, Queensland CRA/RFA Steering Committee 1998). Can only be used to nominate Type B priority taxa. Often used in conjunction with nomination criteria 4 to identify

at risk narrow-range endemics.

4. **Range restricted taxa - potentially susceptible to deterministic/stochastic influences. Taxa may** be endemic to a bioregion or occur across more than one bioregion – emphasis is placed on range restricted taxa, rather than bioregional endemism. Can be used to nominate Type A and B priority taxa. Type A may include those which inhabit a very narrow range and which experts consider places the taxa at risk from stochastic/deterministic pressures. Type B taxa may include those taxa, which encompass a less restricted range, but are still potentially susceptible to stochastic events.
5. **Populations important for maintaining genetic diversity such as complex patterns of genetic variation** – distinct sub-populations or sub-species that exhibit recognised variation in genetic composition. This may be exhibited within the focal bioregion, or with respect to other bioregions. Whilst generally used to nominate Type B priority taxa, this criterion can be used to nominate Type A priority taxa in conjunction with criteria 1,4 and 9 (e.g. narrow range restricted population that occurs within the bioregion of interest, and which is likely to be a subspecies – criterion 4 and 5).
6. **Disjunct species populations** - populations broken by climatic, topographic or edaphic barriers bridged by long distance dispersal of propagules. These barriers are seen as insurmountable barriers to dispersal requiring a geological (historical) rather than a behavioural (ecological) explanation for the taxon presence (Groves 1981). Disjunct populations are often in a different bioregion e.g. the localised occurrence of Kauri pine in Wet Tropics bioregion when its main distribution is confined to parts of the Southeast Queensland bioregion, 1600 km away. Whilst generally used to nominate Type B priority taxa, this criterion may be used to nominate Type A priority taxa in conjunction with criteria 1,4 and 9 (e.g. major disjunct (possible subspecies) at risk and subject to ongoing decline - criterion 1 and 6).
7. **Taxa functionally important to ecosystem integrity** - keystone taxa that play a unique and crucial role in the way an ecosystem functions, and whose decline or disappearance would see a dramatic change in the nature of that ecosystem. The contributions of such species are large compared to the species' prevalence in the habitat. This includes taxa that are keystone predators as well as ecosystem engineers and seed dispersers. Whilst generally used to nominate Type B priority taxa, this criterion may be used to nominate Type A priority taxa in conjunction with criteria 1,4 and 9 (e.g. for example, the cassowary (if not a CEVNT) is an important disperser of rainforest native plants and considered at risk).
8. **Taxa performing a role as an ecological indicator of ecosystem integrity** - can be of many different types. They can be used to reflect a variety of aspects of ecosystems, including biological, chemical and physical integrity. Indicators are used to communicate information about ecosystems and the impact human activity has on ecosystems. Can be used to nominate Type B (medium priority) priority taxa. Historical criterion, retained more for general information purposes.
9. **Taxa vulnerable to impacts of climate change** - species considered to be adversely affected by the predicted changes in climate, e.g. increasing temperatures, sea level rise and increasing frequency of extreme weather events (drought, flood and cyclones). Species can only be listed under this reason if there is sufficient knowledge of species' biology. Can be used to nominate Type A and B priority taxa. Type A may include taxa which experts agree are highly susceptible in lieu of forecast impacts from climate change which will likely result in their eventual upgrade to Near threatened/Threatened across their range. Type B taxa may include those taxa, for which there is less confidence, and/or where a resultant decline across their bioregional range is expected.

The panel also assigns a significance category of "Priority type A", or "Priority type B" for each nominated taxon.

Type A priority taxa – taxa considered as being of “highest” priority. Taxa are considered at high risk due to ongoing declines/threatening processes, and/or those considered naturally vulnerable (i.e. narrow range endemics) across their entire range. These taxa are likely to include at least one of the nomination criteria: 1, 4 or 9.

Type B priority taxa – taxa considered as being of “moderate” priority. Whilst any of the nomination criteria can be used, emphasis is again placed on identifying those taxa, which whilst not declining or at risk across their entire range, are declining/at risk naturally or otherwise within the bioregion of interest.

1.3.2 Special area considerations (Criteria I)

The expert panel nominated areas of special biodiversity value for inclusion under Criterion I. Panels assigned State, Regional, or in some instances Local Significance to the nominated areas based on presence of at least one of the following:

- Criterion Ia - the area supports a number of taxa endemic to the NET
- Criterion Ib - wildlife refugia, for example, large, vegetated tracts, mountain ranges and topographic isolates that act as shelters from clearing, stochastic events (fire, flood, drought) and exotic animals
- Criterion Ic - the area supports a number of taxa that are present in other bioregions and have a limited number of occurrences in the NET (outliers/disjunct populations)
- Criterion Id - the area supports a number of taxa at or near the limits of their respective geographical ranges
- Criterion Ie - the area supports high species richness
- Criterion If - the area supports concentrations of relictual (ancient and primitive) taxa
- Criterion Ig - the area contains a regional ecosystem or regional ecosystems that exhibit variation in species composition
- Criterion Ih - an artificial waterbody or managed/manipulated wetland of ecological significance
- Criterion Ii - the area contains high relative densities of habitat shelters (i.e. nesting or resting shelters - hollow-bearing trees, caves, rock outcrops etc.) that provide animal habitat
- Criterion Ij - the area is used by significant numbers of individuals for roosting or breeding
- Criterion Ik - climate change refugia.

In addition to Criterion I, the panel also reviewed broad landscape and linkages based on consideration of the overall configuration of remnant and other vegetation and areas where landscape restoration would be desirable (Criterion J).

The above criteria are focussed on terrestrial values with some consideration of aquatic values. The importance of specific aquatic values such as habitat dependences associated with aquatic species, ecosystem processes and other aquatic criteria are assessed in more detail through application of the Aquatic Biodiversity Assessment and Mapping Methodology (AquaBAMM) (Clayton et al. 2006).

The diagnostic criteria in BAMM use prescribed thresholds for determining the relative importance of individual criteria and standard rules for assigning biodiversity significance based on combinations of values present. However, BAMM (EHP 2014) deliberately provides non-specific guidance on how expert panels are to assess and assign significance ratings to expert criteria. The NET expert panels used a consensus approach in assigning overall significance. Where there was uncertainty or further work needed, tasks were assigned for follow-up. In some cases, the areas were specifically identified by RE polygons, whilst in others, a bounding box was drawn to indicate the general location and specific recommendations provided which allow later spatial delineation using a combination of other vegetation, geology or landform mapping. Subsequently, the areas were mapped and distributed to the expert panel for review and then finalised.

1.3.3 Corridors (Criterion J)

Landscape scale corridors have been defined and mapped at a statewide level for most of the state. The network is being expanded as BPAs are completed for additional bioregions. Their broad purpose is to provide for ecological and evolutionary processes by:

- maintaining long term evolutionary/genetic processes that allow the natural change in distributions of species and connectivity between populations over long periods of time
- maintaining landscape/ecosystems processes associated with geological, altitudinal and climatic gradients, to allow for ecological responses to climate change
- maintaining seasonal migrations and movement of fauna
- maximising connectivity between large tracts/patches of remnant vegetation
- identifying key areas for rehabilitation and offsets.

Corridors routes may be selected to reflect:

- major watershed and catchment boundaries
- intact river systems
- major altitudinal/geological/climatic gradients
- connectivity between remnant vegetation in good condition
- linkages between bioregions
- linkages between permanent waterholes.

The methods used to identify bioregional terrestrial and riparian corridors, and gaps and critical weaknesses in terrestrial corridors, are outlined in (DES 2020). Corridors that form part of the statewide network are assigned State significance. Other corridors providing connectivity at a sub-regional scale are assigned Regional significance.

1.3.4 Threatening processes: condition (Criterion K)

The condition of remnant vegetation is affected by threatening processes such as clearing, weeds, feral animals, grazing and burning regime, selective timber harvesting/removal, salinity, soil erosion and climate change. A consistent assessment of condition for whole bioregions is not yet possible under the diagnostic criteria. In lieu of this, Criterion K can be used to upgrade or downgrade an area's overall biodiversity significance based upon expert judgement of an area's habitat quality.

2 Results

Outcomes from the flora, fauna and landscape panels are recorded in the following sections.

2.1 Flora taxa (Criteria A, H and I)

Criteria A and H attribute significance to areas based on the presence of CEVNT taxa scheduled under the NCA or the EPBC, or the presence of priority species. The NET flora expert panels identified 86 species for inclusion in Criteria A and H. Table 2 summarises the categories of taxa. The standard BAMB record vetting rules were applied (EHP 2014). In addition, a number of other taxa were considered, however, were noted/excluded from the CEVNT/priority lists as they did not meet the eligibility criteria (refer to Appendix 3. Candidate flora and fauna taxa considered but not implemented as NET threatened/priority species).

Table 2. Summary of flora taxa identified by the expert panel for Criteria A and H

| | Critically Endangered /Endangered | Vulnerable) | Near Threatened | Priority (non-EVNT) taxa | Total |
|----------------|-----------------------------------|-------------|-----------------|--------------------------|-------|
| Number of taxa | 22 | 19 | 13 | 32 | 86 |

2.1.1 Habitat for critically endangered, endangered, vulnerable and near threatened flora (Criterion A)

The panel identified and selectively reviewed species records to define a list of 54 NET CEVNT flora taxa relevant to the NET (Table 3). A number of threatened taxa were excluded from the table below either because there were no (or too few) reliable records in the NET or, based upon expert opinion, the taxa was considered not to occur in the bioregion (refer to Appendix 3). For inclusion in the NET BPA the records were first vetted as described in section (1.3.1) and subsequently buffered by twice the precision with a minimum of 300m and a maximum of 4km. No core habitat suitability models were available for use in place of records.

Table 3. NET – Critically Endangered, Endangered, Vulnerable and Near-Threatened flora taxa (Criterion A)

| Scientific Name | Common Name | NCA ¹ | EPBC ² | Comments |
|-------------------------------|-----------------|------------------|-------------------|---|
| <i>Acacia lauta</i> | Tara wattle | V | V | Records are adjacent to NET boundary. Habitat may cross over into NET. |
| <i>Acacia pubifolia</i> | Wyberba wattle | V | V | Grows on rocky granite hillsides, in sandy, stony or loam soil in eucalypt-scrub woodland. Found within Girraween National Park and also Wallangarra, Wyberba, Fletcher and Somme. |
| <i>Acacia ruppii</i> | | | E | Only found on Girraween National Park. |
| <i>Agiortia cicatricata</i> | | NT | | Grows in sparse shrubby vegetation in rock crevices and on exposed plateaus on skeletal sandy soil over granite. (Plantnet 2023) |
| <i>Allocasuarina rupicola</i> | shrubby she-oak | NT | | High altitudes on granite rock outcrops. |
| <i>Astrotricha roddii</i> | | E | E | Known only from Mt Bullaganang within QLD. |
| <i>Bertya glandulosa</i> | | V | | It occurs in the more protected areas within heaths and scrubs of Girraween 'Central Division' i.e. area with massive granite outcrops and depressions or crevices on exposed rocky slopes. Recorded between Somme and Girraween. |

| Scientific Name | Common Name | NCA ¹ | EPBC ² | Comments |
|---------------------------------|-----------------------------|------------------|-------------------|---|
| <i>Bertya recurvata</i> | | E | | This species grows in shallow, sandy soils on exposed granite outcrops. Flowers have been recorded from August to September, with fruits appearing from October (BRI undated; Halford and Henderson 2002). There appears to be a close relationship between seedling recruitment and fire (Leverington et al. 2003). Locations are Girraween, Ballandean, Amiens. |
| <i>Boronia amabilis</i> | | NT | | Associated with regional ecosystem 13.12.6: Habitat for threatened plant species including <i>Boronia granitica</i> , <i>B. repanda</i> , <i>B. amabilis</i> , <i>Homoranthus papillatus</i> , <i>Phebalium whitei</i> . Only known from Girraween and Ballandean localities. |
| <i>Boronia granitica</i> | granite boronia | E | E | Among rocky boulders, often in crevices where moisture is present and where the rocks hold the warmth during winter (frost protection). The species is known from the Amiens and Fletcher localities. Key refuges include Horan's Gorge Nature Refuge and the Southern section of Passchendaele State Forest. |
| <i>Boronia repanda</i> | | E | E | This species is more abundant in QLD, but also occurs in small populations in NSW, close to the border in the Ruby Creek area. The most important refuge area for this species is Broadwater State Forest, but also occurs in Passchendaele State Forest and Cottonvale area - Mount Janet Rd. A large population also occurs within the rail and road corridors near Thulimbah. It also occurs in bushland next to Stanthorpe Aerodrome, as well as private properties north of Stanthorpe. |
| <i>Cadellia pentastylis</i> | ooline | V | V | Occurs on eastern aspects on ridges, rainforest vine thickets. Locations are associated with an Endangered RE 11.11.14 in the Brigalow Belt bioregion. In NET it is found in Sundown National Park gorges, and in the locality of Watson's Crossing. More ecological detail can be found in Benson (1993). |
| <i>Caladenia atroclavia</i> | Black-clubbed Spider-orchid | E | E | Found in open forest on granite. Flowers Sept/Oct. It is cryptic, like most ground orchids and difficult to identify due to a very limited flowering period. Known from numerous locations in Girraween National Park. Also found in Horan's Gorge Nature Reserve. |
| <i>Calotis glabrescens</i> | | CR | | Occurrence records for the species suggest it is associated with open forest and semi-cleared areas containing species such as <i>Eucalyptus moluccana</i> , <i>Eucalyptus sideroxylon</i> , <i>Eucalyptus viridis</i> and the wattles <i>Acacia montana</i> and <i>A. ixiophylla</i> . The parent rock for these occurrences is metamorphic and the pre-clear regional ecosystem was RE 13.11.8 (<i>Eucalyptus melliodora</i> and/or <i>Eucalyptus microcarpa</i> / <i>Eucalyptus moluccana</i> woodland on rolling hills, depressions and lower slopes around drainage lines, on metamorphics) (AES 2023). |
| <i>Conospermum burgessiorum</i> | | NT | | Found in heathy forests within Girraween National Park. |

| Scientific Name | Common Name | NCA ¹ | EPBC ² | Comments |
|--|-----------------------|------------------|-------------------|--|
| <i>Diuris parvipetala</i> | | V | | Cryptic, and like most ground orchids, difficult to identify due to a very limited flowering period. Known from limited populations close to Stanthorpe, and east of Storm King Dam. Also known from northern part of Passchendaele State Forest. |
| <i>Dodonaea hirsuta</i> | | V | | Occurs in dry sclerophyll forest or heathland on granite and sandstone. Rock pavements/base of rocky hillsides in Girraween National Park. Also found in Passchendaele State Forest (Amiens) area around big boulders and Jolly's falls near "the Summit". |
| <i>Eucalyptus codonocarpa</i> | mallee ash | NT | | Restricted to top of Mt Norman and Mt Approximans within Girraween National Park. It is a disjunct from Mt Barney to Springbrook mountaintop sites. Within NSW, it is restricted to a few similar habitats on northern NSW border. |
| <i>Eucalyptus dalveenica</i> | Dalveen blue box | CR | CE | This species was only described in 2019 after research determined it was genetically and chemically distinct from <i>Eucalyptus magnificata</i> . Known from only three populations in the Dalveen area all on private property. |
| <i>Eucalyptus infera</i> | Durikai mallee | V | V | Understorey species predominately located on two sites within Durikai State Forest. |
| <i>Eucalyptus mckieana</i> | McKie's Stringybark | | V | Very limited distribution in QLD part of NET. It is found in grassy open forest or woodland on poor sandy loams, most commonly on gently sloping or flat sites. The species resprouts from epicormic buds after fire. (NSWEOH 2023) |
| <i>Eucalyptus scoparia</i> | Wallangarra white gum | V | V | Known only from higher parts of Girraween National Park, Christie Target in Roberts Range, Mt Ferguson near Amiens. |
| <i>Eucalyptus virens</i> | shiny-leaved ironbark | V | V | Recorded from western part of Nandewar, Coolmunda conservation park and similar surrounding areas. |
| <i>Euphrasia orthocheila</i> subsp. <i>peraspera</i> | Tenterfield Eyebright | NT | | Little is known about the habitat and ecology of this subspecies. Recorded from 'moist open situations' such as swamps. Flowering generally from November to December. (NSWEOH 2023) |
| <i>Grevillea scortechinii</i> subsp. <i>scortechinii</i> | black grevillea | CR | CE | Taxa prefers well drained soils with underlying clay, in higher rainfall areas. Scattered patches occur on road and rail reserves and some on private land in the Cottonvale, Thulimbah and Applethorpe area. Threats include clearing and habitat disturbance, weed invasion, Phytophthora. Draft recovery plan has been developed. Stanthorpe Rare Wildflower Consortium submission resulted in status listing from Vulnerable to Critically endangered. |
| <i>Hakea macrorrhyncha</i> | | V | | Found in high country that backs onto Girraween National Park (Doctors Ck catchment). Also in Girraween National Park just downstream from Cascades; SE of Dr Roberts' Waterhole. |

| Scientific Name | Common Name | NCA ¹ | EPBC ² | Comments |
|-------------------------------|------------------------|------------------|-------------------|---|
| <i>Hibbertia elata</i> | guinea flower | NT | | Often scattered around on high tops of hills. Always on granite, rock gardens or pavements. It requires the warmth of large rocks. Known from Girraween National Park and a population in Amiens locality. |
| <i>Homoranthus inopinatus</i> | | CR | | Extremely localised - known from only one population on private property in the east Ballandean locality. |
| <i>Homoranthus montanus</i> | | CR | V | This species grows on shallow, coarse, sandy soils on north-east and easterly slopes on areas characterised by moderately steep hills with rocky knolls, tors and rock pavements at 750-850 m above sea level (Donatiu 2006; Halford 1995). Only found in Sundown National Park and Hillview nature refuge. |
| <i>Homoranthus papillatus</i> | mouse bush | CR | | Occurs in pockets of decomposed granite with other heathy shrubs, on high exposed rock pavements and in adjoining heathy eucalypt woodland (Queensland Herbarium 2012a). Known from Girraween National Park (Mt Norman and The Pyramids). |
| <i>Kardomia granitica</i> | | E | V | Found on Rhyolite/Rhyodacite. Grows largely on bare exposed granite outcrops, in depressions or crevices where a little soil can accumulate, with other heathland-type shrubs. Occurrences have been recorded from Girraween National Park and its surrounds, and west to Somme. Nb. Previously identified as <i>Babingtonia granitica</i> . |
| <i>Kardomia silvestris</i> | | E | | Grows adjacent to quite dense forest, but on a rocky shelf with skeletal soil. The known site is rather sheltered (south-east facing). It occurs with other shrubs such as <i>Kunzea</i> and <i>Dodonaea</i> . Only known from Girraween National Park. Nb. Previously identified as <i>Babingtonia silvestris</i> . |
| <i>Leionema ambiens</i> | | NT | | Along gullies and little ravines sheltered among the rocks. Found from Girraween National Park and Wyberba locality. |
| <i>Lepidium peregrinum</i> | Wandering Pepper-cress | | E | Occurs from the Bunya Mountains, south-east Queensland, to near Tenterfield, in northern New South Wales (Queensland Herbarium 2007). Potential threats include clearing of habitat for agriculture, grazing by rabbits, livestock and weed invasion (NSW OEH 2023). |
| <i>Macrozamia conferta</i> | | V | V | Scattered throughout Durikai State Forest. |
| <i>Macrozamia cranei</i> | | E | E | Traprock/Callitris Mt Bullaganang. |
| <i>Macrozamia machinii</i> | | V | V | Found in only a few locations within NET. <i>Macrozamia machinii</i> occurs on flat plains and breakaways in deep sandy soils and in flat areas of open forest. Occurs in Durikai State Forest, Wooli State Forest and Wondul Range National Park. |

| Scientific Name | Common Name | NCA ¹ | EPBC ² | Comments |
|---|-------------|------------------|-------------------|---|
| <i>Macrozamia occidua</i> | | V | V | Within Sundown National Park in Mugga ironbark (<i>Eucalyptus sideroxylon</i>) forest and also at Mt Jibbinbar on Granite. |
| <i>Macrozamia viridis</i> | | E | | Within Girraween National Park and adjacent eastern portions. Also, disjunct populations at Greenlands and Amiens. |
| <i>Melaleuca flavovirens</i> | | NT | | Known from Girraween National Park and surrounding properties. Along many streams in Girraween, rougher country right through to Mt Norman. Habitat includes seepage areas and rock outcrops. In rougher country (yellow-green flower, reasonably broad leaf). Higher altitude occurrence is probably a different species (different flower colour and smaller leaves). Habitat is riparian and seepage areas (e.g. low rocky outcrops with seepage). Often growing in wet places with the sword grass. |
| <i>Melaleuca williamsii</i> subsp. <i>fletcheri</i> | | V | V | More common along watercourses of the Severn River and tributaries but some populations have been found on higher ground. |
| <i>Mirbelia confertiflora</i> | | NT | . | Grows in dry sclerophyll forest and heath on granite, not common. Recorded from Passchendaele State Forest, Broadwater State Forest, The Summit (Jolly Falls and near Frey Rock), Stanthorpe (Carnell Raceway) and Girraween National Park in open forests and woodlands. |
| <i>Persoonia daphnoides</i> | | NT | | This geebung grows in woodland and forest near Tenterfield in New South Wales and nearby Stanthorpe in Queensland, at altitudes between 950 and 1,200 m (3,120 and 3,940 ft). Known from Girraween National Park. (Wikiwand 2023) |
| <i>Phebalium glandulosum</i> subsp. <i>eglandulosum</i> | | V | V | The species occurs on sandy soils in heath, rocky crevices and scree, amongst granite outcrops, at no particular altitude (Harden 1991; Steenbeeke 1998). Known from only a couple of locations in QLD NET (Amiens locality and a restricted population in Girraween National Park). |
| <i>Phebalium whitei</i> | | V | V | Rock outcrops along Bald Rock Creek, Girraween National Park. Also known from Lyra and Wyberba localities. |
| <i>Phlegmariurus varius</i> | | V | | Found in subalpine scrub and forest, on the ground or amongst rocks. (Plantnet 2023) |
| <i>Picris evae</i> | Hawkweed | V | V | Its main habitat is open eucalypt forest. The flowering and fruiting period is mainly October to January, with a few plants collected in flower or fruit until May. Threats include clearing of habitat for cropping and grazing; Habitat fragmentation; Invasion of habitat by introduced weeds; Accidental damage during road maintenance activities. (NSW OEH 2023) |

| Scientific Name | Common Name | NCA ¹ | EPBC ² | Comments |
|--|-------------|------------------|-------------------|---|
| <i>Pomaderris coomingalensis</i> | | E | | <i>Pomaderris coomingalensis</i> is recorded from <i>Eucalyptus decorticans</i> , and <i>Corymbia citriodora</i> subsp. <i>variegata</i> open forest on red soil; and <i>Eucalyptus crebra</i> / <i>Eucalyptus fibrosa</i> subsp. <i>nubila</i> woodland on stony brown clay loam (Walsh 1997; Queensland Herbarium 2012b). Threatening processes for this species include inappropriate fire regimes which results in the loss and/or removal of individual; weeds (mainly grassy weeds); and inappropriate grazing regimes. |
| <i>Prostanthera petraea</i> | | NT | | It grows on sheltered creek lines amongst granite boulders, in sclerophyll forest. It is a rare mint bush, growing on the Northern Tablelands of NSW, mostly close to the NSW-Queensland border; in an area east of Tenterfield, north-west to Jennings (Boonoo National Park), and towards Stanthorpe in Queensland. Known in Girraween National Park around Mt Norman. (APSNSW 2023) |
| <i>Pterostylis setifera</i> | | NT | | Found in only one general location in NET. |
| <i>Styphelia</i> sp. (Coolmunda D. Halford Q1635) | | E | E | Mainly found around Lake Coolmunda. |
| <i>Vincetoxicum forsteri</i> | | E | E | Grows in open forest, woodlands and dry scrub. <i>V. forsteri</i> associated with two main vegetation communities, open forest dominated by <i>Eucalyptus fibrosa</i> subsp. <i>nubilis</i> with <i>Eucalyptus sideroxylon</i> (RE 13.11.5) and open forest dominated by <i>Eucalyptus dealbata</i> with <i>Eucalyptus crebra</i> (RE 13.11.3). (Forster et al. 2004) |
| <i>Vincetoxicum woollsii</i> | | E | E | Girraween National Park. Cryptic species. |
| <i>Zieria graniticola</i> | | E | | Known from the northwest region of the Granite Belt. Recorded from Amiens locality including Passchendaele State Forest. Also known from Messines and Glen Aplin localities. |

¹CR = Critically endangered, E = endangered, V = vulnerable, NT = near threatened as per *Nature Conservation Act 1992*

²CE = critically endangered, E = endangered, V = vulnerable as per *Environment Protection and Biodiversity Conservation Act 1999*

2.1.2 Habitat for priority flora taxa (Criterion H)

Priority species (Criterion H) are non-CEVNT species that are still considered to be of particular conservation significance in the bioregion. The rationale for inclusion is based upon the eligibility criteria described in section 1.3.1. A total of 32 flora taxa were listed for Criterion H (Table 5). The number of species pertaining to each eligibility criteria is summarised in Table 4. Any taxa that were chosen that were at significant risk, or which were narrow endemics/range-restricted taxa (i.e. naturally susceptible), were assigned "Priority type A" taxa, while the remainder were assigned as "Priority type B" taxa.

