A Biodiversity Planning Assessment for the Southeast Queensland Bioregion

Flora Expert Panel Report

Version 4.1

Queensland Government

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Citation

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1 Introduction

This report summarises the proceedings and the output of expert flora panels convened to discuss the biodiversity values of the Southeast Queensland (SEQ) bioregion. The expert panel to discuss the flora biodiversity values of the northern half of the bioregion was held in Maryborough on 9 February 2016, and the southern panel was held in Brisbane on 2 March 2016. This report documents the panels' findings using the regional ecosystem (RE) mapping dated Version 9 (April 2015).

In order to fully capture biodiversity values and to accommodate local knowledge, the following three sets of values were considered for the SEQ study area:

- fauna
- flora
- landscape.

The Biodiversity Assessment and Mapping Methodology (BAMM, version 2.2) (EHP 2014) has been developed to provide a consistent approach for assessing biodiversity values at the landscape scale in Queensland using vegetation mapping data generated or approved by the Queensland Herbarium as a fundamental basis. It is being used by the Department of Environment and Heritage Protection (EHP) to generate Biodiversity Planning Assessments (BPAs) for bioregions in Queensland.

The BAMM is continually being refined and is published on the EHP website at <www.ehp.qld.gov.au>. The methodology was developed from a similar method initially devised by Chenoweth EPLA (2000), and can be used by agency staff, other government departments, local governments or members of the community to inform on a range of planning or decision making processes.

The methodology is applied in two stages (Figure 1). The first stage uses existing data to assess seven diagnostic criteria, which are relatively uniform and reliable across a bioregion. 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 on 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 data that may not be available uniformly across the bioregion.

Expert panels are convened to review and refine diagnostic criteria and to assess the expert panel criteria (Figure 1). A generalised terms of reference for expert panels is provided in the BAMM version 2.2.

Appendix 1 provides details of any abbreviations included in the report.

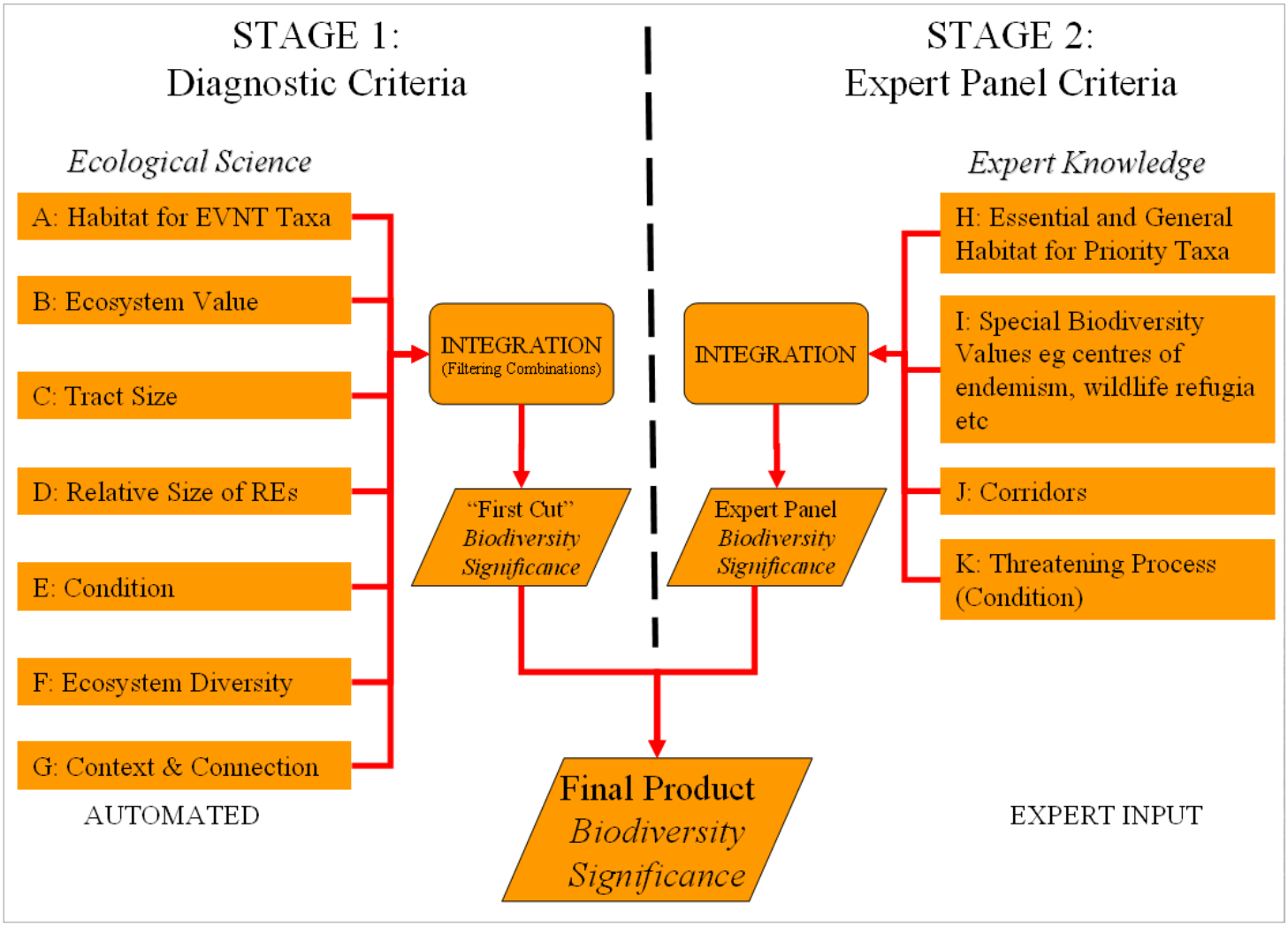


Figure 1 Biodiversity Assessment and Mapping Methodology (BAMM) process

2 Method

2.1 Study Area

The SEQ Bioregion shares its western boundary with the Brigalow Belt Bioregion, and extends from the New South Wales border north to the dry coastal corridor between Gladstone and Rockhampton that forms part of the Brigalow Belt Bioregion (Figure 2). The McPherson Range borders the southern boundary of the bioregion while the Great Dividing Range is to the west. Ranges extend north south through the central region creating an altitudinal gradient from the coast. Small volcanic plugs remain in the landscape offering unique conditions for taxa. Large sand islands off the coast offer unique environments and create sheltered bays and passages within which marine and coastal plants and animals thrive. The SEQ Bioregion is one of the most biologically diverse in Australia rivalling the Wet Tropics. More than 3,300 species of native plant inhabit the greater Brisbane landscape alone (Ryan 2003). Additionally there are many endemic species. The bioregion area contains the most urbanised parts of Queensland but also some of the most exceptional natural areas in the state, including the Gondwana Rainforests of