For inclusion in the NET BPA, priority species records were first subject to filtering rules as described in the section 1.3.1 and subsequently, buffered by twice the precision (as for Criterion A) with a minimum of 300m, and a maximum of 1km. The decision rules for assigning Criterion H values ratings (Low to Very high) are summarised in Table 6.

Table 4. Number of priority flora taxa listed for each eligibility criterion.

| Eligibility value | Taxa count |
|--|------------|
| 1. Taxon at risk | 8 |
| 2. Taxon of scientific interest as relictual (ancient or primitive) | 0 |
| 3. Endemic taxon | 21 |
| 4. Range restricted taxon | 16 |
| 5. Taxon important for maintaining genetic diversity such as complex patterns of genetic variation | 0 |
| 6. Disjunct species populations | 6 |
| 7. Taxon functionally important to ecosystem integrity | 1 |
| 8. Taxon performing a role as an ecological indicator of ecosystem integrity | 0 |
| 9. Taxon vulnerable to impacts of climate change | 11 |

Table 5. NET - priority flora taxa (Criterion H)

| Scientific Name | Common Name | Significance | Eligibility value no. | Expert panel comments |
|---|---------------|--------------|-----------------------|---|
| <i>Acacia brunioides</i> subsp. <i>Granitica</i> | | B | 3 | Mainly concentrated in Girraween National Park in QLD NET. Endemic to broader (QLD and NSW) NET. Tends to occur at base of rocky areas in slightly deeper soil. |
| <i>Acacia latisejala</i> | | B | 3 | NET is the stronghold for this species. Endemic (majority population) occurs in bioregion. Generally found in higher country within crevices on rock pavements and granite boulders. Amiens, Girraween, Jolly's Falls. |
| <i>Acacia pruinosa</i> | frosty wattle | B | 3, 9 | Endemic to NET. Potentially susceptible to climate change. Has been recorded from Stanthorpe, Amiens, Glen Aplin, Ballandean and Girraween. |
| <i>Callitris monticola</i> | steelhead | B | 1, 4, 9 | Dependent upon fire regime. Burns tend to occur too frequently. Montane species. Delisted as more populations were located. Retain as at risk, restricted and possibly susceptible to climate change. |
| <i>Cassinia copensis</i> | | A | 3, 4, 6, 9 | Endemic to NET. Range restricted populations. Disjunct within bioregion. Northern range limit - may be susceptible to climate change. |
| <i>Cheiranthra borealis</i> | | B | 3 | A member of the Pittosporum family and has striking purple flowers. It is sub-shrub/tall forb and appears to be relatively short lived. It is a true QLD bioregional endemic and a bit unusual in that it is present in both granite and traprock country. Observed once in woodland on a lower slope just above a seasonally swampy area on granite (Peter young <i>pers. com.</i> 2023). Recorded at Amiens, Passchendaele, Pozieres, Glen Aplin and Girraween National Park. |
| <i>Cryptandra lanosiflora</i> | | A | 4, 9 | Somewhat restricted. Tends to be confined to high altitude, thus possibly susceptible to climate change. NET presence is northern limit. Limited representation in National Parks. |
| <i>Cyanothamnus inflexus</i> subsp. <i>grandiflorus</i> | | A | 3, 4, 9 | Very few records. Highly restricted, Endemic, and susceptible to climate change. |
| <i>Cyanothamnus inflexus</i> subsp. <i>inflexus</i> | | A | 3, 4 | More widespread than <i>inflexa</i> . Relatively restricted, but found at Amiens, Girraween National Park and Scotney Nature Reserve at Ballandean. Endemic. A PhD study on genus and subspecies is being undertaken by a member of the Stanthorpe Rare Wildflower Consortium. |
| <i>Cyanothamnus inflexus</i> subsp. <i>montiazurus</i> | | A | 1, 3, 4, 9 | Very few records, restricted distribution. At risk. Endemic. Potentially susceptible to climate change. One known location at Dalcouth. |

| Scientific Name | Common Name | Significance | Eligibility value no. | Expert panel comments |
|---|------------------------|--------------|-----------------------|---|
| <i>Diuris tricolor</i> | | B | 1 | Widespread. Occurs outside NET, but records are adjacent to NET boundary. Delisted from Vulnerable status in QLD. Considered Vulnerable in NSW (suggested stronghold) and Critically endangered in Victoria. |
| <i>Epacris breviflora</i> | drumstick heath | B | 6, 9 | This is predominantly an alpine species. The NET population is disjunct at the northern limit of the species range. |
| <i>Eucalyptus camphora</i> subsp. <i>camphora</i> | mountain swamp gum | A | 4, 6 | Broad geographic distribution (not endemic), but disjunct. Disjunct populations are restricted. Only one location in NET QLD - Racecourse swamp. |
| <i>Eucalyptus nova-anglica</i> | New England peppermint | A | 1, 3 | Under threat from New England dieback. Endemic to the bioregion. Also affected by changes to hydrology. |
| <i>Eucalyptus pauciflora</i> subsp. <i>pauciflora</i> | snow gum | A | 1, 9 | Norther range limit, potential retreat with climate change. Main population is near Wilsons dam. The species is also susceptible to New England dieback. |
| <i>Eucalyptus prava</i> | | B | 3, 7 | NET is at the northern limit for the species. Reasonably common. Important habitat tree. Endemic to NET. Dominant eucalypt on granite above 800-900m ASL. Dominant taxa - indicative of ecosystem integrity. |
| <i>Eucalyptus terrica</i> | | B | 4 | Restricted range, but not endemic to NET. Occurs on hard country (Greenup, Coolmunda dam). |
| <i>Hibbertia tenuifolia</i> | | A | 3, 4 | Restricted distribution. There are only a few records (however, possibly a reflection of sampling effort). Endemic to NET. Grows close to tracks in Girraween. |
| <i>Hovea pedunculata</i> | | B | 3 | Endemic to NET, northern range limit. No recent records in Southern QLD. |
| <i>Leionema rotundifolium</i> | | B | 3 | Endemic to bioregion. Common. Harvested, but not under substantial threat. |
| <i>Leptospermum gregarium</i> | | B | 1, 3 | Swamp species. Endemic to NET, but most occurrences are in NSW portion. Northern limit of range in QLD NET. Fire tolerant. Outside of reserves - possible impacted in some areas where water draw down occurs; potentially impacted by pigs; and combination of events such as fire, drought. |
| <i>Melicytus dentatus</i> | | B | 1 | Northern range limit. Occurs at the fringe with dry rainforest taxa. Known from Sundown National Park, Somme area along the Severn River and the western side of Barrington Tops in NSW in similar conditions. Under some pressure from fire. |

| Scientific Name | Common Name | Significance | Eligibility value no. | Expert panel comments |
|---|--------------------------|--------------|-----------------------|--|
| <i>Olearia glandulosa</i> | | A | 4, 6, 9 | Major disjunct. Range restricted sub-populations. Possibly susceptible to climate change. |
| <i>Philotheca epilosa</i> | | B | 3, 4 | Endemic to NET. Relatively range restricted. |
| <i>Pomaderris graniticola</i> | | A | 3, 4 | NET Endemic - majority of records are in NET and range restricted. Distribution centred on NET. Northern records outside of NET are also likely incorrect. Often amongst boulders which provide protection. |
| <i>Prostanthera rupicola</i> | Victorian christmas bush | A | 3, 4 | Previously known as <i>Prostanthera lasianthos</i> . Separates Victorian distribution. Only on Bald Mountain in SEQ, South Bald Rock and Eukey in NET. Only grows on granite. Narrow endemic. |
| <i>Pultenaea hartmannii</i> | | B | 3 | Endemic. Common around Girraween National Park. The panel considered the taxa to be border-line at risk. Fire sensitive. |
| <i>Ricinocarpos linearifolius</i> | | B | 4, 6 | Disjunct. Restricted populations in NET at southern range. Majority of the population is located to the north. |
| <i>Tasmannia stipitata</i> | | A | 1, 3, 9 | Northern range limit. Possibly endemic. Majority of occurrences in NET (mostly NSW portion). Susceptible to climate change. Occurs mainly at relatively high altitude. Susceptible to moisture change. Traditional owner food source. |
| <i>Veronica arenaria</i> | | A | 3, 4 | Located at Horans Gorge, Doctors Creek, near the bottom of Scotney Nature Refuge where it borders Girraween. Majority of records (>75 per cent) in NET. Short - lived perennial. Patchily distributed. Occurs south to Newcastle. Population relatively small - localised occurrences. |
| <i>Zieria arborescens</i> subsp. <i>arborescens</i> | | B | 6 | Close to northern range limit. Disjunct populations in NET. |
| <i>Zieria arborescens</i> subsp. <i>glabrifolia</i> | | A | 3, 4, 9 | Endemic to NET. Restricted localised occurrences. Usually found at relatively high altitude. Potentially susceptible to climate change. |

Table 6. Priority taxa value rating rules

| Low | Medium | High | Very high |
|--|--|---|---|
| <p>The remnant has no confirmed records/models or otherwise defined areas of habitat for priority taxa</p> | <p>The area within the remnant unit has a precise record (precision <= 500m), or core habitat for ONE "Priority type A" taxon</p> <p>OR</p> <p>The area within the remnant unit has precise records (precision <= 500m) or core habitat for only ONE or TWO "Priority type B" taxa</p> <p>OR</p> <p>The area within the remnant unit has imprecise records or non-core habitat for "Priority type A or B" taxa</p> | <p>The area within the remnant unit has precise records (precision <= 500m), or core habitat for TWO "Priority type A" taxa</p> <p>OR</p> <p>The area within the remnant unit has precise records (precision <= 500m), or core habitat for THREE "Priority type B" taxa</p> <p>OR</p> <p>The area within the remnant unit has precise records (precision <= 500m), or core habitat for ONE "Priority type A" taxa AND TWO "Priority type B" taxa</p> | <p>The area within the remnant unit has precise records (precision <= 500m), or core habitat for a minimum of THREE "Priority type A" taxa</p> <p>OR</p> <p>The area within the remnant unit has precise records (precision <= 500m), or core habitat for a minimum of FOUR "Priority type B" taxa</p> <p>OR</p> <p>The area within the remnant unit has precise records (precision <= 500m), or core habitat for TWO "Priority type A" AND TWO OR THREE "Priority type B" priority taxa</p> |

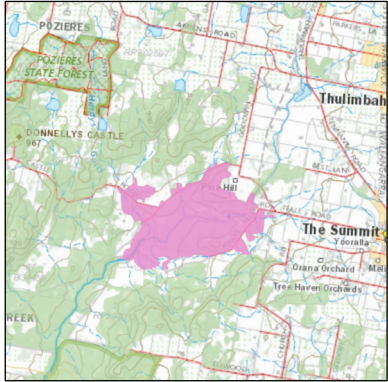
2.1.3 Special flora area decisions (Criterion I)

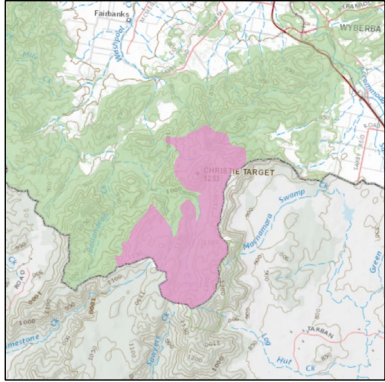
The panel was asked to identify areas with special flora biodiversity values within the NET under the BAMM supplementary Criterion I. Areas with special biodiversity value are important because they can contain multiple taxa in unique ecological and often highly biodiverse environments. Values can include centres of endemism, wildlife refugia, disjunct populations, geographic limits of species distributions, high species richness and relictual populations. The full rationale for inclusion is based on eligibility criteria described in section 1.3.2.



Using expert knowledge and available information (records, maps, GIS derived datasets), panel members discussed nine areas and described their values. Of these areas, seven were implemented as flora decisions. A number of decisions were consolidated with fauna or other values to become landscape decisions. The special areas proposed by the flora panel are detailed in Table 7. A range of species are listed for most decisions including CEVNT and endemics.

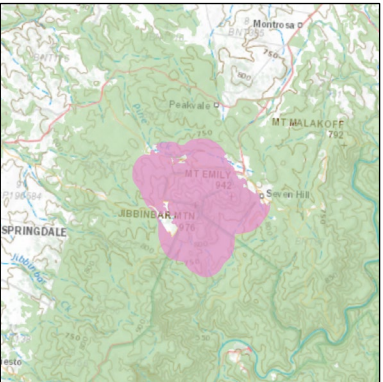
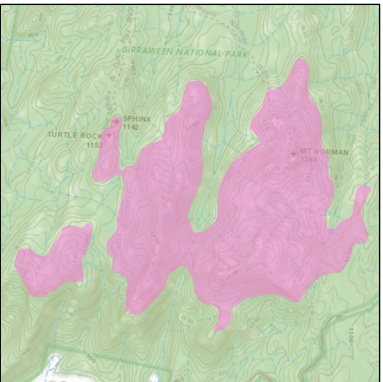
Table 7. Areas of special flora biodiversity value (Criterion I)


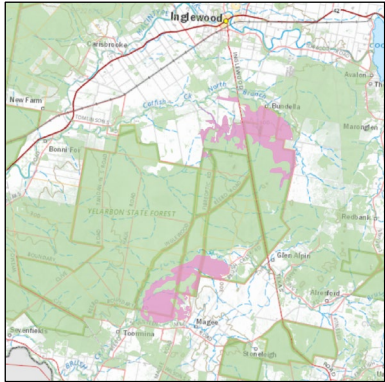
For more information on the criteria values, see section 1.3.2.


| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|---|
| net_fl_01 | Jolly's Falls  | State | <p>A large, vegetated tract that exhibits both western and eastern regional taxa influences. Identified by the panel as being of both high floristic diversity and housing a number of conservation significant taxa at or near their northern range limit.</p> <p>Threatened bioregional endemic taxa recorded include both <i>Boronia repanda</i> and <i>Boronia granitica</i>*, <i>Grevillea scortechinii</i> subsp. <i>scortechinii</i>, <i>Melaleuca williamsii</i> subsp. <i>fletcheri</i>, <i>Mirbelia confertiflora</i> and <i>Zieria graniticola</i>, whilst the threatened non-endemic taxa <i>Dodonaea hirsuta</i> is also present. The endemic priority taxon <i>Acacia latisejala</i> has also been recorded.</p> <p>* There was some uncertainty at the expert panel as to whether <i>Boronia repanda</i> was misidentified – later confirmation that a photo of <i>Boronia granitica</i> was taken on site in Oct 2012 (Stanthorpe Rare Wildflower Consortium <i>pers. com.</i> 2024).</p> | <p>la (endemic richness): High</p> <p>lc (disjunct populations): High</p> <p>ld (geographic range limits): Very high</p> <p>le (species richness): High</p> |
| 02 | Girraween National Park and surrounding private lands | | Implemented as landscape decision "net_l_13" in Version 3.1. | |
| 03 | Mt Bullaganang | | Implemented as flora decision "net_fl_18" in Version 3.1. | |
| 04 | Reserve 206 Parish of Warroo | | Implemented as flora decision "net_fl_18" in Version 3.1. | |
| 05 | Greenup State Forest (State Forest 120) | | Implemented as landscape decision "net_l_11" in Version 3.1. | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|--|---|
| 06 | Cherry Gully | | <i>Previously not implemented. Values in part captured in landscape decisions “net_l_21” and “net_l_22” in Version 3.1.</i> | |
| net_fl_07 | Mount Christie Target, Roberts Range  | State | <p>A topographic isolate situated between Sundown and Girraween National Parks (named Mount Christie Target as it had a bombing target painted during World War 2). Areas of traprock are present (few of which occur within the region), as well as an area of alluvial substrate at high elevation.</p> <p>Due to the elevation (approximately 1,300 m in parts) and high moisture from south easterly weather patterns, isolated disjunct populations of <i>Eucalyptus nobilis</i>, <i>Eucalyptus laevopinea</i>, <i>Eucalyptus radiata</i> and <i>Eucalyptus quadrangulata</i> (White-topped box) are present, as well as other high-altitude species.</p> <p>New England Tableland endemic heath species occur including <i>Bertya</i> sp. (Amiens L.Pedley 1488.), <i>Westringia amabilis</i>, <i>Acacia pubifolia</i> and <i>Rulingia hermannifolia</i>. Other threatened species include <i>Eucalyptus scoparia</i> (Wallangarra white gum), <i>Eucalyptus scoparia</i>, <i>Eucalyptus radiata</i> subsp. <i>sejuncta</i> and <i>Melaleuca williamsii</i> subsp. <i>Fletcheri</i>.</p> | la (endemic richness): High lb (wildlife refugium): Very high lc (disjunct populations): High lg (ecosystem variation): High |
| 08 | Jibbinbar Mountain | | <i>Implemented as flora decision “net_fl_20” in Version 3.1.</i> | |
| 09 | Red Rock Gorge | | <i>Implemented as landscape decision “net_l_23” in Version 3.1.</i> | |
| 10 | Durikai State Forest | | <i>Implemented as landscape decision “net_l_10” in Version 3.1.</i> | |
| 11 | Stalling Lane / Emu Swamp / Murphy’s Creek Road | | <i>Implemented as landscape decisions “net_l_15” and “net_l_16” in Version 3.1.</i> | |
| 12 | Limberlost Road | | <i>Values incorporated in landscape decision “net_l_13” in Version 3.1.</i> | |
| 13 | Mt Ferguson - Amiens area | | <i>Implemented as flora decision “net_fl_19” in Version 3.1.</i> | |
| 14 | Northeast Sundown National Park | | <i>Not implemented in Version 3.1 – decision related to a single species, Eucalyptus laevopinea. Values captured under Criterion H.</i> | |
| 15 | Ooline communities | | <i>Not implemented in Version 3.1 – decision related to a single species, Cadellia pentastylis. Values captured in decision net_l_14 and Criterion A.</i> | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|--|
| 16 | Watson's Crossing to Pinnacle limestone vine thicket | | <i>Not implemented as more accurate mapping of areas with identified values (rainforest overlaying vine thicket) is required. Nb. Vine thicket within the proximity of the "Pinnacle" is captured in landscape decision net_I_23.</i> | |
| 17 | NET Wetlands | | <i>Refer to individual wetland decisions (net_fa_01, net_fa_14, net_I_24, and net_I_25).</i> | |
| net_fl_18 | Mt Bullaganang and surrounds  | State | <p>Granite mountain isolates, such as Mount Bullaganang, serve as topographic refuges which house disjunct populations of flora that occur only/largely at high altitude, resulting in unique variations in regional ecosystem species composition.</p> <p>The area depicted, also incorporates vegetation on the surrounding traprock and captures two (a northern and smaller southern) geological intergrades that link Mount Bullaganang granite, through traprock to alluvia along Bracker Creek.</p> <p>Flora surveys undertaken in a reserve at the northern extent of the site on traprock, recorded high eucalypt diversity. <i>Eucalyptus conica</i> (Fuzzy box) communities (13.3.4), poorly conserved and under clearing pressure, are present within the reserve and along the riparian area. A disjunct population of <i>Astrotricha roddii</i>, unknown to occur elsewhere in the New England Tableland, is also present on the traprock adjoining Mount Bullaganang.</p> <p>Significant clearing occurred post World War II and the surrounding landscape heavily fragmented. Whilst grazing activities pose a potential threat to flora values, the area depicted provides an isolated refugia.</p> <p>Nb. This decision in part replaces "net_I_01" in the previous New England Tableland Biodiversity Planning Assessment version 2.1.</p> | Ib (wildlife refugia): Very high Ic (disjunct populations): Very high Id (geographic range limits): Very high Ie (species richness): High Ig (ecosystem variation): Very high |
| net_fl_19 | Mt Ferguson and Mt Brown (previously called Mount Amiens)  | State | <p>Granite mountain isolates such as Mount Ferguson and Brown, serve as topographic isolates which house disjunct populations of flora that occur only/largely at high altitude, resulting in unique variations in regional ecosystem species composition.</p> <p>The area depicted captures the northern portion of a large tract which encompasses both Mount Ferguson and Mount Brown (as well as a few smaller adjoining tracts/patches at higher elevation). Threatened/near-threatened flora recoded within/adjoining the area depicted include <i>Bertya recurvata</i>, <i>Boronia granitica</i> (Granite boronia), <i>Eucalyptus scoparia</i> (Wallangarra white gum), <i>Allocasuarina rupicola</i> (Shrubby she-oak), <i>Hibbertia elata</i> (Guinea flower), <i>Dodonaea hirsuta</i> and <i>Macrozamia viridis</i>.</p> <p>Nb. This decision in part replaces "net_I_01" in the previous New England Tableland Biodiversity Planning Assessment version 2.1. Refer also to the decision "net_I_15" which provides a summary of values associated with the Passchendaele State Forest tracts and surrounds.</p> | Ib (wildlife refugia): Very high Ic (disjunct populations): Very high Id (geographic range limits): Very high Ig (ecosystem variation): Very high |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|--|---|
| net_fl_20 | <p>Mt Jibbinbar</p>  | State | <p>The feature depicture, captures Mount Jibbinbar, a granite outcrop surrounded by traprock. Granite mountain isolates such as Mount Jibbinbar, serve as topographic isolates which house disjunct populations of flora that occur only/largely at high altitude, and result in unique variations in regional ecosystem species composition.</p> <p>Threatened/near-threatened flora recoded within/adjoining the area include <i>Bertya recurvata</i>, <i>Homoranthus montanus</i> (known only from two locations - Mount Jibbinbar and an area approximately 18 km WNW) and <i>Macrozamia occidua</i>.</p> <p>Nb. This decision in part replaces “net_I_01” in the previous New England Tableland Biodiversity Planning Assessment version 2.1.</p> | <p>Ib (wildlife refugia): Very high</p> <p>Ic (disjunct populations): Very high</p> <p>Id (geographic range limits): Very high</p> <p>Ig (ecosystem variation): Very high</p> |
| net_fl_21 | <p>Mt Norman</p>  | State | <p>Granite mountain isolates such as Mount Norman, serve as topographic isolates which house disjunct populations of flora that occur only/largely at high altitude, resulting in unique variations in regional ecosystem species composition.</p> <p>Located in Girraween National Park, at 1,267 m, Mount Norman it is the highest peak within the Protected area. The area hosts the mallee <i>Eucalyptus codonocarpa</i> (Mallee ash), as well as the largest population of <i>Eucalyptus scoparia</i> (Wallangarra white gum) in QLD (classed as near threatened and vulnerable respectively at the time of writing). Other threatened/near-threatened flora recoded within/adjoining the area include <i>Allocasuarina rupicola</i> (shrubby she-oak), <i>Bertya glandulosa</i>, <i>Boronia amabilis</i>, <i>Conospermum burgessiorum</i>, <i>Dodanea hirsute</i>, <i>Hibbertia elata</i> (guinea flower), <i>Homoranthus papillatus</i> (mouse bush), <i>Leionema ambiens</i>, <i>Melaleuca flavovirens</i> and <i>Prostanthera petraea</i>.</p> <p>Nb. This decision in part replaces “net_I_01” in the previous New England Tableland Biodiversity Planning Assessment version 2.1.</p> | <p>Ib (wildlife refugia): Very high</p> <p>Ic (disjunct populations): Very high</p> <p>Id (geographic range limits): Very high</p> <p>Ig (ecosystem variation): Very high</p> |
| 22 | Bushland next to Stanthorpe Aerodrome | | <i>Raised at the panel, however not implemented. Grevillea scortechinii</i> subsp. <i>scortechinii</i> (black grevillea) has been recorded from the area, along with a population of <i>Boronia repanda</i> (~1000 plants). Area captured under Criterion A. | |
| 23 | Bents Rd/Fletcher Rd Somme, near Ballandean | | <i>Not implemented – values related to Acacia pubifolia and Melaleuca williamsii. Locations captured under Criterion A.</i> | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|---|---|--------------|---|---|
| Adjoining Bioregions – Flora Expert Panel Decisions | | | | |
| brbs_fl_13 | <p>Poplar box <i>Eucalyptus populnea</i> open woodland on alluvium, Eastern Darling Downs</p>  | State | <p>Within the Eastern Darling Downs subregion, the regional ecosystem “<i>Eucalyptus populnea</i> woodland on alluvial plains” (11.3.2) exhibits a distinct variation in terms of structure and presents a more open woodland community when compared to other examples of this ecosystem. Due to clearing, less than 10 per cent of the preclear extent of this regional ecosystem remains within the subregion.</p> <p>This ecosystem provides habitat for threatened or rare plant taxa including <i>Homopholis belsonii</i>, <i>Picris evae</i>, and <i>Digitaria porrecta</i>, as well as other priority taxa. Endemics present within the area include <i>Acacia loroloba</i>, <i>Kardomia jucunda</i>, <i>Melaleuca quercina</i> and <i>Rutidosia lanata</i>, whilst species such as <i>Acacia aneura</i> var. <i>major</i>, <i>Acacia aprepta</i>, <i>Homoranthus melanostictus</i> and <i>Jacksonia rhadinoclona</i> occur at or close to their known limit of range. In addition to the flora values, some areas of <i>Eucalyptus populnea</i> may also provide important faunal habitat through fostering high densities of hollows in a heavily modified landscape. (DES 2018)</p> | <p>la (endemic richness): High</p> <p>lb (refugia): Very high</p> <p>ld (range limits): High</p> <p>Ig (ecosystem variation): High</p> |
| brbs_fl_15 | <p>Yelarbon State Forest sandstone remnants</p>  | Regional | <p>The area is characterised by cypress through to eucalypt woodlands/shrubby woodlands situated on sandstone (Landzone 5) near the boundary of the Brigalow Belt bioregion and the Nandewar subregion within the New England Tableland bioregion. As a result, values incorporate a mix of the two bioregions floral characteristics.</p> <p>The area is considered to be species rich with approximately 200 taxa identified within a 10,000 ha sample area. Species present include the narrow endemic <i>Acacia argyrotricha</i>, <i>Eucalyptus terrica</i> (a narrow endemic), a disjunct example of <i>Eucalyptus taurina</i>, the Plunkett mallee <i>Eucalyptus curtisii</i>, the vulnerable cycad <i>Macrozamia machinii</i>, the narrowly distributed species <i>Westringia parvifolia</i> and <i>Leucopogon</i> sp. (Coolmunda D. Halford Q1635). In addition, a distinct subunit (11.5.14a) of the parent regional ecosystem 11.5.14 is also present for which the characteristic groundcover species is <i>Triodia vella</i> (Brigalow belt endemic). (DES 2018)</p> <p><i>Nb. New England Tableland expert panel noted the area was severely burnt by a bushfire in early January 2024 - impact unknown.</i></p> | <p>la (endemic richness): High</p> <p>Ic (disjunct populations): High</p> <p>le (species richness): Very high</p> <p>Ig (ecosystem variation): High</p> |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|---|
| brbs_fl_37 | <p>Devine State Forest Tract</p>  | Regional | <p>Bordering the New England tableland, temperate eucalypt woodlands occupy the majority of the State Forest, tending to drier communities at its eastern margins.</p> <p>Approximately 140 species of flora are considered to occur within the State Forest, with the eastern most portion considered to be of high flora diversity. Several threatened taxa have been recorded including <i>Eucalyptus curtisii</i>, <i>Bertya opponens</i>, <i>Pomaderris coomingalensis</i> and <i>Daviesia quoquoversus</i>. Broadleaf and Mugga ironbark communities at the eastern extent also exhibit high densities of hollows important for fauna. (DES 2018)</p> | <p>le (species richness): High</p> <p>li (hollow density): High</p> |

2.2 Fauna taxa (Criteria A, H and I)

Criteria A and H attribute significance to areas based on the presence of CEVNT taxa scheduled under the NCA or the EPBC, or the presence of priority species. The NET fauna expert panels identified some 36 taxa for inclusion under Criteria A and 21 taxa for criterion H. Table 8 summarises the number of taxa by status categories. The standard BAMB record filtering rules were applied (EHP 2014). In addition, a number of other taxa were considered, however, were noted/excluded from the CEVNT/priority lists as they did not meet the eligibility criteria (refer to Appendix 3. Candidate flora and fauna taxa considered but not implemented as NET threatened/priority species).

Table 8. Summary of fauna taxa considered by the expert panel for Criteria A and H

| | Critically endangered/Endangered | Vulnerable | Near Threatened | Priority (non-EVNT) taxa | Total |
|-----------------------|----------------------------------|------------|-----------------|--------------------------|-------|
| Number of taxa listed | 14 | 21 | 1 | 21 | 57 |

2.2.1 Habitat for critically endangered, endangered, vulnerable and near-threatened fauna (Criterion A)

The panel identified and selectively reviewed species records to define a list of 36 NET EVNT fauna taxa (Table 9). A number of threatened taxa were excluded from the table below either because there were no (or too few) reliable records in the NET or, based upon expert opinion, the taxa was considered not to occur in the bioregion (refer to Appendix 3). For inclusion in the NET BPA the records were first subject to vetting rules as described in section 1.3.1 and subsequently buffered by twice the precision with a minimum of 300m, and a maximum of 4km. Only a single core habitat suitability model was available for use in place of records (*Petrogale penicillata*).

Table 9. NET – Critically endangered, endangered, vulnerable and near threatened fauna taxa (Criterion A)

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|------------------------------|--------------------------|------------------|-------------------|-----------------------|---|
| Invertebrates | | | | | |
| Insects | | | | | |
| <i>Hypochrysops piceatus</i> | bulloak jewel | CR | CE | L | This species has a tight ecological relationship with <i>Allocasuarina luehmannii</i> (bulloak), mistletoe species, and an ant host <i>Anonychomyrma inclinata</i> that protects the juvenile stages in a symbiotic relationship. Unless all three are present the species cannot persist, though there are also sites where all habitat factors are present, but the butterfly is not. They are now only known from the Leyburn area on the northern boundary of the NET and nowhere else, with no recent records from Bendidee State Forest, the only other known site for the species. |
| <i>Jalmenus eubulus</i> | pale imperial hairstreak | V | | L | This subspecies has been split from <i>Jalmenus evagoras</i> and is now elevated to full species as <i>Jalmenus eubulus</i> (pale imperial hairstreak). It requires <i>Acacia harpophylla</i> (brigalow) with <i>Iridomyrmex</i> sp. ants for breeding, though <i>Acacia melvillei</i> has been suggested as another possible host in a previous panel. It historically occurred all throughout the NET, wherever brigalow habitat was found. There are known localities in Texas and Leyburn, however all potential habitat in the Texas area has been cleared, and the Leyburn population has substantially declined (Don Sands, <i>pers. com.</i> 2023). |

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|------------------------------|----------------------|------------------|-------------------|-----------------------|--|
| Vertebrates | | | | | |
| Fish | | | | | |
| <i>Bidyanus bidyanus</i> | silver perch | | CE | L | This species has been uplisted from vulnerable to critically endangered since the previous NET report. The species was historically translocated to the region, but recent surveys failed to find them in the Severn River and tributaries. The species is stocked in the Condamine River, and Leslie, Coolmunda, Storm King, and Glen Lyon Dams within the region. It is unclear whether the local population is naturally persisting or being maintained by ongoing stocking. |
| <i>Maccullochella peelii</i> | Murray cod | | V | L | The NET represents the top end of this species' range which extends throughout the Murray-Darling Basin. The species has been re-introduced to upper reaches of the Severn River upstream from Sundown. The species is stocked in the Condamine River, and Leslie, Coolmunda, Storm King, and Glen Lyon Dams within the region. |
| Frogs | | | | | |
| <i>Adelotus brevis</i> | tusked frog | V | | L | This species was previously known from Girraween but is now likely extirpated from the whole of the NET. No records could be found for the region since the time of the last assessment (2006), and the panel were not aware of any recent sightings. |
| <i>Litoria pearsoniana</i> | cascade treefrog | V | | L | This species is an otherwise montane rainforest stream frog, however there was previously a disjunct population in Girraween. It is now likely extirpated from the whole of the NET, with no sightings for 50 years. The panel weren't aware of any recent sightings. |
| <i>Litoria subglandulosa</i> | New England treefrog | V | V | L | In Queensland this species prefers montane streams in intact remnant. Its habitat becomes more mesic further south into New South Wales. This species is still present in NET only in Girraween National Park but is now restricted to the area near South Bald Rock. |
| Birds | | | | | |
| <i>Anthochaera phrygia</i> | regent honeyeater | CR | CE | H1 | This species has been uplisted from Vulnerable to Critically endangered since the previous NET report. The species historically bred in the Gore area; however, this population seems to have collapsed due to habitat loss in the core breeding area. Requires large tracts of box ironbark grassy woodland, particularly <i>Eucalyptus melliodora</i> (yellow box), <i>Angophora floribunda</i> (rough-barked apple), <i>Eucalyptus sideroxylon</i> (mugga ironbark) and <i>Eucalyptus albens</i> (white box). |

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|--|---------------------------------------|------------------|-------------------|-----------------------|--|
| <i>Aphelocephala leucopsis</i> | southern whiteface | V | V | L | The NET population of this species is the easternmost extent of their occurrence. In the NET the species prefers heavily modified habitat, which is often overgrazed. Still recorded in both granite and traprock country, often in drier years when inland species move coastally. |
| <i>Botaurus poiciloptilus</i> | Australasian bittern | E | E | H1 | This species is a poorly known irregular visitor to southern Queensland, preferring flooded grasslands and wetlands with extensive reed or sedge coverage. Only one record for the region, despite good habitat being present. |
| <i>Calyptorhynchus lathami lathami</i> | glossy black-cockatoo (eastern) | V | V | H2 | This species feeds exclusively on <i>Casuarina</i> and <i>Allocasuarina</i> . In the NET they primarily use <i>Allocasuarina inophloia</i> (thready barked oak) in the west and <i>A. torulosa</i> in the east, though they may use other species depending on food availability. Girraween National Park is an important refuge area for these birds. Passchendaele State Forest also provides important habitat. In the northern part of Girraween, the species has regularly been observed feeding on <i>Allocasuarina littoralis</i> . The species requires large hollows for breeding. |
| <i>Climacteris picumnus victoriae</i> | brown tree creeper (south-eastern) | V | V | L | This subspecies has been added to the threatened species list as Vulnerable since the previous NET report. They require open grassy woodland with grass cover and coarse woody debris and tend to drop out of highly fragmented landscapes. They occur primarily in the traprock (Nandewar) in Sundown and Durikai, but there is a population around the fringes of Girraween in the Granite Belt. The subspecies description notes habitat for <i>victoriae</i> as "inland slopes of the Great Dividing Range", so while the Girraween birds are certainly included, the Sundown/Durikai birds may be subspecies <i>picumnus</i> , though where this boundary lies, or the presence of an intergrade zone is not clear from literature. |
| <i>Erythrotriorchis radiatus</i> | red goshawk | E | E | H2 | This highly mobile species has not been recorded from the NET for decades. Previous records were of individuals passing through rather than nesting or feeding. Records noted in the previous report include one from "Dalmoak" NSW opposite The Summit, and the Maryland region in NSW near Cherrabah. |
| <i>Geophaps scripta scripta</i> | squatter pigeon (southern subspecies) | V | V | L | In the NET this species prefers yellow box woodland in traprock country. Populations are known from the Gore, Karara and Inglewood areas and the panel notes this species appears to be increasing in the region after a historic period of declines. The species declines have been attributed to overgrazing during drought followed by clearing. |
| <i>Grantiella picta</i> | painted honeyeater | V | V | H1 | This is a highly nomadic species which is reliant on mistletoe for feeding. The species has been sporadically recorded in the NET in both traprock and granite areas, and generally appears in the area in late spring through summer. |

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|--|--|------------------|-------------------|-----------------------|--|
| <i>Lathamus discolor</i> | swift parrot | E | CE | H1 | This species is migratory between Tasmania and the mainland, ranging up to Queensland in winter most years. On the mainland they follow flowering events, but generally prefers yellow box-white box-ironbark grassy woodland. They are regularly recorded in the Durikai area and have also been recorded near Girraween. |
| <i>Melanodryas cucullata cucullata</i> | hooded robin (south-eastern) | E | E | L | This subspecies has been added to the threatened species list as Endangered since the last NET report. They require open grassy woodland with grass cover and coarse woody debris. Based on available literature the entirety of the NET population is likely to be <i>Melanodryas cucullata cucullata</i> (Schodde and Mason 1999). The species occurs in Durikai, Sundown, and on the fringes of Girraween. |
| <i>Ninox strenua</i> | powerful owl | V | | H1 | Within NET, the species prefers gorges with large trees and water, however, has also been recorded from other areas inclusive of undulating eucalypt woodland. They prefer to feed on arboreal mammals but have been known to take a variety of other prey. The species is highly mobile but territorial, and unlikely to occur outside of their large home range. There are recent records from the Stanthorpe area including Glen Aplin, Ballandean and Fletchers Road occurring in open eucalypt woodlands near the Severn River. A pair is known to occupy the Horans Gorge section of Girraween National Park. Has also been regularly seen or heard at properties along Eukey Road adjoining Horans Gorge. |
| <i>Poephila cincta cincta</i> | black-throated finch (white-rumped subspecies) | E | E | L | This subspecies has disappeared from the southern 80 per cent of its former range and is now not known south of Townsville. They have not been recorded in the NET since 1992, despite intensive searching and potentially viable habitat remaining in the region. |
| <i>Polytelis swainsonii</i> | superb parrot | | V | H2 | This species has been recorded in the Durikai State Forest area of the NET, which represents the northernmost records for the species. There are only a handful of records and limited evidence that the NET represents viable habitat for the species rather than vagrant birds, however, the species has been retained on this list for completeness. |
| <i>Rostratula australis</i> | Australian painted-snipe | E | E | H1 | A nomadic species that prefers moist meadows, freestanding water, mud, farm dams and shallow swamps. It was listed as <i>Rostratula benghalensis</i> but has been split to <i>Rostratula australis</i> , a species endemic to Australia, and has been listed as Endangered. Despite the species being highly mobile, sightings are unlikely to occur outside of habitat, so all records are included in habitat determination. |

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|-------------------------------------|--|------------------|-------------------|-----------------------|--|
| <i>Stagonopleura guttata</i> | diamond firetail | V | V | L | This species has recently been listed as Vulnerable. Their habitat is open grassy woodland with intact groundcover and coarse woody debris. They are widespread through the NET, which represents a QLD stronghold for the species. They are known from Sundown, the fringes around Girraween, and Durikai. The species has historically been vulnerable to poaching and appear to be impacted by habitat loss and fragmentation as well as loss of habitat condition from overgrazing. |
| <i>Stipiturus malachurus</i> | southern emu-wren | V | | L | This disjunct population of an otherwise coastal heathland species was well known until extensive fires in 2003 substantially impacted the population. There have been only a handful of records since then, in 2004, 2006 and a possible record in 2008 (heard-only, Girraween National Park on Paling Yard Creek - Darren Fielder <i>pers. com.</i> 2024). The panel weren't aware of any recent records, and it is possible the species no longer occurs in the NET. |
| Mammals | | | | | |
| <i>Chalinolobus dwyeri</i> | large-eared pied bat | E | E | L | This species has been recently recorded from the NET in the Emu Swamp area, confirming the belief of previous panels that the species would occur in the area. The species forages in open woodland and roosts in caves, rock overhangs, mine tunnels and even in <i>Petrochelidon ariel</i> (fairy martin) nests. |
| <i>Dasyurus maculatus maculatus</i> | spotted-tailed quoll (southern subspecies) | E | E | H1 | This species has greatly declined across its mainland range, and the Granite Belt in the NET represents one of the last strongholds for the species. Granite landscapes with high frequency of boulders and rock crevices appear to provide important denning habitat as well as adequate shelter from predators that are believed to be responsible for the species' decline in other areas. The absence of cane toads in NET also likely to contribute to healthy population numbers in remaining strongholds. This species is a keystone mesopredator species and one of the largest native carnivores on the mainland. |
| <i>Nyctophilus corbeni</i> | eastern long-eared bat | V | V | L | The <i>Nyctophilus timoriensis</i> species complex has been split since the previous NET report, including one taxon becoming <i>N. corbeni</i> , and being listed as Vulnerable. They occur primarily in box/ironbark/Callitris pine woodland, though can also be found sparsely in bull oak, box, and brigalow/belah communities. They roost under bark and in tree crevices. These habitats are found throughout the NET. |
| <i>Petauroides volans volans</i> | southern greater glider | E | E | L | This species uses wet and dry sclerophyll woodland where hollows of sufficient size to support roosting occur. The taxonomy of this group is still unresolved, with the local species currently being known as <i>Petauroides volans volans</i> . |

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|-------------------------------------|---|------------------|-------------------|-----------------------|--|
| <i>Petaurus australis australis</i> | yellow-bellied glider (southern subspecies) | V | V | L | This subspecies has been elevated to Vulnerable since the last NET report. It uses wet sclerophyll forest where hollows of sufficient size to support roosting occur. They feed on the sap of a variety of Eucalyptus species. The species is at the western extent of its range in the NET and has been found in Ruby Creek (east of Stanthorpe), Girraween (between Middle and West Bald Rocks - although no records from recent acoustic surveys in this area in 2023 - severely impacted by 2019 bushfire), and Whetstone State Forest just outside of the NET. They are likely under surveyed in the region and additional sighting records are encouraged to be reported to WildNet. |
| <i>Petrogale penicillata</i> | brush-tailed rock-wallaby | V | V | L | This species was probably historically widespread throughout the region. There is a refugial population in the northern section of Sundown National Park, and recent aerial surveys have rediscovered them in Girraween National Park (confirmed via camera trapping by the Quoll Society of Australia which used the aerial survey data to site cameras). |
| <i>Phascolarctos cinereus</i> | koala | E | E | L | The species is still relatively common in the NET, however at lower densities comparative to coastal regions. They are found in woodland and forest and use a very broad range of <i>Eucalyptus</i> species as food. They are widespread across the traprock and granite belt and may be recovering in numbers after historic trapping for the fur trade in the area. |
| <i>Potorous tridactylus</i> | Long-nosed potoroo | V | V | L | Recently recorded in Girraween National Park for the first time near West Bald Rock. Further assessment of this population required. |
| <i>Pteropus poliocephalus</i> | grey-headed flying-fox | | V | H2 | This species was historically heavily persecuted in the NET. There are now several camps that have returned to the area, on Quartpot Creek in Stanthorpe, Passchendaele State Forest, and Durikai State Forest. The species typically visits the region from October to April. |
| <i>Vombatus ursinus</i> | common wombat | NT | | L | The Queensland population is largely contained within Girraween National Park, with some records further to the north. This is a disjunct population along with those in the northern NSW tablelands from Glen Innes. They are threatened by dogs and foxes and sarcoptic mange. |
| Reptiles | | | | | |
| <i>Acanthophis antarcticus</i> | common death adder | V | | L | This species has declined sharply in the NET, with only a handful of recent records of the species in WildNet for the region. They prefer woodland with intact groundcover and/or shrub layer, and high levels of leaf litter. They are likely impacted by habitat loss, fragmentation, and inappropriate fire regimes. |

| Scientific name | Common name | NCA ¹ | EPBC ² | Mobility ³ | Expert panel comments |
|----------------------------|---------------------------|------------------|-------------------|-----------------------|--|
| <i>Uvidicolus sphyurus</i> | border thick-tailed gecko | | V | L | This species is least concern under the NCA but has been listed as Vulnerable in the EPBC Act. It is endemic to the New England/Nandewar bioregion, and near-endemic to the NET. They prefer woodland with high levels of leaf litter or coarse woody debris and appear to be associated with exfoliating granite within QLD. They have also been recorded in Leyburn State Forest and Greenlands. |
| <i>Wollumbinia belli</i> | Bell's turtle | E | E | L | This species is endemic to the NET, and is only known from Bald Rock Creek, Accommodation Creek and the Severn River. It has been renamed from <i>Euseya belli</i> to <i>Wollumbinia belli</i> since the previous NET report. |

¹ CR = critically endangered E = endangered, V = vulnerable, NT = near threatened as per *Nature Conservation Act 1992*

² CE = critically endangered, E = endangered, V = vulnerable as per the *Environment Protection and Biodiversity Conservation Act 1999*

³ Mobility rating: H1 = high - use all records, H2 = high - use only known breeding/feeding/roosting records, L = low - use all records

2.2.2 Habitat for priority fauna taxa (Criterion H)

Priority species are non-CEVNT species that are considered to be of particular conservation significance. The rationale for inclusion is based upon the eligibility criteria described in section 1.3.1. A total of 21 fauna taxa were listed for inclusion under Criterion H (Table 11). The number of species pertaining to each eligibility criteria is summarised in Table 10. Some species listed had more than one eligibility criteria assigned. Any taxa that were chosen that were at significant risk, or which were narrow endemics/range-restricted taxa (i.e. naturally susceptible), were assigned "Priority type A" taxa, while the remainder were assigned as "Priority type B" taxa.

For inclusion in the NET BPA priority species records were first subject to filtering rules as described in section 1.3.1 and subsequently, buffered by twice the precision (as for Criterion A) with a minimum of 300m, and a maximum of 1km. The decision rules for assigning Criterion H values (Low to Very high) are summarised in Table 6.

Table 10. Number of priority fauna taxa listed for each eligibility criteria

| Eligibility value ¹ | Taxa count |
|--|------------|
| 1. Taxon at risk | 18 |
| 2. Taxon of scientific interest as relictual (ancient or primitive) | 2 |
| 3. Endemic taxon | 1 |
| 4. Range restricted taxon | 3 |
| 5. Taxon important for maintaining genetic diversity such as complex patterns of genetic variation | 0 |
| 6. Disjunct species populations | 1 |
| 7. Taxon functionally important to ecosystem integrity | 2 |
| 8. Taxon performing a role as an ecological indicator of ecosystem integrity | 0 |
| 9. Taxon vulnerable to impacts of climate change | 6 |

Table 11. NET - priority fauna taxa (Criterion H)

| Scientific Name | Common Name | Significance | Eligibility value no. | Expert panel comments |
|----------------------------|-------------------------|--------------|-----------------------|---|
| Invertebrates | | | | |
| Insects | | | | |
| <i>Hypochrysops byzos</i> | yellow jewel | B | 1 | The species was known from the Glen Aplin area of the NET. Difficult to find adult butterflies. Cliff Meyer (<i>pers.com.</i> 2023) noted there is no reason to assume the species is not still in the area, though he had not personally heard of any recent records. The initial priority listing was based on a subspecies designation which is no longer considered valid. Retained as a priority as this species is uncommon anywhere, although this may reflect difficulties in detection. |
| <i>Petalura gigantea</i> | south-eastern petaltail | A | 1, 9 | This species has been recorded by several DETSI staff in Girraween National Park and is known to be resident in the nearby Basket Swamp in NSW. The species is listed as Endangered in NSW where most of the species' distribution lies. |
| Malacostracans | | | | |
| <i>Euastacus suttoni</i> | | A | 1, 4 | Known only from the NET (QLD and NSW components). Panel suggested the species should be listed as threatened. Threats include poaching for food and pet trade, and predation of young crayfish by <i>Cherax destructor</i> . Lack of successful breeding/young mortality rates is of concern, as surveys suggest population skewed towards older individuals. Threats and status of this species was confirmed by James Furse in out of panel discussion (<i>pers.com.</i> 2023). |
| Vertebrates | | | | |
| Fish | | | | |
| <i>Gadopsis marmoratus</i> | river blackfish | B | 1, 9 | Found only within Bald Rock Creek and upper Condamine near Warwick. Girraween National Park is a stronghold for the species. Recent eDNA and trapping projects run by DETSI show the species still occurs despite droughts and intense fires, however, have declined in certain areas due to overfishing, competition with introduced species, and habitat modification/degradation. |

| Scientific Name | Common Name | Significance | Eligibility value no. | Expert panel comments |
|-----------------------------|---------------------------------|--------------|-----------------------|--|
| <i>Galaxias olidus</i> | mountain galaxias | B | 1, 9 | Found in clear headwaters of west-flowing streams. Present in streams of Mount Norman and Bald Rock Creek in Girraween National Park, and north to Goomburra. Streams subject to periodic drying. Climate change is a potential threat. Translocated populations were created post 2019 fires and drought. Nearing northern limit of range - but does extend into SEQ. Potentially at risk locally. |
| <i>Mogurnda adspersa</i> | southern purple-spotted gudgeon | B | 1 | The species is rare west of the Great Dividing Range, with its presence further west into the Murray-Darling Basin being disputed by experts. May be declining in the area due to droughts and habitat modification. |
| Birds | | | | |
| <i>Burhinus grallarius</i> | bush stone-curlew | B | 1 | The species is probably functionally extinct in the NET, with only a handful of records in the past two decades (despite being easy to detect). A pair was recorded in 2008 near the Killarney Golf Course (Darren Fielder <i>pers. com.</i> 2024). While the species is abundant further north, the panel decided it was a priority taxon for the NET based on the significant and continuing threats of fox predation in the region. |
| <i>Gallinago hardwickii</i> | Latham's snipe | B | 1 | This species migrates from Japan to Australia annually, and all stopover and wintering sites have importance for the species. It is Special Least Concern in Queensland, but Victoria considers it Near Threatened and the Action Plan for Australian Birds 2020 (Garnet and Baker 2020) recommends it be considered as Vulnerable. |
| <i>Hylacola pyrrhopygia</i> | chestnut-rumped heathwren | B | 1 | The species is at the northern limit of its range in the NET. Known primarily in Queensland from Girraween National Park, with some recent records as far north as Durikai State Forest. The panel notes the species may be locally declining in Queensland. |

| Scientific Name | Common Name | Significance | Eligibility value no. | Expert panel comments |
|--|------------------|--------------|-----------------------|---|
| <i>Menura novaehollandiae edwardsi</i> | superb lyrebird | B | 1, 2, 7 | This species has been delisted since the last NET report. They are known from the Girraween National Park area north to Horans Gorge, and in Sundown National Park. The subspecies <i>edwardsi</i> is the northernmost one, and this is the northernmost extent of the distribution of the subspecies. They are threatened by fire, habitat loss, and predation by foxes. Records at Jolly's Falls were considered questionable by the panel. |
| <i>Neophema pulchella</i> | turquoise parrot | B | 1 | The species has been delisted since the last NET report. While they occur beyond the bioregion to Victoria, the local population is a stronghold for the species. The species is known from open grassy woodland from Girraween across to Sundown, being more common in the traprock than on granite. The species is declining elsewhere in its range, due to habitat loss and fragmentation, and potentially predation by cats and foxes. |
| <i>Petroica boodang</i> | scarlet robin | B | 1 | This species is part of a suite of threatened woodland birds listed in NSW that occur just into QLD. The panel decided that the listing of vulnerable in NSW warranted the inclusion as priority in the NET. Previous reports listed this taxon as <i>Petroica multicolor</i> , but it has been redescribed as <i>P. boodang</i> . |
| <i>Petroica phoenicea</i> | flame robin | B | 1, 9 | The species is very scarce in the NET, which is the northern extent of its range. It is found in Girraween National Park. Restricted to high country with large expanses of rock. Never seen in middle of summer. This species is suspected to contract southwards in response to climate change. |

| Mammals | | | | |
|---------------------------------|-----------------------|---|------|---|
| <i>Aepyprymnus rufescens</i> | rufous bettong | B | 1, 7 | <p>Panel recommended the species be retained on the priority list. Recent records show it is still seen around the Marylands National Park area and vicinity, including into Queensland. Quoll society noted they had been observed in Girraween adjacent to Bill Goebbels bridge while spotlighting and that rangers had reported seeing them occasionally along Pyramids Road in the north of the park.</p> <p>Insufficient survey work to determine trends. Panel decided to retain the taxa on the priority list. The taxon is assumed to be threatened by fire, habitat fragmentation, grazing, and predation (dogs, cats). Critical weight range mammals like this are known keystone species due to burrowing/fungi foraging and turning soil over at a landscape scale.</p> |
| <i>Chalinolobus picatus</i> | little pied bat | B | 1 | <p>This species has been removed from the threatened species list since the last NET report. The panel judged it should be retained on the priority list as it is threatened in other jurisdictions and likely under threat in the NET from habitat loss and fragmentation.</p> |
| <i>Notamacropus dorsalis</i> | black-striped wallaby | B | 1 | <p>This species prefers dense scrubs along creeks and gorges, surrounded by open country, and relies on a dense daytime refuge. Within the NET it has been nominated as priority due to significant declines in the region and appears to have disappeared from Girraween and the granite belt entirely. It is vulnerable to habitat loss, fragmentation, vehicle strikes, and predation by foxes and dogs.</p> |
| <i>Ornithorhynchus anatinus</i> | platypus | B | 1, 2 | <p>This species is likely to be present in waterholes throughout Sundown National Park and along the Severn River. Observed in Bald Rock Creek just within the park and outside Girraween National Park. Drought appears to have significantly impacted the Girraween population. Taxa is susceptible to water quality issues and accidental bycatch in yabby traps.</p> |
| Reptiles | | | | |
| <i>Acritoscincus platynotum</i> | red-throated skink | B | 9 | <p>This otherwise temperate species is at the northern limit of its range in upland parts of the NET. It is known from Mt Norman, the Pyramids, Slip Rock, and South Bald Rock in Girraween National Park. Included as a priority as it may be impacted by climate change.</p> |

| | | | | |
|---------------------------------|------------------------------------|---|---------|---|
| <i>Ctenotus eurydice</i> | brown-backed yellow-lined ctenotus | B | 4 | The status of a Main Range population is uncertain, so the NET population should be treated as disjunct from other parts of the species' range. (Steve Wilson <i>pers. com.</i> 2023). |
| <i>Hoplocephalus stephensii</i> | Stephen's banded snake | B | 1, 6 | While not quite disjunct, the Girraween population is an outlier and the western limit of the species' range. In Queensland it is otherwise found in rainforests and wet sclerophyll along the Lamington Plateau, Border Ranges, Main Range and into the D'Aguilar Range. The species is threatened by pigs, destruction of habitat from rock collections for landscaping and gardening, and from poaching. The species is Vulnerable in NSW. |
| <i>Saltuarius wyberba</i> | granite leaf-tailed gecko | B | 3, 4, 9 | This species is near-endemic to the NET. Found under exfoliating rocks, granite outcrops, crevices, usually associated with vertical tors rather than flat. Rarely found on horizontal slabs. Plausible threats to the species include climate change, fire, poaching, and habitat loss/fragmentation. |

2.2.3 Special fauna area decisions (Criterion I)

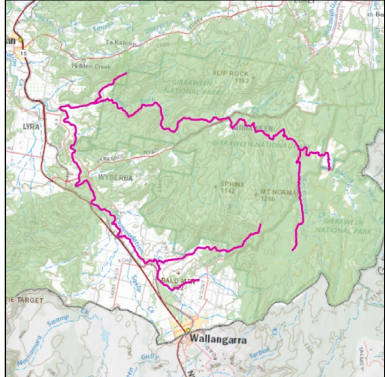
The panel was asked to identify areas with special fauna biodiversity values within the NET under the BAMB supplementary Criterion I. Areas with special biodiversity value are important because they contain multiple taxa in unique ecological and often highly biodiverse environments. Values can include centres of endemism, wildlife refugia, disjunct populations, geographic limits of species distributions, high species richness, relictual populations, high densities of hollow-bearing trees and breeding sites. The full rationale for inclusion is described in section 1.3.2.

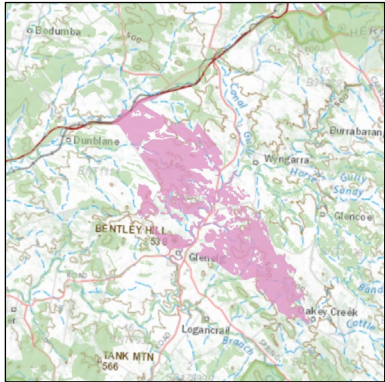
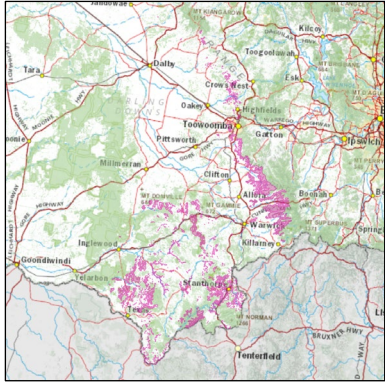
Using expert knowledge and available information (records, maps, GIS derived datasets), panel members discussed areas and described their values, all of which were implemented as fauna decisions. Several other areas discussed which encompassed fauna values, were combined with flora or other values to become landscape decisions. The special areas proposed by the panel are detailed in Table 12. Generally, only CEVNT and priority species are specified for each decision.


To ensure consistency and provide better integration with BPAs conducted across adjoining bioregions, special areas nominated during the course of non-NET expert panels, however, which impact NET remnant units, have been incorporated and are listed at the end of Table 12.

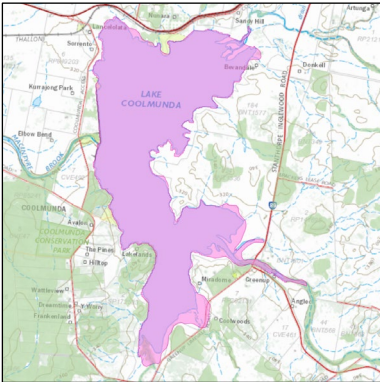
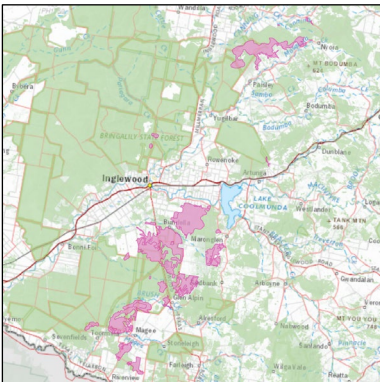
Table 12. Areas of special fauna biodiversity value (Criterion I)

For more information on the criteria values, see section 1.3.2.

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|--|
| net_fa_01 | <p>Bald Rock Creek</p>  | State | <p>Freshwater system that supports important habitat for a variety of threatened and priority species, including <i>Wollumbinia belli</i> (Bell's turtle), <i>Euastacus suttoni</i> (spiny crayfish), <i>Galaxias olidus</i> (mountain galaxias), <i>Gadopsis marmoratus</i> (river blackfish), <i>Ornithorhynchus anatinus</i> (platypus) and <i>Maccullochella peelii</i> (Murray cod). Bell's turtle is endemic to Bald Rock and Accommodation Creeks. There are historic records of <i>Adelotus brevis</i> (tusked frog) and <i>Litoria subglandulosa</i> (New England treefrog) from this feature, however they are likely extirpated from the area.</p> <p>Freshwater jellyfish have also been observed. In 2005, several hundred individuals were observed in the recreation area pool and in 2007, the taxa was observed at the "junction" pools (Darren Fielder <i>pers. com.</i> 2023).</p> | <p>Ib (wildlife refugia): Very high</p> <p>Ic (disjunct populations): Very high</p> <p>Id (geographic range limits): Very high</p> |
| 02 | Girraween National Park | | <i>Implemented as landscape decision "net_I_13".</i> | |
| 03 | Sundown National Park | | <i>Implemented as landscape decision "net_I_14".</i> | |
| 04 | Durikai State Forest | | <i>Implemented as landscape decision "net_I_10".</i> | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|---|
| net_fa_05 | <p>Glenelg / Gore</p>  | State | <p>Important habitat for nectar-feeding and nesting birds, inclusive of the threatened species <i>Anthochaera phrygia</i> (regent honeyeater), <i>Lathamus discolor</i> (swift parrot) and <i>Pteropus poliocephalus</i> (grey-headed flying-fox).</p> <p>Flowering <i>Eucalyptus melliodora</i> (yellow box) and <i>Eucalyptus sideroxylon</i> (mugga ironbark) provide important food sources for honeyeaters, whilst remnant riparian vegetation, particularly along the Macintyre Brook, hosts high quality habitat with abundant roosting and nesting hollow opportunities.</p> <p>In addition to the nectar resource values, this feature also contains habitat for a suite of threatened and priority woodland species (known to occur within or nearby) including <i>Geophaps scripta scripta</i> (squatter pigeon), <i>Neophema pulchella</i> (turquoise parrot), <i>Notamacropus dorsalis</i> (black-striped wallaby), and <i>Stagonopleura guttata</i> (diamond firetail).</p> <p>There have been records of <i>Polytelis swainsonii</i> (superb parrot) in the region, though the importance of the area for this species is uncertain. <i>Poephila cincta cincta</i> (black-throated finch (white-rumped subspecies)) historically used this habitat, however, have been locally extirpated since the 1990s.</p> | <p>Ib (wildlife refugia): Very high</p> <p>Id (geographic range limits): High</p> <p>Ie (species richness): Very high</p> |
| net_fa_06 | <p>White box, yellow box and mugga ironbark communities</p>  | Regional | <p><i>Eucalyptus albens</i> (White box), <i>Eucalyptus melliodora</i> (Yellow box) and <i>Eucalyptus sideroxylon</i> (Mugga ironbark) communities* support nectar-feeding animals, leaf-gleaners, bark-feeders and host hollows for nesting. These communities are recognised as important habitat for a number of threatened taxa inclusive of the <i>Lathamus discolor</i> (swift parrot), <i>Anthochaera phrygia</i> (regent honeyeater), <i>Pteropus poliocephalus</i> (grey-headed flying-fox) and <i>Stagonopleura guttata</i> (diamond firetail). As well as the species noted as particularly reliant on this habitat type, there is a suite of priority and threatened species that use this habitat type regularly as part of their greater habitat envelope.</p> <p>* (<i>Eucalyptus melliodora</i>: 13.3.4, 13.11.8, 13.12.8; <i>Eucalyptus sideroxylon</i>: 13.11.5; <i>Eucalyptus albens</i>: 11.8.8)</p> | <p>Ib (wildlife refugia): High</p> <p>Ie (high species richness): High</p> <p>Ii (hollow-bearing trees): High</p> |
| 07 | Greenup State Forest (SF 120) | | Implemented as landscape decision "net_I_11". | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|---|
| net_fa_08 | Riverton Caves  | State | <p>The Riverton limestone cave system is just over 30m long, with an extensive south-western side wing that incorporates a partially domed chamber (Dwyer and Hamilton-Smith 1965). Since flooding of the Texas Caves, the Riverton Cave system maybe the last limestone cave in Southeast Queensland (Grimes 1978).</p> <p>The system is used as a maternity site for a colony of the threatened bat <i>Miniopterus schreibersii</i> (large bentwinged bat). Surveys during the period 1961-1964, estimated the maximum colony size ranged between 15,000 - 20,000 individuals at the time. Colonies of several hundred individuals of <i>Rhinolophus megaphyllus</i> (Eastern horseshoe bat) have also been observed using the cave as a maternity site (Dwyer and Hamilton-Smith 1965). Counts of <i>Miniopterus schreibersii</i> in the 2003-2023 period show the numbers have grown to 22,000 – 52,000, with <i>Rhinolophus megaphyllus</i> numbers being in the 20-30s (Greg Ford pers. com. 2023).</p> <p>Current threats to the system include an operating mining lease, which contains the cave system within its bounds. To avoid disturbance, a 215 m exclusion zone, as well annual monitoring conditions were imposed as conditions of the environmental authority.</p> | Ij (breeding/roosting site): Very high. |
| 10 | All high-altitude Granite areas | | <i>Not implemented - high altitude environments (>= 1050m) and associated values on landzone 12 have been captured under existing decisions.</i> | |
| 11 | Vinethicket on limestone substrates | | <i>Not implemented as more accurate/finer scale mapping of limestone/rainforest is required. Nb. all mapped rainforest regional ecosystem communities are captured under other decisions, refer to net_I_20, net_I_21 and net_I_23.</i> | |
| 12 | Quoll habitat in the Dalveen - Cherrabah Area | | <i>Not implemented. Values captured under criteria A, and decisions “net_I_02” and “net_I_22”.</i> | |
| 13 | SE of Silver Spur LOT 24 CVE38 and LOT 20 CVE 38. | | <i>Not implemented – further values required. Approx. 800 ha site which hosts habitat for threatened species including Anthochaera phrygia (Regent honeyeater) and Macrozamia cranei.</i> | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|--|---|--------------|---|---|
| net_fa_14 | <p>Lake Coolmunda - significant waterbird habitat</p>  | State | <p>Lake Coolmunda includes extensive shallow habitat for waterbirds. This wetland consistently holds large numbers of waterbirds, up to the tens of thousands at various times. Additionally, there is a good diversity of waterbirds. (DES 2022)</p> | <p>Ib (wildlife refugia): Very high</p> |
| Adjoining Bioregions - Fauna Expert Panel Decisions | | | | |
| brbs_fa_69 | <p>Yelarbon and Bringalily State Forest Tracts.</p>  | State | <p>Open eucalypt woodlands on either shallow soils (in areas of higher elevation) or sandy plains dominate. Diversity of terrestrial vertebrate taxa is very high with approximately 350 recorded. Among the threatened taxa known are <i>Furina dunmalli</i> (Dunmall's snake), <i>Lophochroa leadbeateri</i> (Major Mitchell's cockatoo), <i>Anthochaera phrygia</i> (regent honeyeater), <i>Grantiella picta</i> (Painted honeyeater), <i>Dasyurus maculatus maculatus</i> (Spotted-tailed quoll) and <i>Petauroides volans volans</i> (Greater glider). Priority taxa include both endemics such as <i>Paradelma orientalis</i> (Brigalow scaly-foot), and declining taxa, e.g. <i>Climacteris picumnus</i> (Brown tree creeper), <i>Pyrrholaemus sagittatus</i> (Speckled warbler) and <i>Melanodryas cucullata</i> (Hooded robin). (DES 2018)</p> | <p>Ie (species richness): Very high</p> |

2.3 Landscape

Specific recommendations from the landscape panel are recorded in several tables in the following sections.

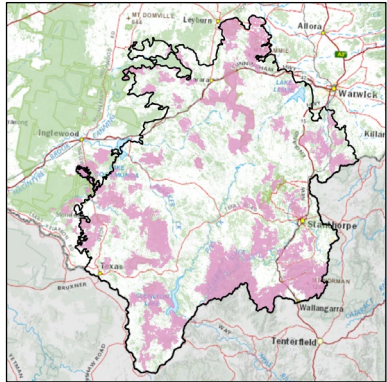
2.3.1 Special landscape decisions (Criterion I)

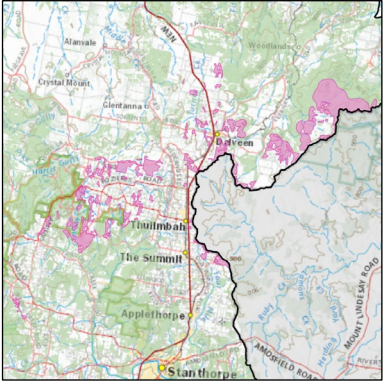
The panel identified new areas which met the eligibility criteria (section 1.3.2). Selected decisions nominated by flora and fauna panels were also reviewed and consolidated into broader landscape decisions. Panel comments and recommendations relating to these landscapes of special biodiversity value are outlined in Table 13.

To ensure consistency and provide better integration with BPAs conducted across adjoining bioregions, special areas nominated during the course of non-NET expert panels and which impact NET remnant units, have been incorporated and are listed at the end of Table 13.

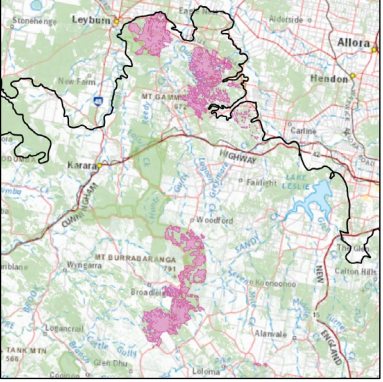
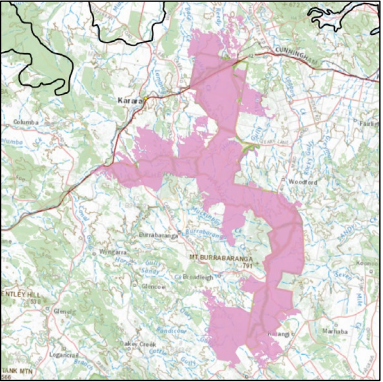
Table 13. Areas of special landscape biodiversity value (Criterion I)

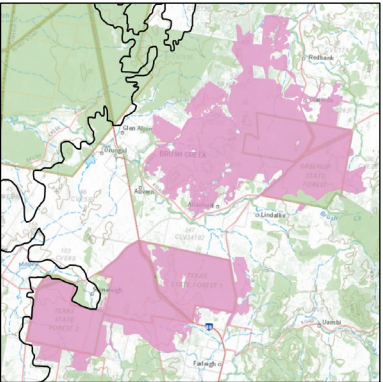

For more information on the criteria values, see section 1.3.2.

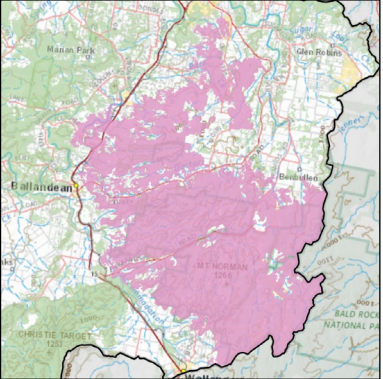
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|--|----------------------------------|
| 01 | Mt Bullaganang, Jibbinbar Mountain, Mount Norman, Mt Ferguson and Mt Amiens. | | <i>Implemented as separate flora decisions – refer to “net_fl_18”, “net_fl_19”, “net_fl_20” and “net_fl_21”.</i> | |
| net_I_02 | Very High Tract Size (from Criteria C)  | State | <p>Tracts are defined as patches of continuous remnant and regrowth vegetation. The size of any tract is a major indicator of ecological significance and is strongly correlated with the long-term viability of biodiversity values. Larger tracts are less susceptible to ecological edge effects and are more likely to sustain viable populations of native flora and fauna. These areas can be considered core nodes/refugia in which a large proportion of a bioregion’s biodiversity is represented.</p> <p>Evidence suggests that once remnant vegetation falls below 30 per cent, there are significant declines in biodiversity (Neldner et al. 2017). In lieu of the level of historical clearing and resultant fragmentation in the New England Tableland Bioregion (approx. only 30 per cent remnant vegetation remains), the panel recommended that all remaining tracts assigned a Criterion C (Tract size) rating of Very high be accorded State Significance.</p> | Ib (wildlife refugia): Very high |
| 03 | Largest remaining areas of regional ecosystem 13.11.3 | | <i>Not implemented - accommodated under Criterion B1 and D1.</i> | |

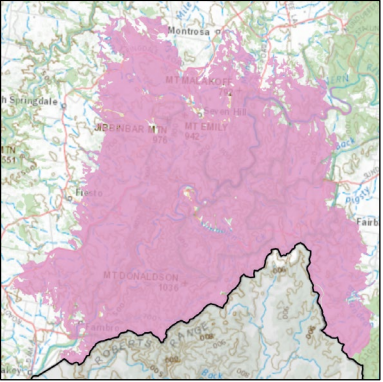
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|--|--|
| 04 | Largest remaining areas of regional ecosystem 13.11.4 | | <i>Not implemented - accommodated under Criterion B1 and D1.</i> | |
| net_I_05 | Regional ecosystem 13.12.1 north of Latitude 28 o 40 ‘  | Regional | <p>All remnants of regional ecosystem 13.12.1 (<i>Eucalyptus campanulata</i> open forest on igneous rocks) in the north of the New England Tableland (north of Latitude -28deg 40min) are considered of Regional significance. Northern occurrences of 13.12.1 have been subject to higher levels of fragmentation from clearing comparative to those in the south of the Queensland portion of the New England Tableland.</p> <p>These northern occurrences of 13.12.1, are known to house a number of conservation significant species not represented on Girraween National Park. Threatened/near threatened flora often associated with this regional ecosystem include <i>Grevillia scortechinii</i> (black grevillea), <i>Caladenia atroclavia</i>, <i>Phlegmariurus varius</i>, <i>Hibbertia elata</i> (guinea flower), <i>Persoonia daphnoides</i>, <i>Leionema ambiens</i> (forest Phebalium) and <i>Boronia amabilis</i> (Wyberba boronia).</p> <p>This habitat appears to be a major component of the last remaining stronghold of <i>Aepyprymnus rufescens</i> (rufous bettong) in the New England Tableland, and other species of note using this RE are <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll (southern subspecies)) which have very high population density in the area, and the northernmost population of <i>Uvidicolus sphyrurus</i> (border thick-tailed gecko).</p> <p>There is an old record of <i>Erythrotriorchis radiatus</i> (red goshawk) from this habitat, however the species has not been recorded in the bioregion in 40 years.</p> | la (endemic richness): High Ib (wildlife refugia): High Ic (disjunct populations): High Id (geographic range limits): High le (species richness): High lg (ecosystem variation): High |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|---|--|--|
| net_I_06 | Riparian landscape corridors Refer to Figure 4 | State (net_I_06a) or Regional (net_I_06b) | <p>Riparian corridors encompass some of the most diverse, dynamic and complex habitats incorporating both environmental and topographic gradients. Comparatively, such areas tend to exhibit high species richness with respect to both flora and fauna, provide important resources in terms of water, food, shelter, nesting and nursery sites and act as a refugia during periods of drought, or in response to longer terms impacts associated with climatic change.</p> <p>At the landscape scale, networks of major and minor riparian linkages are a significant element of habitat continuity and provide important migratory and dispersal pathways for a substantial number of species (especially birds, insects and flora, but also for many arboreal mammals and reptiles). In some areas of fragmented landscapes, watercourses often provide the only remaining habitat connectivity due to the extensive clearing and surrounding modified landscape.</p> <p>Within the New England Tableland bioregion, remnant and regrowth vegetation within 200m and 100m of major and minor waterways is designated as being of State and Regional significance respectively. Corridor triggered remnant and regrowth vegetation focuses upon identifying key connections between remaining core tracts/nodes (as identified under the special area decisions net_I_02) within the bioregion. For further information regarding the broad principles and intent, as well as more specific information relating to the New England Tableland riparian corridor network, refer to Section 2.3.2.2 and Table 15.</p> | <p>Criterion J (riparian corridor): STATE</p> <p>or</p> <p>Criterion J (riparian corridor): REGIONAL</p> |
| net_I_07 | Terrestrial bioregional corridors (landscape connections) Refer to Figure 4 | State (net_I_07a) or Regional (net_I_07b) | <p>The broad purpose of landscape-scale connections, is to provide for ecological and evolutionary processes at a bioregional scale. Maintaining connectivity across a landscape, either through "continuous linkages" or via "stepping-stones" of remnant and regrowth vegetation, is important for the long-term conservation of biodiversity.</p> <p>Corridor triggered remnant and regrowth vegetation is focused upon areas between core tracts/nodes (as identified under the special area decision net_I_02) within the bioregion. For further information regarding the broad principles and intent, as well as more specific information relating to the New England Tableland terrestrial corridor network, refer to Section 2.3.2.1 and Table 14.</p> | <p>Criterion J (terrestrial corridor): STATE</p> <p>or</p> <p>Criterion J (terrestrial corridor): REGIONAL</p> |
| 08 | Regional Ecosystem 13.11.8 | | <i>No implemented - suitable intact areas could not be delineated – potential to use biocondition coverage once complete.</i> | |

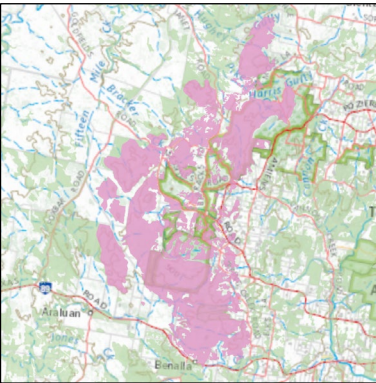
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|---|
| net_I_09 | <p>“Old Growth” Regional Ecosystem 13.11.6</p>  | State | <p>Remnants of regional ecosystem 13.11.6 (<i>Corymbia citriodora</i> open forest on metamorphics) with old growth (trees >40cm diameter).</p> <p>This community, relatively intact around the Leyburn area and to the South and external to Durikai State Forest, encompasses areas of very high habitat value. Old growth forest provides critical breeding or roosting habitat resources for <i>Petauroides volans volans</i> (southern greater glider), <i>Calyptorhynchus lathami lathami</i> (glossy black cockatoo (eastern)), <i>Phascolarctos cinereus</i> (koala), <i>Neophema pulchella</i> (turquoise parrot), <i>Ninox strenua</i> (powerful owl), and <i>Chalinolobus picatus</i> (little pied bat) from our priority and threatened species lists for the New England Tableland BPA and is also likely to be important for other hollow-roosting microchiropteran bats. Conservation significant flora <i>Eucalyptus infera</i> and <i>Macrozamia conferta</i> have also been recorded.</p> <p>Whilst significant areas of Durikai, Leyburn and Talgai State Forest have been logged, mature forest mapping provided by Griffith University (Norman and Mackey 2023) suggested mosaics of mature/near mature forest maybe present within areas of the State forests as well as their surrounds.</p> | li (hollow bearing trees): Very high |
| net_I_10 | <p>Durikai State Forest</p>  | State | <p>The scientific areas in the north and south of Durikai State Forest support mallees including <i>Eucalyptus sideroxylon</i> and the endemic <i>Eucalyptus infera</i>. There are also large patches of <i>Eucalyptus infera</i> in the southern part of the State Forest. Southern Durikai also has disjunct populations of <i>Eucalyptus sideroxylon</i>, <i>Eucalyptus fibrosa</i>, <i>Eucalyptus caleyi</i> and <i>Corymbia citriodora</i> as well as records of <i>Macrozamia conferta</i>.</p> <p>In regards to fauna, the tract depicted supports habitat for conservation significant species (known to occur in or within proximity to) such as <i>Anthochaera phrygia</i> (regent honeyeater), <i>Aphelocephala leucopsis</i> (southern whiteface), <i>Burhinus grallarius</i> (bush stone-curlew), <i>Calyptorhynchus lathami lathami</i> (glossy black cockatoo), <i>Climacteris picumnus victoriae</i> (brown treecreeper (south-eastern)), <i>Geophaps scripta scripta</i> (squatter pigeon (southern subspecies)), <i>Grantiella picta</i> (painted honeyeater), <i>Hirundapus caudacutus</i> (White-throated Needle-tail), <i>Lathamus discolor</i> (swift parrot), <i>Neophema pulchella</i> (turquoise parrot), <i>Ninox strenua</i> (powerful owl), <i>Melanodryas cucullata cucullata</i> (hooded robin (south-eastern)), <i>Petroica boodang</i> (scarlet robin), <i>Stagonopleura guttata</i> (diamond firetail), <i>Aepyprymnus rufescens</i> (rufous bettong), <i>Chalinolobus picumnus</i> (little pied bat), <i>Notamacropus dorsalis</i> (black-striped wallaby), <i>Petauroides volans volans</i> (southern greater glider), <i>Pteropus poliocephalus</i> (grey-headed flying-fox), <i>Phascolarctos cinereus</i> (koala), and <i>Uvidicolus sphyrurus</i> (border thick-tailed gecko). (Noske et. Al 2023)</p> <p>There have been records of <i>Polytelis swainsonii</i> (superb parrot) in this forest, but it is unclear whether it represents regular habitat for the species or the presence of one or more vagrant birds.</p> | <p>la (endemic richness): High</p> <p>Ib (wildlife refugia): Very high</p> <p>Ic (disjunct populations): High</p> <p>Ig (ecosystem variation): High</p> |

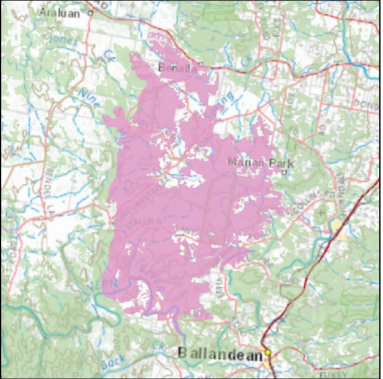

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|--|
| net_i_11 | Greenup and Texas (1 and 2) State Forest Tracts  | Regional | <p>The area captured, transitions from the Nandewar to Brigalow Belt bioregion encompassing a diverse range of vegetation types inclusive of heath communities. Conservation significant species recorded from the site include <i>Macrozamia machinii</i> and <i>Styphelia</i> sp. (Coolmunda D.Halford Q1635).</p> <p>The feature provides habitat for threatened and priority species (known to occur in or within proximity to) including <i>Acanthopis antarcticus</i> (common death adder), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Calyptorhynchus lathami lathami</i> (glossy black-cockatoo), <i>Geophaps scripta scripta</i> (squatter pigeon (southern subspecies)), <i>Hylacola pyrrhopygia</i> (chestnut-rumped heathwren), <i>Melanodryas cucullata cucullata</i> (hooded robin (southern)), <i>Neophema pulchella</i> (turquoise parrot), <i>Stagonopleura guttata</i> (diamond firetail), <i>Ninox strenua</i> (powerful owl), <i>Notamacropus dorsalis</i> (black-striped wallaby), <i>Petauroides volans volans</i> (southern greater glider) and <i>Phascolarctos cinereus</i> (koala).</p> | Ib (wildlife refugia): High le (species richness): High lg (ecosystem variation): High |
| net_i_12 | Millmerran State Forest 131 Forestry Reserve  | Regional | <p>A granite topographic isolate containing a disjunct representation of the regional ecosystem 13.12.5 located within the Brigalow Belt bioregion (outlier). A small peak protruding from a surrounding flat landscape, with similarities to the granitic landscape of Girraween. Contains the endemic <i>Coleus insularis</i> (Millmerran mint bush), only recorded from this site. The dominant tall plant in the thickets is <i>Leptospermum brevipes</i> (Slender Tea Tree).</p> <p>Other species of note, include <i>Prostanthera nivea</i> (Snowy mintbush), <i>Portulaca bicolor</i> (Round-leave pigface), <i>Stypandra glauca</i> (Nodding blue lily), <i>Muehlenbeckia rhyticarya</i> (Shrubby lignum) and <i>Isotoma axillaris</i> (Australian harebell).</p> <p>(Leiper 2021)</p> <p>Nb. refer also to the decision brbs_fl_15, in the Brigalow Belt Biodiversity Planning Assessment, Version 2.1 (DES 2018).</p> | Ia (endemic richness): High Ib (wildlife refugia): High Ic (disjunct populations): High Id (geographic range limits): High Ig (distinct ecosystem variation): High |
| net_i_13 | Girraween and surrounds | State | <p>An intact granitic landscape incorporating areas of high elevation and ruggedness, contiguous with Bald Rock National Park in New South Wales. Subject to an east-west rainfall gradient and characterised by large granite formations, tors, boulders, rock pavements and sheltered gorges - the complex landscape provides a range of topographic isolates of refugial value for fauna and flora. Within the protected areas estate, surveys report a rich and diverse composition of both fauna (>300 species) and flora (>750 species), with more than 50 species categorised as being of conservation significance</p> | Ia (endemic richness): Very high Ib (wildlife refugia): Very high |


| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|--|--|
| |  | | <p>under State and/or Federal legislation (DERM 2010). Furthermore, in lieu of the size and ecological integrity of the area depicted (and given the Queensland portion of the New England Tableland bioregion represents the northern most extremity of the granite belt region), high numbers of bioregional endemics, disjunct populations of southern taxa and/or taxa at their northern range limit are present.</p> <p>The park itself is highly important for a number of fauna groups. It represents the centre of the <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll) population within the region, as well as the near northern limit for the <i>Vombatus ursinus</i> (common wombat). It is also important habitat for the <i>Petauroides volans volans</i> (southern greater glider) and <i>Petaurus australis australis</i> (yellow-bellied glider (southern subspecies)) and <i>Phascolarctos cinereus</i> (koala) are present. The granite outcrops provide cave refuges for bat species, including <i>Chalinolobus dwyeri</i> (large-eared pied bat). In terms of Aves, the park is the northern range limit for the <i>Menura novaehollandiae</i> (superb lyrebird), the main locality for <i>Petroica phoenicea</i> (flame robin) sightings in Queensland and a stronghold for <i>Calyptorhynchus lathami lathami</i> (glossy black cockatoo (eastern)), <i>Hylacola pyrrhopygia</i> (chestnut-rumped heathwren), <i>Neophema pulchella</i> (turquoise parrot), <i>Ninox strenua</i> (powerful owl), <i>Petroica boodang</i> (scarlet robin), and <i>Stagonopleura guttata</i> (diamond firetail). Surveys along Old Wallangarra Road have reported very high diversity.</p> <p>With respect to frogs and reptiles, the park is an important stronghold for <i>Litoria subglandulosa</i> (New England treefrog) in Queensland, as well as <i>Acritoscincus platynotum</i> (red-throated skink), <i>Ctenotus eurydice</i> (brown-backed yellow-lined ctenotus), <i>Hoplocephalus stephensii</i> (Stephen's banded snake), <i>Saltuarius wyberba</i> (Wyberba leaf-tailed gecko), <i>Uvidicolus sphyurus</i> (border thick-tailed gecko) and <i>Wollumbinia belli</i> (Bell's turtle).</p> <p>The headwater sections of Bald Rock Creek (refer also to decision "net_fa_01") and Accommodation Creek (upstream from Beehive Dam, near Wallangarra) are noted as being in good condition, hosting a diversity of fish, aquatic plants and habitats (DES, 2022). Creeks in the park house populations of <i>Euastacus suttoni</i> (a spiny crayfish), <i>Gadopsis marmoratus</i> (river blackfish) and <i>Galaxias olidus</i> (mountain galaxias). There have also been reported sightings in the east of the park of <i>Petalura gigantea</i> (giant petaltail), a threatened and evolutionarily significant dragonfly. In the north of the park there have been records of <i>Hypochrysops byzos</i> (yellow jewel) particularly around the Limberlost Rd area. Historically the park had populations of <i>Ornithorhynchus anatinus</i> (platypus), <i>Stipiturus malachurus</i> (southern emu-wren), <i>Adelotus brevis</i> (tusked frog) and <i>Litoria pearsoniana</i> (cascade treefrog), but these appear to have been extirpated from the park through droughts and fires.</p> <p>With respect to floristic values, more than 20 bioregional endemics have been recorded from the park itself. High floristic species richness is associated with the rock pavements and heath communities, whilst the swamps exhibit high endemism (shared with adjacent NSW national parks). For details see McDonald et al. (1995). Within Queensland, the National Park houses the only representations of alpine heath (in the east of park) and high</p> | <p>Ic (disjunct populations): Very high</p> <p>Id (geographic range limits): Very high</p> <p>Ie (species richness): Very high</p> <p>Ig (ecosystem variation): Very high</p> <p>K (intactness): State</p> |

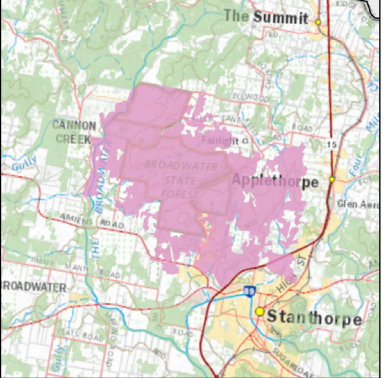
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|--|
| | | | <p>montane perched swamps (Dingo Swamp is one of the larger examples of the latter). Examples of threatened flora recorded from within the park include <i>Acacia ruppii</i>, <i>Boronia amabilis</i>, <i>Conospermum burgessiorum</i>, <i>Eucalyptus scoparia</i> (Wallangarra white gum), <i>Kardomia granitica</i>, <i>Phebalium whitei</i>, <i>Vincetoxicum woollsii</i>, whilst examples of panel nominated priority taxa include <i>Acacia pruinose</i> (frosty wattle), <i>Eucalyptus camphora</i> subsp. <i>Camphora</i> (mountain swamp gum), <i>Eucalyptus nova-anglica</i> (new England peppermint), <i>Leionema rotundifolium</i>, <i>Olearia glandulosa</i>, <i>Pultenaea hartmannii</i> and <i>Veronica arenaria</i>.</p> <p>Two of the key QPWS management plan values relate to the protection and maintenance of the ecological condition, diversity and structure of temperate woodlands and alpine swamps. The Koppen Geiger climate classification system indicates the Stanthorpe Plateau climate will shift from a temperate warm to hot summer by 2050. Increased severity and frequency of drought and fire events is of a significant risk to the area and its associated values. Whilst on park, the implementation of successful pest control programs has resulted in low densities of targeted pest species (goats, rabbits and more recently deer), <i>Hyparrhenia hirta</i> (Coolatai grass) and <i>Andropogon virginicus</i> (Whiskey grass) still pose a threat to the areas ecology. Off park, adjoining intensification of horticulture, residential development, some clearing and absentee landowners (limited property maintenance), pose ongoing management issues. Other issues include collecting of exfoliated rock (of particular importance to invertebrates and reptiles) for construction of private stone walls etc.</p> <p>Nb. this decision replaces net_fa_02 and net_fl_02 in the previous New England Tableland Biodiversity Planning Assessment version 2.1.</p> | |
| net_l_14 | <p>Sundown National Park and Surrounds</p>  | State | <p>The area depicted encompasses the Sundown Resources Reserve, Sundown National Park and surrounds, and takes in part of the largest contiguous expanse of New England Tableland remnant vegetation within Queensland. Underlying geology is largely metamorphosed sedimentary rocks, with igneous intrusions and subsequent traprock erosion giving rise to Red Rock and Blue Gorges, Jibbinbar Mountain and Rats Castle (NPRSR 2013). The Red Rock and Blue Gorges support moist rainforest refugia (refer also to decision “net_l_23” – description and values treated separately). Similar to Girraween, in lieu of the size of the tract, and as the Queensland portion represents the northern most extremity of the broader granite belt region, disjunct populations of southern taxa and/or a number of taxa at their northern range limit are present. Approximately, 20 fauna and flora species are classified as being of conservation significance under State or Federal legislation.</p> <p>In terms of floristic values, more than 300 flora species have been recorded from the National Park and Resource reserve (Haselgrove and Cant, 2009). One of the key parks management values (NPRSR 2013), is the protection of <i>Cadellia pentastylis</i> scrubs which occur within sheltered side gorges of the park and resources reserve (NPRSR 2013). Other threatened flora present include <i>Bertya recurvata</i>, <i>Homoranthus montanus</i>, <i>Lepidium peregrinum</i> and <i>Macrozamia occidua</i>. Priority nominated flora species found in the park</p> | <p>Ib (wildlife refugia): VH</p> <p>Ic (disjunct populations): Very high</p> <p>Id (geographic range limits): Very high</p> <p>Ie (species richness): High</p> |

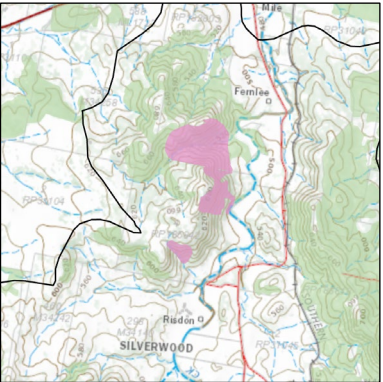
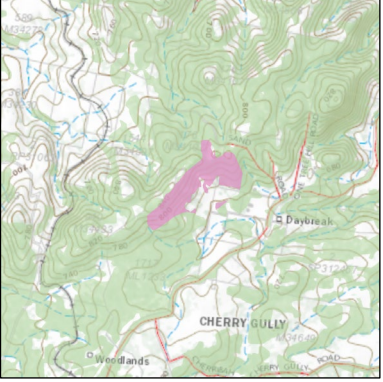
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|--|------------------------------|
| | | | <p>include <i>Eucalyptus prava</i>, <i>Cryptandra lanosiflora</i>, <i>Pomaderris graniticola</i> and <i>Melicytus dentatus</i>. Whilst parts of the area depicted are still subject to or are recovering from earlier land clearing (1800s and 1990s) and grazing activities, old growth forest is present in the southern parts of Sundown National Park.</p> <p>The park hosts a number of significant populations of fauna: the largest population of <i>Neophema pulchella</i> (turquoise parrot) in Queensland, the north-western extent of occurrence of <i>Menura novaehollandiae</i> (superb lyrebird), and one of the last populations of <i>Petrogale penicillata</i> (brushtail rock-wallaby) in the New England Tableland. Other fauna values for the park include habitat for priority and threatened species including <i>Chalinolobus picatus</i> (Little pied bat) and threatened <i>Nyctophilus corbeni</i> (Eastern long-eared bat), <i>Anthochaera phrygia</i> (regent honeyeater), <i>Aphelocephala leucopsis</i> (southern whiteface), <i>Calyptorhynchus lathami lathami</i> (glossy-black cockatoo), <i>Climacteris picumnus victoriae</i> (brown treecreeper (south-eastern)), <i>Grantiella picta</i> (painted honeyeater), <i>Lathamus discolor</i> (swift parrot), and <i>Stagonopleura guttata</i> (diamond firetail), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Phascolarctos cinereus</i> (koala) and <i>Uvidicolus sphyrurus</i> (border thick-tailed gecko). Within Sundown National Park, the Severn River provides habitat for threatened aquatic taxa, <i>Maccullochella peelii</i> (Murray cod) and <i>Mogurnda adspersa</i> (southern purple-spotted gudgeon), as well as black ducks, wood ducks, herons, cormorants and tiny azure kingfishers, yellow-belly and eel-tailed catfish. Permanent or near-permanent waterholes in excellent condition sustain high fish diversity. The Broadwater waterhole in particular offers significant drought refugia due to its permanency. (DES 2022)</p> <p>Feral control (active shooting) has taken place on park approximately every 3 years and goats, known to displace brushtail rock-wallaby populations, have largely been removed. Deer control at the eastern margin of the park has also been successful. The park boundary is 80 per cent fenced (inclusive of council dog fence).</p> <p>Note: this decision replaces previous decisions “net_fa_03” and part of “net_fl_15” in the version 2.1 release.</p> | |

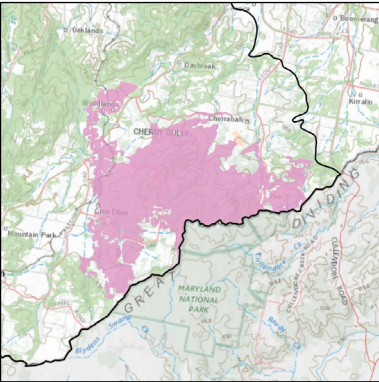
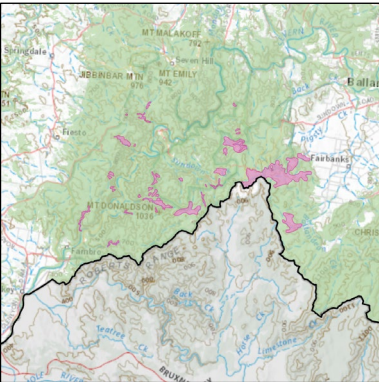
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|---|
| net_I_15 | Northern intersect of the Stanthorpe Plateau and Nandewar Northern Complex  | State | <p>Extends northwards from Benalla to Mount Magnus, encompassing the Passchendaele State Forest tracts, as well as Egernia, Dragonweyr and Tumbledown Nature Refuges. Substantial clearing was undertaken within the area post World War II and then later, planted with <i>Pinus radiata</i>. The remaining fragments and adjoining larger tracts provide important refugia. Within the region, the southern portion of the Passchendaele State Forest hosts intact eucalypt forest with high floristic diversity, as well as a key area for <i>Boronia granitica</i> (upwards of 10,000 plants). The area to the east of Mt Ferguson (Boatfields Road connecting to Harslett Road) was noted by the panel as housing a high diversity of wildflowers.</p> <p>An east-west transition from granite in the Stanthorpe Plateau Subregion to traprock in the Nandewar Northern Complex Subregion imposes east/west distribution limits on a number of taxa. Flora intrusions from the traprock country extend into the granites at the boundary, whilst a number of granite-associated taxa are at their drier western limits. A considerable number of New England Tableland endemic threatened flora are present, inclusive of <i>Bertya recurvata</i>, <i>Boronia granitica</i>, <i>Boronia repanda</i>, <i>Eucalyptus scoparia</i>, <i>Hibbertia elata</i>, <i>Macrozamia viridis</i> and <i>Zieria granitica</i>. Other conservation significant flora present include <i>Dodonaea hirsuta</i>, and <i>Allocasuarina rupicola</i> (shrubby she-oak).</p> <p>In terms of faunistic values, recorded priority and threatened fauna include <i>Aphelocephala leucopsis</i> (southern whiteface), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Hylacola pyrrhopygia</i> (chestnut-rumped heathwren), <i>Lathamus discolor</i> (swift parrot), <i>Neophema pulchella</i> (turquoise parrot), <i>Ninox strenua</i> (powerful owl), <i>Petroica boodang</i> (scarlet robin), <i>Phascolarctos cinereus</i> (koala), <i>Pteropus poliocephalus</i> (grey-headed flying-fox), <i>Saltuarius wyberba</i> (Wyberba leaf-tailed gecko), <i>Stagonopleura guttata</i> (diamond firetail), and <i>Uvidicolus sphyurus</i> (border thick-tailed gecko).</p> | Ia (endemic richness): Very high Ic (disjunct populations): Very high Id (geographic range limits): Very high Ie (high species richness): Very high Ig (ecosystem variation): Very high |
| net_I_16 | Southern intersect of the Stanthorpe Plateau and Nandewar Northern Complex | State | <p>Effectively a southern extension of the decision “net_I_15” to encompass both the Bungawarrah and Hillview Nature Refuges through to the locality of Somme. As per the previous decision, the area depicted captures an east-west transition from granite in the Stanthorpe Plateau Subregion to traprock in the Nandewar Northern Complex Subregion imposing east/west distribution limits on a number of taxa.</p> <p>Flora intrusions from the traprock country extend into the granites at the boundary, whilst a number of granite associated taxa are at their drier western limits. A considerable number of New England Tableland endemic threatened flora are present, inclusive of <i>Acacia pubifolia</i>, <i>Bertya glandulosa</i>, <i>Boronia granitica</i>, <i>Homoranthus montanus</i> (known only from two locations, Hillview Nature Refuge and Mount Jibbinbar), <i>Kardomia granitica</i>, <i>Macrozamia viridis</i>, <i>Melaleuca flavovirens</i> and <i>Melaleuca williamsii</i> subsp. <i>Fletcheri</i> and <i>Zieria granitica</i>. Other conservation significant taxa include <i>Diuris parvipetala</i>.</p> <p>In regard to fauna values, large hollow bearing trees are present (particularly the stringybarks <i>Eucalyptus prava</i>, <i>Eucalyptus blakelyi</i>, <i>Eucalyptus bridgesiana</i>) which provide</p> | Ia (endemic richness): Very high Ic (disjunct populations): Very high Id (geographic range limits): Very high Ie (species richness): Very high Ig (ecosystem |

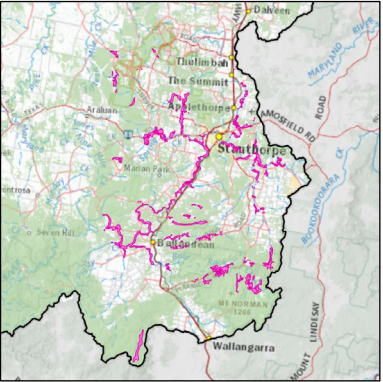
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|---|
| |  | | <p>habitat for taxa inclusive of <i>Ninox strenua</i> (powerful owl - also due to the high densities of common ringtail possum and brushtail possum) and <i>Neophema pulchella</i> (turquoise parrot). The area is also considered a stronghold for <i>Geophaps scripta scripta</i> (squatter pigeon (southern subspecies)) and the eastern extent for a number of common dry country species (inclusive of the Bluebonnet, Mallee Ringneck, White-winged Fairy-wren).</p> <p>Habitat for other threatened and priority species includes <i>Chalinolobus dwyeri</i> (large-eared pied bat), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Maccullochella peelii</i> (Murray cod), <i>Ornithorhynchus anatinus</i> (platypus), <i>Petroica boodang</i> (scarlet robin), <i>Phascolarctos cinereus</i> (koala), <i>Stagonopleura guttata</i> (diamond firetail), <i>Wollumbinia belli</i> (Bell's turtle) and <i>Uvidicolus sphyrurus</i> (border thick-tailed gecko). Both habitat and taxa occurrence were confirmed for a number of the above-mentioned taxa within the proposed Emu Swamp Dam site.</p> <p><i>Poephila cincta cincta</i> (black-throated finch (white-rumped subspecies)) historically used this habitat, however, have been locally extirpated since the 1990s.</p> | <p>variation): Very high</p> |
| net_I_17 | <p>Lochiel (Dalveen)</p>  | Regional | <p>The area depicted captures a tract of vegetation composed entirely of Endangered and Of concern regional ecosystems along Glentanna Road in the Dalveen area. The property is comprised of the following regional ecosystems:</p> <ul style="list-style-type: none"> • 13.3.3 (Endangered) - <i>Eucalyptus nobilis</i> open forest on alluvial plains • 13.11.1 (Of Concern) - <i>Eucalyptus youmanii</i>, <i>Eucalyptus dealbata</i>, <i>Eucalyptus caleyi</i>, and <i>Callitris</i> woodland on metamorphics • 13.11.8 - <i>Eucalyptus melliodora</i>, <i>Eucalyptus moluccana</i> woodland on metamorphics • 13.12.4 (Of concern) - <i>Eucalyptus caliginosa</i>, <i>Eucalyptus blakelyi</i> open forest on igneous rocks. <p>Permanent waterholes are present within the site, which provide refugia. Surveys on site report high species richness, with 90 species of Aves and 109 species of flora recorded. Priority and threatened fauna known to be present on or near the property include <i>Calyptorhynchus lathami lathami</i> (glossy black cockatoo (eastern)), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Gallinago hardwickii</i> (Latham's snipe), <i>Petroica boodang</i> (scarlet robin), <i>Rostratula australis</i> (Australian painted-snipe), and <i>Stagonopleura guttata</i> (diamond firetail).</p> | <p>lb (wildlife refugia): High le (species richness): High</p> |
| net_I_18 | <p>Wilga Park (Nature Refuge) NE of Texas.</p> | State | <p>A large contiguous expanse of vegetation composed entirely of Endangered and Of concern regional ecosystems which encompasses the Whilaloo, Dilladerri and Wilga Park nature refuges. Regional ecosystem communities present include:</p> <ul style="list-style-type: none"> • 13.11.3 (Of concern) - <i>Eucalyptus crebra</i> woodland on metamorphics | <p>lb (wildlife refugia): Very high le (species richness): Very</p> |

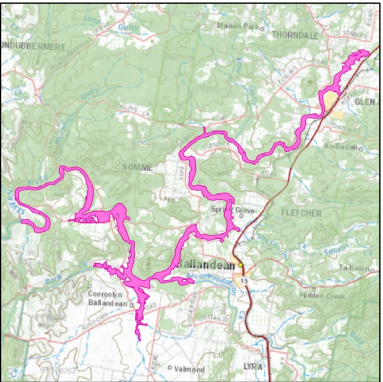
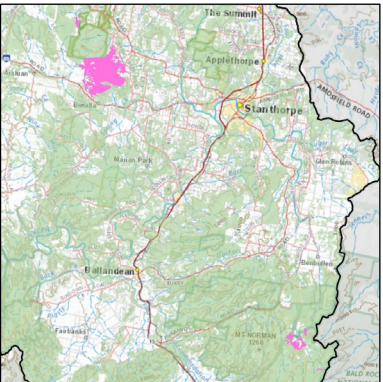
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|--|---|
| |  | | <ul style="list-style-type: none"> • 13.11.4 (Of concern) - <i>Eucalyptus melanophloia</i> woodland on metamorphics • 13.11.5 (Of concern) - <i>Eucalyptus sideroxylon</i>, <i>Eucalyptus fibrosa</i> subsp. <i>nubilis</i> open forest on metamorphics • 13.11.8 (Endangered) - <i>Eucalyptus melliodora</i>, <i>Eucalyptus moluccana</i> woodland on metamorphics. <p>The panel noted that a unique representation of 13.11.5 was present, with pure stands (up to 30m high) of <i>Eucalyptus woollsiana</i> and <i>Eucalyptus elegans</i> (with only patches of the usually dominant <i>Eucalyptus sideroxylon</i>). The area depicted also contains a long-term reference site for the federal listed threatened ecological community “White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland”.</p> <p>Over 200 species of flora have been recorded from the area, inclusive of the conservation significant species <i>Macrozamia cranei</i> and <i>Pterostylis setifera</i>. In addition, a number of ‘Special least Concern’ plants are present including <i>Pterostylis hamata</i> (orchid), <i>Santalum lanceolatum</i> (sandalwood), <i>Potamogeton tricarinatus</i> (floating pondweed), <i>Cymbidium canaliculatum</i> (orchid), <i>Pellaea calidirupium</i> (rock fern) and <i>Adiantum atroviride</i> (maidenhair fern).</p> <p>Fauna values are provided by areas of topographic ruggedness, permanent waterholes and riparian habitats. Old growth vegetation is present, particularly in the northern section. Surveys have recorded 181 bird species. Priority and threatened species recorded in and around the property include <i>Acanthophis antarcticus</i> (common death adder), <i>Aphelocephala leucopsis</i> (southern whiteface), <i>Calyptorhynchus lathami lathami</i> (glossy black cockatoo(eastern)), <i>Climacteris picumnus victoriae</i> (Brown tree creeper), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Geophaps scripta scripta</i> (squatter pigeon), <i>Grantiella picta</i> (painted honeyeater), <i>Hylacola pyrrhopygia</i> (chestnut-rumped heathwren), <i>Melanodryas cucullata cucullata</i> (hooded robin), <i>Neophema pulchella</i> (turquoise parrot), and <i>Stagonopleura guttata</i> (diamond firetail).</p> | <p>high</p> <p>Ig (ecosystem variation): Very high - in particular RE 13.11.5 on Whilaloo</p> <p>li (habitat shelters): Very high</p> |

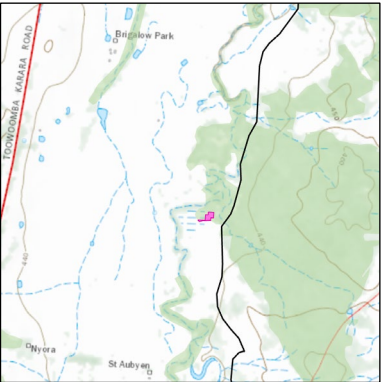
| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|--|--------------|---|--|
| net_I_19 | <p>Broadwater State Forest and Surrounds</p>  | State | <p>A tract of vegetation approximately 2,000 ha in size consisting of six regional ecosystems, five of which are categorised under the Queensland Herbarium's biodiversity status as Endangered (13.12.8, 13.12.9 and 13.3.1) or Of concern (13.12.1 and 13.12.6). Detailed knowledge of the site is limited, however, the panel noted that the site was unlikely to have been extensively logged and that high densities of small gliders and ringtail possums have been observed in areas, indicative of hollow bearing trees and areas of intact habitat structure. Granite boulder fields and rock pavements are also present.</p> <p>With respect to floristic values, the feature is known to contain the largest population of <i>Boronia repanda</i> in Queensland. Whilst the southern portion of the area depicted was severely impacted during the 2019 bushfires, <i>Boronia repanda</i> recovered well following resprouting and reseeded. Other conservation significant flora recorded include <i>Melaleuca williamsii</i> subsp. <i>Fletcheri</i>, <i>Mirbelia confertiflora</i> and <i>Diuris parvipetala</i> (orchid). <i>Grevilia scortechinii</i> ssp. <i>scortechinii</i> may also be present. "Special Least Concern" species recorded from Broadwater State Forest include <i>Cyrtostylis reniformis</i>, <i>Wahlenbergia tumidifruta</i>, <i>Dendrobium speciosum</i> subsp. <i>Hillii</i>, <i>Corybas hispidus</i> (bristly helmet orchid), <i>Calochilus campestris</i> (copper beard orchid), <i>Pterostylis rufa</i> and <i>Corunastylis cuspidate</i>.</p> <p>Whilst no comprehensive fauna surveys have been undertaken, priority and threatened species known to occur in or within proximity to the area include, <i>Acanthophis antarcticus</i> (common death adder), <i>Anthochaera phrygia</i> (regent honeyeater), <i>Aphelocephala leucopsis</i> (southern whiteface), <i>Calyptorhynchus lathami lathami</i> (glossy black cockatoo (eastern)), <i>Ctenotus eurydice</i> (brown-backed yellow-lined ctenotus), <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll), <i>Gallinago hardwickii</i> (Latham's snipe), <i>Hylacola pyrrhopygia</i> (chestnut-rumped heathwren), <i>Menura novaehollandiae</i> (superb lyrebird), <i>Neophema pulchella</i> (turquoise parrot), <i>Petroica boodang</i> (scarlet robin), <i>Phascolarctos cinereus</i> (koala), <i>Saltuarius wyberba</i> (Wyberba leaf-tailed gecko), <i>Stagonopleura guttatus</i> (diamond firetail), and <i>Uvidicolus sphyurus</i> (border thick-tailed gecko). The panel noted it was likely that <i>Ninox strenua</i> (powerful owl) would also be present.</p> | <p>Ib (wildlife refugia): Very high</p> <p>li (habitat shelters): High</p> |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|--|
| net_I_20 | <p>Wild Ash Vine Thicket (south of Warwick)</p>  | Regional | <p>Situated to the south of Warwick, the area depicted includes the largest patch (remnant and regrowth) of vine thicket within the New England Tableland bioregion. Vine thickets make up only a small portion of the New England Tableland's vegetation communities, occurring as small, sporadic and often isolated patches. The pre-clear extent of vine thicket/forest communities within the bioregion is estimated to be less than 550ha, approximately 330ha remains. The Wild Ash Vine Thicket community reflects the endangered regional ecosystem 13.11.7a - low microphyll vine forest on metamorphics.</p> <p>Nb. refer also to related New England Tableland vine thicket decisions net_I_21 and net_I_23.</p> | Ib (wildlife refugia): High |
| net_I_21 | <p>Cherry Gully vine forest</p>  | State | <p>Relatively closed vine forest situated on an old Andesite formation. Structurally more developed than other vine thickets in proximity, the vegetation is more closely aligned with some of the vine scrubs on Killarney basalts. Reflects a subset of 13.11.7a and was previously proposed as a new regional ecosystem.</p> <p>Patches of vine thicket provide important refugia, and act as a steppingstone between Main Range and Sundown National Parks. The closed vine forest likely attracts pigeons, which introduce seeds from more distant rainforest patches. Nominated as being of State significance due to its importance as a refugia and unique variation in rainforest species composition within the New England Tableland Bioregion.</p> <p>Nb. refer also to related New England Tableland vine thicket decisions net_I_20 and net_I_23.</p> | Ib (wildlife refugia): High Ig (ecosystem variation): Very high |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|--|
| net_l_22 | Cherrabah Area  | Regional | <p>A northern extension of the Maryland National Park tract in New South Wales. The feature depicted incorporates areas of high topographic ruggedness and areas of intact vegetation (particularly in the South). In addition to three mapped regional ecosystem communities below, pockets of vine thicket also occur. Mapped regional ecosystems include:</p> <ul style="list-style-type: none"> • 13.12.1 (Of concern) <i>Eucalyptus campanulata</i> open forest to woodland • 13.12.4 (Endangered) <i>Eucalyptus caliginosa</i>, <i>Eucalyptus tereticornis</i> open forest • 13.3.3 (Endangered) <i>Eucalyptus nobilis</i> open forest. <p>The area is recognised as important habitat for a number of threatened fauna, especially <i>Dasyurus maculatus maculatus</i> (spotted-tailed quoll) – contains over 2,000ha of high-quality quoll habitat. Other recorded priority and threatened fauna includes <i>Aepyprymnus rufescens</i> (rufous bettong), <i>Calyptorhynchus lathami lathami</i> (glossy black-cockatoo(eastern)), <i>Ninox strenua</i> (powerful owl), <i>Petauroides volans volans</i> (southern greater glider), <i>Petaurus australis australis</i> (yellow-bellied glider (southern subspecies)), <i>Petroica boodang</i> (scarlet robin), <i>Phascolarctos cinereus</i> (koala), <i>Pteropus poliocephalus</i> (grey-headed flying-fox), <i>Stagonopleura guttata</i> (diamond firetail), and <i>Uvidicolus sphyrurus</i> (border thick-tailed gecko). Threatened flora, within or in proximity to the site include <i>Eucalyptus dalveenica</i>, <i>Eucalyptus dunnii</i> (Dunn's white gum), and <i>Melaleuca williamsii</i> subsp. <i>fletcheri</i>.</p> | lb (wildlife refugia): High le (high species richness): High li (habitat shelters): High |
| net_l_23 | Rainforest and wet sclerophyll gorges and gullies  | State | <p>This decision captures rainforest and wet sclerophyll communities within rugged gorges and gullies of the New England Tableland bioregion. The steep topography creates sheltered environments which in turn support localised microclimates. Often in conjunction with the presence of permanent water holes, these areas provide wildlife and climate refugia from fire and drought.</p> <p>Although not limited to, characteristic rainforest regional ecosystems include 13.11.7 and 13.11.7a (low microphyll rainforest in rugged gorges of Mesozoic to Proterozoic moderately to strongly deformed and metamorphosed sediments and interbedded volcanics). This community also provides habitat for <i>Cadellia pentastylis</i>. Vine forests and thickets of the New England Tableland bioregion, have floristic characteristics similar to the federally listed threatened ecological community, Brigalow Belt Vine thickets. In effect, the New England Tableland communities represent their western continuation.</p> <p>Notable examples include:</p> <ul style="list-style-type: none"> • Blue Gorge - located in Sundown National Park. Has permanent water holes and sheltering, thus provides potential climate and wildlife refugia from fire and drought. In addition to the rainforest communities noted above, other vegetation units in the gorge include tall vine thicket interspersed with tall/very tall woodland (and rock pavements) of <i>Angophora floribunda</i>, <i>Callitris glaucophylla</i>, <i>Ficus platypoda</i>, <i>Aphananthe philippinensis</i>, <i>Dendrocnide excelsa</i> and <i>Streblus brunonianus</i>. | lb (wildlife refugia): Very high lg (ecosystem variation): High li (habitat shelters): Very high lk (climate change refugia): Very high |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|--|--|
| | | | <ul style="list-style-type: none"> Red Rock Gorge - a deep sheltered gorge important as a local/climate refugia. It has shaded microhabitats; moist areas often containing permanent water and provides a refuge from fire. The regional ecosystem in the gorge is 13.12.11 - <i>Angophora floribunda</i> with semi-evergreen vine thicket species, <i>Ficus</i> spp., <i>Dendrocnide excelsa</i>, <i>Eucalyptus melliodora</i>, <i>Alphitonia excelsa</i> open forest in deep sheltered gorges or gully beds or lower talus granitic slopes. Moister gully species with western limits/relictual distribution e.g. <i>Melicytus dentatus</i>, <i>Dendrocnide excelsa</i> (stinging tree). Endemic species include: <i>Philotheca conduplicata</i>. Other values include populations of <i>Myrsine howittiana</i> and <i>Cissus antarctica</i> on granite areas. <p>Nb. Refer also to related rainforest decisions in the North of the bioregion net_I_20 and net_I_21. This decision replaces net_fl_9 in the previous New England Tableland Biodiversity Planning Assessment version 2.1.</p> | |
| net_I_24 | <p>Fringing riparian shrublands of the New England Tableland bioregion</p>  | State | <p>Regional ecosystem 13.3.1 (riverine wetland or fringing riverine wetland) and 13.3.1x1 (which is the denser, shrubby part community of regional ecosystem 13.3.1). Very limited extent. Is also an unusual ecosystem due to riparian flora species diversity. The shrublands are under threat from hydrological modification (e.g. proposed Emu Swamp Dam). They exhibit high riparian species diversity (<i>Melaleucas</i> and <i>Leucopogon</i>, <i>Leptospermums</i>). They fringe along the Severn River. The riparian zone is habitat for rare and threatened flora species including <i>Melaleuca williamsii</i> subsp. <i>fletcheri</i>. This community also provide habitat for a variety of fauna (DES 2022).</p> | <p>1b (wildlife refugia): Very high 1e (species richness): Very high</p> |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|-----------------|---|--------------|---|--|
| net_l_25 | Severn River between Glen Aplin and Sundown Region  | Regional | The Severn River riparian zone and instream condition is relatively intact between Glen Aplin and Sundown National Park and hosts habitat for several flora threatened species including <i>Melaleuca williamsii</i> subsp. <i>fletcheri</i> . The zone is also floristically diverse whilst the river provides habitat for Murray Cod. Submerged macrophytes communities support small-bodied fish and platypus have been known to occur in selected pools. (DES 2022) | Ib (wildlife refugia): High le (species richness): High |
| net_l_26 | Rockholes (Gnammas)  | Local | This decision applies to gnammas (rockholes) on the Stanthorpe Plateau. The exposed granites of the Stanthorpe Plateau are pitted with shallow rock holes known as "pan gnammas" of which most are <7 cm deep which is much shallower than gnammas studied elsewhere in Australia (Timms et al. 2020). These rain fed and isolated aquatic ecosystems support unique biota assemblages. For example, surveys of 26 gnammas across the Stanthorpe Plateau revealed 35 aquatic invertebrate taxa and an invertebrate metacommunity consisting mainly of dipterans and crustaceans of which 14 per cent were gnamma obligates (Timms et al. 2020). Insects (22 taxa) made up almost two-thirds of the total, and crustaceans (8 taxa) about a quarter. However, few taxa are gnamma specialists, and just two of these are endemic or possibly endemic to the northern New England Tableland (Timms, et al. 2020). Climatic change could restrict reduce clam shrimps to deeper gnammas which are scarce on the Stanthorpe Plateau (Timms, et al. 2020). Gnammas are also important for terrestrial wildlife and have cultural significance to Australian First Nations people. (DES 2022) | Ij: Medium |
| 27 | Riverine drought refugia/permanent waterholes | | <p><i>Not implemented – insufficient information to delineate permanent local waterholes with high accuracy.</i></p> <p><i>Nb. Permanent riverine drought refugia and waterholes are identified at a riverine subsection scale under individual wetland decisions (bd_r_ec_06, bd_r_ec_24, bd_r_ec_45, cb_r_ec_24 and cb_r_ec_45) in the Aquatic Conservation Assessment using AquaBAMM for the riverine and non-riverine wetlands of the Queensland Murray-Darling and Bulloo Basins, v 2.1 (DES, 2022).</i></p> | |

| Decision Number | Description (including spatial extent where implemented) | Significance | Identified Values in BPA | Criteria values ¹ |
|---|---|--------------|--|----------------------------------|
| Adjoining Bioregions - Landscape Expert Panel Decisions | | | | |
| brbs_l_48 | <p>Locally significant natural palustrine and lacustrine wetlands</p>  | Local | <p>The panel considered that relatively natural palustrine and lacustrine wetlands and waterbodies within the Brigalow Belt bioregion act as important refugia, especially during periods of drought.</p> <p>Whilst State significant wetlands are captured under Criterion B1, and regionally significant wetlands under the decision brbn_l_47, the panel agreed that all remaining relatively natural wetland complexes of less than 5ha in size be classed as being of local significance. (DES 2018).</p> | Ib (wildlife refugia): Medium |

2.3.2 Corridors (Criterion J)

2.3.2.1 Terrestrial corridors

The broad purpose of landscape-scale connections is to provide for ecological and evolutionary processes at a bioregional scale. Maintaining connectivity across a landscape, either through "continuous linkages" or via "stepping-stones" of remnant vegetation, is important for the long-term conservation of biodiversity. The panel was presented with results from the vegetation connectivity index, and on that basis, they reviewed the existing corridors. The panel recommended to upgrade the status of one corridor from Regional to State, and to add the Far Eastern Regional corridor. The final terrestrial corridor network is summarised in decisions net_1_07 in Table 13. Details relevant to each corridor are described in Table 14 and displayed in and Figure 4.

Table 14. Terrestrial bioregional corridors (landscape connections) identified by the landscape expert panel

| Corridor Number | Corridor description | Significance (width) |
|-----------------|--|----------------------|
| 1 | <p>East-West NET Corridor</p> <ul style="list-style-type: none"> - crosses a significant rainfall gradient (higher in the east, grading to low in the west) - crosses a significant geological variation (granite in the east, changing to metamorphic geology in the west) - crosses a significant altitudinal gradient (higher in the east, grading to low in the west) - intersects with several riparian landscape corridors - intersects major remnant tracts - incorporates relatively short non-remnant 'gaps' - links through to major vegetation tracts in bioregions to the east and west. | State (10km) |
| 2 | <p>Main Range NET Corridor</p> <ul style="list-style-type: none"> - Main Range through Dalveen to Bringalily - crosses a significant rainfall gradient (higher in the east, grading to low in the west) - crosses a significant altitudinal gradient (higher in the east, grading to low in the west) - intersects with several riparian landscape corridors - provides a high degree of connectivity between remnant tracts. | State (10km) |
| 3 | <p>Dalveen to Talgai State Forest Corridor</p> <ul style="list-style-type: none"> - links remnant tracts in NSW to mid-west of the NET - provides a high degree of connectivity between remnant tracts - intersects with the Macintyre River riparian landscape corridor. | State (10km) |
| 4 | <p>Durikai State Forest to Talgai State Forest Corridor</p> <ul style="list-style-type: none"> - provides a high degree of connectivity between remnant tracts within the NET - links Landscape Corridor 2 to remnant tracts in the north of the NET - intersects with the Condamine River riparian landscape corridor. - major connection to BRB from the south of the bioregion | State (10km) |
| 5 | <p>Western Main Range NET Corridor</p> <ul style="list-style-type: none"> - corridor along the western slopes of the Main Range - provides a high degree of connectivity between remnant tracts within the NET - links Landscape Corridors 1 and 2 - links remnant vegetation tracts that are in very good condition - links remnant tracts in southern NET to NSW tracts - follows the sub-regional boundary between the Stanthorpe Plateau and Nandewar | State (10km) |
| 6 | <p>Terrica State Forest Corridor</p> <ul style="list-style-type: none"> -links riparian landscape corridors | Regional (5km) |

| Corridor Number | Corridor description | Significance (width) |
|-----------------|---|----------------------|
| 7 | <p>Wilga Vale to Passchendaele State Forest Corridor</p> <ul style="list-style-type: none"> - crosses a significant rainfall gradient (higher in the east, grading to low in the west) - crosses a significant altitudinal gradient (higher in the east, grading to low in the west) - intersects with riparian landscape corridors | Regional (5km) |
| 8 | <p>Far Eastern NET Corridor</p> <ul style="list-style-type: none"> - joins large tracts of remnant within northeast of Nandewar complex subregion - significant connectivity for parrots | Regional (5km) |
| 9 | <p>Bringalily State Forest to Durikai State Forest Corridor</p> <ul style="list-style-type: none"> - East west corridor which links a number of large and smaller remnant tracts with relatively good connectivity | Regional (5km) |
| 10 | <p>Darling Downs Link:</p> <ul style="list-style-type: none"> - derived from the State-wide Conservation Corridor Framework. - cross bioregional link extending from Southwest in SEQ from the Dwyer's Scrub Conservation Park, through the Brigalow Blet to the boundary of the New England Tableland bioregion at Stonehenge. | State (10 km) |

2.3.2.2 Riparian corridors

Watercourses are important landscape elements which act as significant migratory and dispersal pathways for many species of fauna and flora and contain important habitat resources (including food, water, sheltering, roosting and nesting sites).

All watercourses with a stream order equal to 4 or 5 (assigned at a scale of 1:100,000) were selected to provide connections to upland/headwater areas and assigned regional significance. Streams orders of 6 or more, were assigned State significance.

The final riparian corridor network is summarised in decisions net_I_06 in Table 13. Watercourses which form the riparian corridor network are described in Table 15 and displayed in Figure 4.

Table 15. Riparian bioregional corridors

| Riparian Corridors - watercourses names |
|---|
| Accommodation Creek, Alpin Creek, Apple Tree Creek, Back Creek, Bald Rock Creek, Ballandean Creek, Bandicoot Gully, Bear Creek, Black Swamp Gully, Blackfellow Creek, Blacks Camp Creek, Bodumba Creek, Bodumba Creek East Branch, Bodumba Creek Middle Branch, Boolba Creek, Bracker Creek, Branch Creek, Bringalily Creek, Brush Creek, Budgee Creek, Bull Creek, Burns Gully, Burrabaranga Creek, Canal Creek, Canning Creek, Cannon Creek, Catfish Creek, Catfish Creek (North Branch), Catfish Creek (South Branch), Cattle Creek, Chain of Ponds Creek, Clay Waterhole Creek, Columba Creek, Condamine River, Connolly Dam, Dalrymple Creek, Dingo Creek, Doctors Creek, Downfall Creek, Dumaresq River, Dunn Gully, Eagles Nest Lagoon, Eight Mile Creek, Emu Creek, Fifteen Mile Creek, Fitz Creek, Five Mile Creek, Fourteen Mile Creek, Friday Gully, Funkers Gap Creek, Glen Creek, Glengallan Creek, Hardys Gully, Harris Gully, Hodgson Creek, Horse Gully, Hughey Gully, Hunts Gully, Jack Wade Gully, Jones Creek, Kings Creek, Lake Coolmunda, Lake Glenlyon, Leslie Dam, Lighthouse Gully, Little Plains Creek, Logan Creek, Lookout Creek, Lord John Creek, Macintyre Brook, Magee Creek, Maryland Creek, Mclaughlin Creek, McLaughlin Creek, Middle Creek, Mingimarny Creek, Mocatta Creek, Mosquito Creek, Mount Donaldson Creek, Mountain Creek, Mountain Station Creek, Muckinboy Creek, Murphys Gully, Native Dog Creek, Nine Mile Creek, Oaky Creek, Oaky Creek South Branch, Paling Yard Creek, Paradise Creek, Pariagara Creek, Pike Creek, Pine Creek, Pinnacle Creek, Pyramid Creek, Quart Pot Creek, Racecourse Creek, Red Rock Creek, Reedy Creek, Reeves Gully, Rocky Creek, Rodger Creek, Rosenthal Creek, Rushes Creek, Sambo Creek, Sandy Creek, Sandy Gully, Seventeen Mile Creek, Severn River, Shingled Hut Creek, Six Mile Creek, Smiths Creek, Spring Creek, Stockyard Creek, Sundown Creek, Swan Creek, Tea Tree Creek, Ten Mile Creek, Thane Creek, Thanes Creek, Thanes Creek Left Branch, The Broadwater, Thirteen Mile Creek, Treverton Creek, Turner Creek, Twenty Five Mile Creek, Twenty Mile Creek, Waddy Mudoey Creek, Washpool Creek, Whilaloo Creek. |

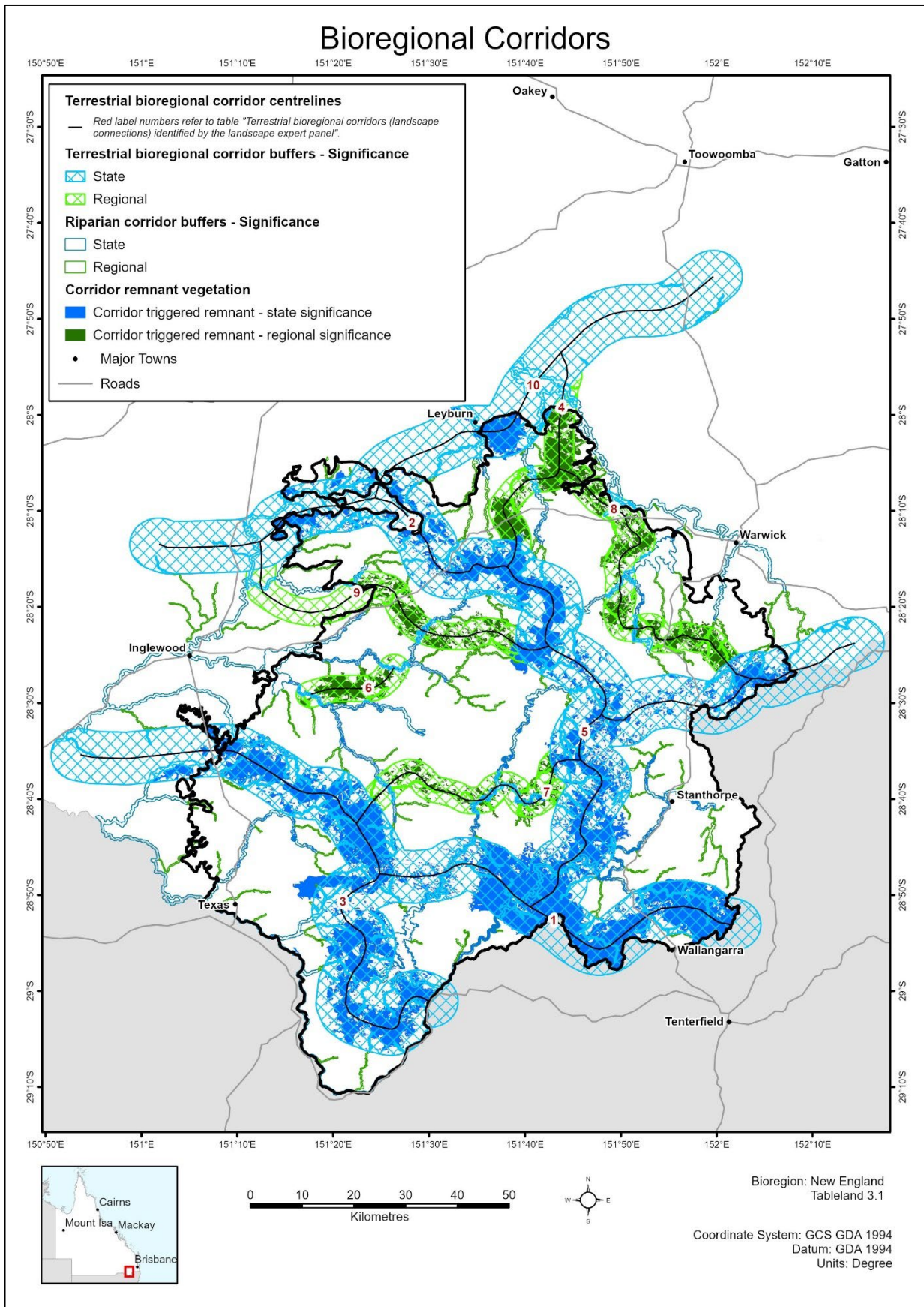


Figure 4. Bioregional Corridors

3 Discussion

The Queensland NET incorporates the northernmost extensions of the Stanthorpe and Tenterfield subregions of the granite belt, as well as the Nandewar subregion. Consequently, a number of southern temperate species occur at their limit of range. The granite belt portion of the NET in particular is noted as supporting higher taxa richness and housing a number of endemic species. The high richness is epitomised within Girraween National Park, a granitic, rugged and intact landscape unique within Queensland and which boasts over 750 species of flora and 317 species of vertebrate fauna (DERM 2010).

Historically, the NET has been subject to high levels of vegetation clearing and disturbance. Within Queensland, only approximately 36 per cent of the pre-clear vegetated extent of the NET is mapped as remnant, with an additional 6 per cent as regrowth. In addition to clearing and habitat disturbance, inappropriate fire regimes are recognised as a significant threat to biodiversity. Fire regimes and effort varies across the region, and further research is required to optimise management, in terms of timing, frequency and intensity.

The suspected long-term Köppen-Geiger climate classification shift (based upon the high emissions scenario) indicates that a large portion of the bioregion will shift from a “Temperate, no dry season, warm summer” to “Temperate, no dry season, hot summer” climate (Beck et al. 2023). This shift will likely impact on a number of range-restricted endemic taxa, as well as contractions for those at their northern limits (Low 2011). The potential for more extreme fire events, following increases in temperatures and prolonged/reduced precipitation, is also of concern.

As per the common pattern of clearing within fragmented bioregions and landscapes, the largest remaining tracts of vegetation largely occupy areas at higher elevation, less suited for cropping or grazing purposes. The importance of the remaining vegetation was emphasised in the expert panel nomination process whereby 89 per cent of current remnant and regrowth vegetation in the bioregion was assigned significance, with the majority (79 per cent), as State significance. Ninety species of threatened or near threatened flora and fauna were listed by the panel and a further 53 species nominated as priority taxa.

3.1 Expert panel recommendations

The expert panel raised several issues and made recommendations for future consideration when updating the NET BPA. The following provides a summary of key comments and recommendations.

Criterion A Threatened species habitat

Similar to other BPA panel recommendations, the NET BPA panel noted that the comprehensiveness of Criterion A (threatened species habitat) is limited, due to availability of information and overreliance on occurrence records (i.e. subject to spatial biases arising from inconsistent survey effort).

To try to address this issue, there was general agreement that the Queensland Herbarium and Biodiversity Science’s Potential Habitat models (Laidlaw and Butler 2021) be included as non-core (effectively to provide an index of potential habitat) in future BPA iterations to balance the lack of survey effort in some areas and to provide an alternative measure to Core habitat (higher confidence habitat).

Criterion H Priority Species

Similar to Criterion A, depiction of Priority Species habitat is over reliant on occurrence records (i.e. provides a limited representation for most taxa’s true distribution). Furthermore, there are no readily available habitat suitability models for non-threatened taxa.

The panel also commented on the priority species nomination process:

- it was likely that only a small subset of species present in the bioregion were assessed. A broader pre-panel review/assessment of possible small range endemics etc. would increase comprehensiveness, and
- when undertaking such assessments, a taxon’s broader Australian distribution should be considered when compiling records, not just with respect to Queensland.

Regarding the latter, the panel acknowledged the difficulties in compiling records from adjoining States for use in developing automated processes to identify potential bioregional endemics/range restricted taxa. Issues arise due to the inclusion of incorrect records in various government and non-government databases, and/or cultivated and vagrant records, as well as taxonomic inconsistencies between custodians/herbaria. Without significant vetting, the effectiveness of any automated process (i.e. such as the development of convex hulls to produce indicative range extents) for a broad range of taxa is limited (as distributional extents are often exaggerated).

Criterion I Special Areas

A few of the previously nominated special areas (i.e. proposed during past NET BPA expert panels) which related

to habitat for one or two threatened taxa, were not considered to meet the special area sub-criteria at the time of the review. Whilst Criterion A is intended to address/capture threatened species habitat, it is largely based upon occurrence records and habitat models (where available).

In future assessments, the option to retain areas of notable threatened species habitat as defined by the panel as a special area (with accompanying decision number) and which directly influences Criterion A (rather than Criterion I), would allow for the retainment of such areas, as well as their direct extraction from the final spatial output.

The panel also indicated that future consideration should be given to identifying special areas that house concentrations of taxa whose distributions have limited extent overlap within protected area estate (i.e. concentrations taxa with low representation within Protected Area estate).

Criterion J Corridors

Some concern was raised by the panel regarding justification of terrestrial landscape corridors and how they have been delineated historically. The panel was highly supportive of the use of landscape connectivity indices such as presented at the workshop to drive both review and nomination of landscape connections, especially in fragmented bioregions. Going forward, the use of such indices will improve justification in terms of both ecological relevance and defensibility, as well as pathway selection and corridor extent/width.

References

- Astrebla Ecological Services (AES) 2023. *Calotis glabrescens* (white burr-daisy) – critically endangered daisy. Accessed 2023 <<https://astrebla.com/calotis-glabrescens-white-burr-daisy-critically-endangered-daisy/#:~:text=Collection%20records%20for%20the%20species,ixiophylla>>.
- Australian Plants Society NSW (APSNSW) 2023. Accessed 2023 <<https://wwwresources.austplants.com.au/plant/prostanthera-petraea/>>.
- Beck, HE, McVicar, TR, Vergopolan, N, Berg, A, Lutsko, NJ, Dufour, A, Zeng, Z, Jiang, X, van Dijk, AIJM & Miralles, DG 2023. High-resolution (1 km) Köppen-Geiger maps for 1901–2099 based on constrained CMIP6 projections. *Scientific Data*, vol. 10. Accessed 2023 < <https://doi.org/10.1038/s41597-023-02549-6>>.
- Benson, JS 1993. The biology and management of *Ooline* (*Cadellia pentastylis*) in NSW. Species Management Report No. 2. NSW National Parks and Wildlife Service. Hurstville.
- Chenoweth Environmental Planning and Landscape Architecture (EPLA) 2001. Common Nature Conservation Classification System. Chenoweth EPLA. Brisbane.
- Clayton, PD, Fielder, DF, Howell, S & Hill, CJ 2006. Aquatic biodiversity assessment and mapping method (AquaBAMM): a conservation values assessment tool for wetlands with trial application in the Burnett River catchment. Environmental Protection Agency. Brisbane.
- Commonwealth of Australia 1995. Regional Forest Agreements – The Commonwealth Position. Commonwealth of Australia. Canberra.
- Department of Environment and Heritage Protection, former (EHP) 2014. Biodiversity Assessment and Mapping Methodology Version 2.2. Queensland Government. Brisbane.
- Department of Environment and Science, former (DES) 2018. A Biodiversity Planning Assessment for the Brigalow Belt Bioregion: Expert Panel. Version 2.1. Queensland Government. Brisbane.
- Department of Environment and Science, former (DES) 2020. Corridor Identification through Biodiversity Planning Assessments. Department of Environment and Science. Queensland Government.
- Department of Environment and Science, former (DES) 2022. Aquatic Conservation Assessment using AquaBAMM for the riverine and non-riverine wetlands of the Queensland Murray-Darling and Bullo Basins: Flora, Fauna and Ecology Expert Panel Report, Version 2.1. Queensland Government. Brisbane.
- Department of the Environment, Tourism, Science and Innovation (DETSI) 2024. A Biodiversity Planning Assessment for the New England Tableland Bioregion: Summary report, Version 3.1. Queensland Government. Brisbane.
- Department of Environment and Resource Management, former (DERM) 2010. Girraween National Park Management Plan 2010. Queensland Government. Brisbane.
- Donatiu, P 2006. Stanthorpe Plateau Threatened Flora Recovery Plan 2007-2011. Report to Department of Environment and Heritage, Canberra. Queensland Murray-Darling Committee. Toowoomba.
- Dwyer, PD & Hamilton-Smith, E 1965. Breeding caves and maternity colonies of the Bent-winged bat in South-eastern Australia. *Helictite, Journal of Australasian cave research*, vol 4 (1), pp. 3-22.
- Environmental Protection Agency, former (EPA) 2006a. New England Tableland Biodiversity Planning Assessment: Fauna Expert Panel Report, Version 2.3. Queensland Government. Brisbane.
- Environmental Protection Agency, former (EPA) 2006b. New England Tableland Biodiversity Planning Assessment: Flora Expert Panel Report, Version 2.3. Queensland Government. Brisbane.
- Environmental Protection Agency, former (EPA) 2006c. New England Tableland Biodiversity Planning Assessment: Landscape Expert Panel Report, Version 2.3. Queensland Government. Brisbane.
- Forster, PI, Binns, D & Roberston, G 2004. Rediscovery of *Tylophora linearis* P.I. Forster (Apocynaceae: Asclepiodoideae) from New South Wales, with revision of its conservation status to vulnerable. *Austrobaileya*, vol 6 (4), pp. 942-946.
- Garnett, S & Baker, GB, (eds) 2020. The Action Plan for Australian Birds 2020. CSIRO Publishing, 2021.
- Garnett, ST & Crowley, GM, (eds) 2000. The Action Plan for Australian Birds 2000. Environment Australia.
- Grimes 1978. Geology and geomorphology of Texas Caves. In *Memoirs of the Queensland Museum*, vol. 19 (1), pp. 17-59.
- Groves, RH 1981. *Australian Vegetation*. Cambridge University Press.

- Halford, D 1995. *Homoranthus montanus* Craven and S.R. Jones (Myrtaceae), a conservation statement. Queensland Herbarium, Department of Environment and Heritage. Brisbane.
- Halford, DA & Henderson, RJF 2002. Studies in Euphorbiaceae A.L.Juss. sens. lat. 3. A revision of *Bertya* Planch. (Ricinocarpeae Müll.Arg., Bertyinae Müll.Arg.). *Austrobaileya*, vol. 6(2), pp. 187-245.
- Harden, GJ, (ed) 1991. *Flora of New South Wales, Volume Two*. University of NSW Press. Kensington NSW.
- Haselgrove, P & Cant, M 2009. *Sundown National Park and Resources Reserve Dominant Species Vegetation Report and Map*. Queensland Parks and Wildlife Service. Toowoomba.
- Laidlaw, MJ & Butler, DW, 2021. Potential habitat modelling methodology for Queensland, Version 2.0, Updated November 2021. Queensland Herbarium, Queensland Department of Environment and Science. Brisbane.
- Leiper, G 2021. Millmerran. *Native Plants of Queensland Journal* September 2021. *Native Plants of Queensland*.
- Leverington, A, Edgar, R & Gordon, G 2003. Multi-species recovery plan for *Acacia eremophiloides*, *Acacia grandifolia*, *Acacia porcata*, *Bertya granitica* and *Newcastelia velutina* 2003-2007. Pp. 17.
- Low, T 2011. *Climate Change and Terrestrial Biodiversity in Queensland*. Department of Environment and Resource Management, Queensland Government. Brisbane.
- McDonald, W, Gravatt, C, Grimshaw, P, & Williams, J 1995. *The Flora of Girraween and Bald Rock National Parks*. Queensland Department of Environment and Heritage. Brisbane.
- National Parks, Recreation, Sports and Racing (NPRSR) 2013. *Sundown National Park and Sundown Resources Reserve Management Statement, 2013*. Department of National Parks, Recreation, Sports and Racing. Brisbane.
- Neldner, VJ, Laidlaw, MJ, McDonald, KR, Mathieson, MT, Melzer, RI, Seaton, R, McDonald, WJF, Hobson, R & Limpus, CJ 2017. *Scientific review of the impacts of land clearing on threatened species in Queensland*. Queensland Government. Brisbane.
- New South Wales Office of Environment and Heritage (NSWOEH) 2023. *Threatened biodiversity profile search*. Accessed 2023 <<https://threatenedspecies.bionet.nsw.gov.au/>>.
- Norman, P & Mackey, B 2023. *Priority areas for conserving greater gliders in Queensland, Australia*. *Pacific Conservation Biology*. Accessed 2023 <<https://doi.org/10.1071/PC23018>>.
- Noske, R, Prowse, S, Gillman, S, Donatiu, P & Moran, A 2023. *Durikai State Forest – a biodiversity hotspot*. *Protect the Bush Alliance Inc*. Brisbane.
- Plantnet 2023. *Agiortia cicatricata*. Accessed 2023 <<https://plantnet.rbgsyd.nsw.gov.au/>>.
- Queensland CRA/RFA Steering Committee 1998. *Flora data analysis, EH 1.1.4*. Forest Assessment Unit, Queensland Department of Environment and Heritage. Brisbane.
- Queensland Herbarium 2007. *Lepidium peregrinum*, nomination for re-classifying rare wildlife under the Nature Conservation Act 1992. Queensland Government, Environmental Protection Agency, Queensland National Parks and Wildlife Service (unpublished). Brisbane.
- Queensland Herbarium 2012a. *Specimen label information*. Queensland Herbarium. Accessed 19/01/2012.
- Queensland Herbarium, 2012b. *Specimen label information*. Queensland Herbarium. Accessed 20/03/2012
- Sattler, PS and Williams, RD (eds) 1999. *The Conservation Status of Queensland's Bioregional Ecosystems*. Queensland Environmental Protection Agency (former). Brisbane.
- Schodde, R & Mason, IJ 1999. *The Directory of Australian Birds: Passerines. A Taxonomic and Zoogeographic Atlas of the Biodiversity of Birds in Australia and its Territories*. CSIRO Publishing. Collingwood, Australia.
- Steenbeeke, G 1998. *Clarence Rare Plant Species Information*. Accessed from <<http://www.nor.com.au/environment/clarencecatchment/vegetation/rares/rarein.htm>>.
- Thackway, R and Cresswell, ID (eds) 1995. *An Interim Biogeographic Regionalisation for Australia: a framework for establishing the national system of reserves, Version 4.0*. Australian Nature Conservation Agency. Canberra.
- Timms, BV, Booth, CJ, Newman, M & McCann, JA 2020 *The Ecology Of Gnammas (Weathering Pits) On The Stanthorpe Plateau, Northern New England Tablelands, With Special Reference To The Clam Shrimp Paralimnadia Urukhai (Webb and Bell) (Crustacea: Branchiopoda: Spinicaudata)*. *Proceedings of The Royal Society of Queensland*.
- Walsh, NG & Coates, F 1997. *New taxa, new combinations and an infrageneric classification in Pomaderris (Rhamnaceae)*. *Muelleria*, vol. 10, pp. 37.
- Wikiwand 2023. *Persoonia daphnoides*. Accessed from <https://www.wikiwand.com/en/Persoonia_daphnoides>

Appendix 1. Acronyms and abbreviations

| | |
|----------|---|
| ALA | Atlas of Living Australia |
| BAMM | Biodiversity Assessment and Mapping Methodology |
| BPA | Biodiversity Planning Assessment |
| CEVNT | Critically Endangered, Endangered, vulnerable or near threatened under the Queensland <i>Nature Conservation Act 1992</i> and Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| CORVEG | The site survey database maintained by the Queensland Herbarium |
| DCDB | Digital cadastral database – a spatial database of Queensland property boundaries. |
| NSWOEH | New South Wales Office of Environment and Heritage |
| DERM | Queensland Department of Environment and Resource Management, former |
| DETSI | Queensland Department of the Environment, Tourism, Science and Innovation |
| EHP | Queensland Department of Environment and Heritage Protection, former |
| EPBC | <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| GIS | Geographic information system |
| HerbreCs | Specimen based register of plants held by Queensland Herbarium |
| NCA | <i>Nature Conservation Act 1992</i> |
| NET | New England Tableland bioregion |
| QHFD | Queensland Historical Fauna Database |
| RE | Regional ecosystem |
| REDD | Regional Ecosystems Description Database |
| SDRN | State Digital Road Network |
| SPA | <i>Sustainable Planning Act 2009</i> |
| WildNet | Department of the Environment, Tourism, Science and Innovation (DETSI)'s corporate wildlife application containing records and other information on Queensland flora and fauna |

Appendix 2. Datasets/themes available to the expert panel during the workshop

GIS

Geographic data

Catchment boundaries

Contours (10m interval)

Topographic maps (1:100 000)

Cadastral, government and locational data

Cadastral data (DCDB) for NET study area local government areas

Local government boundaries

Places

Towns

State Digital Road Network (SDRN)

Stock routes

Vegetation

Regional Ecosystem Description Database (REDD)

Pre-clearing (RE13) RE mapping

Remnant (RE13) RE mapping

Imagery

Landsat mosaic of the NET

Species

All fauna species records were obtained from Queensland Historical Fauna database, Wildnet, ALA and panel provided data. Flora species records were obtained from HerbreCs, WildNet and Corveg databases

Wetlands

Queensland Wetland Mapping

Directory of Important Wetlands

Ramsar

Drainage network - rivers

Drainage network - creeks

Biodiversity Planning Assessment data

Queensland bioregion and subregion boundaries

Terrestrial and riparian state bioregional corridors

Protected areas

Protected areas

Nature refuges

Documents available electronically

EHP 2014, *Biodiversity Assessment and Mapping Methodology. Version 2.2*, Department of Environment and Heritage Protection, Brisbane

Hard copy maps

NET bioregions and subregions (Queensland)

Broad vegetation groups (1:5M)

Statewide corridors

Appendix 3. Candidate flora and fauna taxa considered but not implemented as NET threatened/priority species

Flora

| Species | Common Name | Panel decision | Panel reason for not implementing |
|------------------------------------|--------------------|------------------------------|---|
| Threatened species NCA/EPBC | | | |
| <i>Acacia argyrotricha</i> | | Exclude | Records adjoin bioregion, however, do not fall within NET in QLD |
| <i>Acacia torringtonensis</i> | | Exclude | Taxa is currently known to occur only in NSW, not within the QLD extent of the NET |
| <i>Bertya opponens</i> | | Exclude | Sandstone, records adjoin bioregion - probably not relevant to NET. Panel recommended to exclude from threatened taxa list. |
| <i>Bertya pedicellata</i> | | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Digitaria porrecta</i> | finger panic grass | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Discaria pubescens</i> | | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Eucalyptus curtisii</i> | Plunkett mallee | Exclude | Same location as <i>Bertya opponens</i> . Panel agreed, exclude from threatened taxa list. |
| <i>Eucalyptus dunnii</i> | Dunn's white gum | Exclude | No records within/near NET in QLD |
| <i>Homopholis belsonii</i> | Belson's panic | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Macrozamia crassifolia</i> | | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Macrozamia pauli-guilielmi</i> | | Exclude | Coastal <i>Macrozamia</i> - probable mis-identification, remove from threatened taxa list. |
| <i>Picris conyzoides</i> | | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Pultenaea setulosa</i> | | Exclude | Potential taxon change - BriMapper shows further North. |
| <i>Solanum papaverifolium</i> | | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| <i>Thesium australe</i> | toadflax | Exclude | Records adjoin, however, do not fall within the NET in QLD. |
| Priority Species | | | |
| <i>Acacia adunca</i> | Wallangarra wattle | Exclude | Not endemic to NET - found in bioregions in NSW, VIC and SA |
| <i>Acacia betchei</i> | | Exclude | Not endemic to NET - found in northern and central NSW - exclude. Previous panel suggest risk from clearing now low. |
| <i>Acacia brownii</i> | | Exclude | Widespread throughout NSW and some records in southeastern QLD. Records indicate less disjunct than originally thought. |
| <i>Acacia granitica</i> | | Noted - future consideration | Coastal to tableland. Occurs on granite and sandstone. Relatively common where it occurs. Tends to dominate its niche (edge of pavements). Not considered susceptible to fire. |
| <i>Acacia hispidula</i> | | Noted - future consideration | Disjunct population on sandstone. Disjunct occurrences. Coastal and upland areas. |
| <i>Acacia resinicostata</i> | | Noted - future consideration | |
| <i>Acacia sertiformis</i> | | Noted - future consideration | Mainly high country in South East Queensland. More widespread in NSW. |
| <i>Acacia verniciflua</i> | varnished wattle | Noted - future consideration | Northern limit of range. Disjunct. Not that common in QLD. Northern distribution - potential retreat south due to climate change. Small distribution in QLD. Disjunct from NSW. |

| Species | Common Name | Panel decision | Panel reason for not implementing |
|---|------------------------|------------------------------|--|
| <i>Boronia microphylla</i> | small-leaved boronia | Noted - future consideration | Northern distribution - potential retreat south due to climate change. |
| <i>Bossiaea scortechinii</i> | | Noted - future consideration | Possibly endemic - some uncertainty associated with northern records. |
| <i>Bothriochloa biloba</i> | | Noted - future consideration | Previously listed as Vulnerable, now delisted. Not Listed in NSW either. Broad distribution. |
| <i>Burmannia disticha</i> | | Noted - future consideration | Predominantly coastal species. Record in Girraween disjunct from taxa's normal/common range. |
| <i>Cladium procerum</i> | leafy twigrush | Noted - future consideration | Coastal taxa mainly. A couple of disjunct records in NET. Poorly known. Disjunct. |
| <i>Correa glabra</i> var. <i>glabra</i> | | Noted - future consideration | Northern limit. Very scattered. Occurs on Main range as well. Not endemic. Only a few locations in NET. Possible dry adapted. |
| <i>Dipodium hamiltonianum</i> | yellow hyacinth orchid | Noted - future consideration | Disjunct, but widespread geographic distribution, however, uncommon and occurs as isolated patches. Also at Horan's Gorge, Amiens. |
| <i>Eucalyptus amplifolia</i> subsp. <i>Sessiliflora</i> | cabbage gum | Noted - future consideration | Some of the records in ALA - not QLD Herb records. Further investigation required. |
| <i>Eucalyptus viridis</i> | | Exclude | More patchy rather than disjunct. Very widespread. |
| <i>Eucalyptus williamsiana</i> | Williams's stringybark | Exclude | More patchy rather than disjunct. Very widespread. |
| <i>Eucalyptus youmanii</i> | Youman's stringybark | Noted - future consideration | Occurs on the slightly higher, rock granite country. More information required. |
| <i>Grevillea juniperina</i> subsp. <i>allojohnsonii</i> | | Noted - future consideration | Endemic. Northern limits. |
| <i>Grevillea viridiflava</i> | | Noted - future consideration | Common, but largely restricted to NET. Possibly under pressure in general landscape - NSW population largely on Protected Area Estate. More information required. |
| <i>Haemodorum planifolium</i> | | Noted - future consideration | Majority of distribution in NSW, creeps into QLD - northern distribution. |
| <i>Hakea laevipes</i> subsp. <i>graniticola</i> | | Noted - future consideration | Montane. Most likely endemic. |
| <i>Leucopogon microphyllus</i> | | Exclude | Wide-distribution. Not endemic. Exclude. |
| <i>Melaleuca linearis</i> var. <i>linearis</i> | | Exclude | Widespread. Occurs across Lamington as well. Exclude. |
| <i>Melaleuca pallida</i> | | Exclude | Northern Range of the taxa, however widespread. Exclude. |
| <i>Melaleuca pityoides</i> | | Noted - future consideration | Northern limit of Alpine swamp. Although common around Foxbar at low altitude, generally observed at high altitude - possibly susceptible to climate change. Influenced by changes in water table. |
| <i>Microseris lanceolata</i> | | Noted - future consideration | Discussed by the panel. No collections - anecdotal. Records are present near the border. |
| <i>Oxylobium arborescens</i> | tall shaggy pea | Noted - future consideration | Common in South East Queensland. Exclude. |
| <i>Ptilothrix deusta</i> | | Noted - future consideration | Largely coastal - disjunct occurrence. On Mount Norman Road in NET. Tolerant of disturbance. |
| <i>Pultenaea daphnoides</i> | | Noted - future consideration | Largely coastal distribution. |
| <i>Spyridium scortechinii</i> | | Noted - future consideration | Relatively common, not endemic. Harvested species. Northern portion of taxa's distribution, potentially susceptible to climate change retreat. |

Fauna

| Species | Common Name | Panel decision | Panel reason for not implementing |
|--|-----------------------------------|------------------------------|---|
| Threatened species NCA and /or EPBC | | | |
| <i>Acrodipsas illidgei</i> | Illidge's ant-blue | Exclude | This species was mistakenly included in the previous NET report. Local <i>Acrodipsas</i> of interest would be <i>A. mortoni</i> or <i>A. violacea</i> , however these are not CEVNT species and not nominated as priority species. |
| <i>Calidris ferruginea</i> | curlew sandpiper | Exclude | This species is unlikely to rely on any habitat within the NET. Excluded from consideration. |
| <i>Delma torquata</i> | collared delma | Exclude | There are no records of the species for the NET, and there is limited habitat that could support the species (Steve Wilson, <i>pers. com.</i> out of panel). |
| <i>Hemiaspis damelli</i> | grey snake | Exclude | There are no records of the species for the NET, and there is limited habitat that could support the species (Steve Wilson, <i>pers. com.</i> out of panel). |
| <i>Limosa lapponica baueri</i> | Western Alaskan bar-tailed godwit | Exclude | This species is unlikely to rely on any habitat within the NET. Excluded from consideration. |
| <i>Pseudomys oralis</i> | Hasting's River mouse | Exclude | This species has not been detected in the NET despite intensive survey effort, and should be considered not to occur in the region (Ian Gynther, <i>pers. com.</i> out of panel) |
| Priority Species | | | |
| <i>Accipiter novaehollandiae</i> | grey goshawk | Noted - future consideration | Delisted from rare to least concern since previous NET report. Does not meet criteria. |
| <i>Alectura lathamii</i> | Australian brush-turkey | Exclude | This species was recently recorded in Girraween. It has historically declined across the Brigalow Belt and the NET; however, it was decided that it doesn't meet priority criteria as it is stable and even increasing in population elsewhere in its range. |
| <i>Amalosia lesueurii</i> | Lesueur's velvet gecko | Noted - future consideration | This species is widespread south into NSW and is not eligible as a priority species. While the panel felt this could be a priority species, it was judged that it didn't meet the current criteria. |
| <i>Antechinus stuartii</i> | brown antechinus | Noted - future consideration | This species is restricted to a few upland sites in QLD but is widespread and abundant further south. While the panel felt this could be a priority species based on climate change impact, it was judged that it didn't meet the current criteria. |
| <i>Carlia tetradactyla</i> | southern rainbow-skink | Exclude | This species is widespread and not threatened. The panel judged that this species does not meet priority criteria. |
| <i>Climacteris erythroptis</i> | red-browed tree creeper | Noted - future consideration | Delisted from rare to least concern since previous NET report. Does not meet criteria. |
| <i>Delma plebeia</i> | common delma | Exclude | The species is uncommon but not particularly threatened. The panel judged that this species does not meet priority criteria. |
| <i>Ephippiorhynchus asiaticus</i> | black-necked stork | Noted - future consideration | Not known to be resident in NET and doesn't meet criteria. |
| <i>Eulamprus kosciuskoi</i> | alpine water skink | Noted - future consideration | There are known records of this species from Girraween National Park, which is the northern range limit for the species. The species is Vulnerable in Victoria and is potentially threatened by climate change. The QLD population is too poorly known to qualify for priority status but should be considered in future panels if more information comes to light. |
| <i>Falcunculus frontatus</i> | crested shrike-tit | Noted - future consideration | Panel concluded this species probably doesn't meet criteria. Would benefit from research on population trends in NET. |

| Species | Common Name | Panel decision | Panel reason for not implementing |
|--|----------------------------|------------------------------|--|
| Heliozelid moths on <i>Boronia granitica</i> and <i>B. repanda</i> | | Noted - future consideration | Species are currently undescribed and were only first collected in 2023. Needs further research and taxonomy (Don Sands and Doug Hilton <i>pers. com.</i> 2024). To be considered in future panels. |
| <i>Liopholis whitii</i> | White's skink | Exclude | This species was split into <i>Liopholis modesta</i> and <i>L. whitii</i> since the previous NET panel, with <i>L. modesta</i> being the dominant species in QLD. The only population of <i>L. whitii</i> in QLD is at Girraween National Park. The species is abundant and widespread further south and doesn't meet priority criteria. |
| <i>Lonchura castaneothorax</i> | chestnut-breasted mannikin | Noted - future consideration | Not known to be resident in NET and does not meet criteria. |
| <i>Lophoictinia isura</i> | square-tailed kite | Noted - future consideration | Species appears to be increasing in southern QLD. Does not meet criteria. |
| <i>Melithreptus gularis</i> | black-chinned honeyeater | Noted - future consideration | Delisted from rare to least concern since previous NET report. Does not meet criteria. |
| <i>Microeca fascinans</i> | jacky winter | Noted - future consideration | Assertion of declines in previous NET report have not held up. Does not meet criteria. |
| <i>Nettapus coromandelianus</i> | cotton pygmy-goose | Noted - future consideration | Delisted from rare to least concern since previous NET report. Not known to be resident in NET and does not meet criteria. |
| <i>Ninox connivens</i> | barking owl | Noted - future consideration | The species is Vulnerable in NSW and Critically Endangered in Vic, but QLD population is stable, and more abundant the further north you go. Does not meet priority criteria. |
| <i>Oreixenica lathoniella</i> | silver xenica | Exclude | Panel nominated this species for consideration, however, out of panel expert consultation concluded it does not occur in QLD. |
| <i>Oxyura australis</i> | blue-billed duck | Noted - future consideration | This species is Vulnerable or Near Threatened across most of its range, however not in QLD, where it is found across most of the state in varying population densities. NET is not a stronghold for the species, though it has been recorded breeding there recently. Does not meet priority criteria but should be reconsidered next panel. |
| <i>Paradelma orientalis</i> | brigalow scaly-foot | Exclude | This species is unlikely to occur in the NET and does not meet priority criteria. |
| <i>Pomatostomus superciliosus</i> | white-browed babbler | Noted - future consideration | Species is at the eastern limit of its range in NET, but otherwise widespread and abundant. Does not meet priority criteria. |
| <i>Pomatostomus temporalis</i> | grey-crowned babbler | Noted - future consideration | Vulnerable in Victoria, and may be declining across south of range, but widespread and abundant in northern and central Australia. Does not meet priority criteria. |
| <i>Pseudomys gracilicaudatus</i> | eastern chestnut mouse | Noted - future consideration | Listed as Vulnerable in NSW but does not seem to be declining in QLD, where most of its distribution is (Ian Gynther, <i>pers. com.</i> out of panel comments). Does not meet priority criteria but should be reconsidered during future panels. |
| <i>Saproscincus rosei</i> | Rose's shadeskink | Noted - future consideration | This species is widespread through wetter forests in South-eastern Queensland, and not particularly threatened as far as the panel was aware. Does not meet priority criteria at this time but should be considered in future panels. |
| <i>Theclinesthes onycha</i> | cycad blue | Noted - future consideration | While the declining status of native host plants is accepted as an issue in the NET, this species is abundant in nearby SEQ, and will readily use exotic cycads as hosts. Does not meet criteria. |

| Species | Common Name | Panel decision | Panel reason for not implementing |
|---------------------------|---------------------|------------------------------|---|
| <i>Vespadelus regulus</i> | southern forest bat | Noted - future consideration | Northern limit of range. Not identified in any State as threatened. Occurs throughout Southern Australia. The panel notes they are not typically a high-altitude species. Does not qualify as priority based on criteria. |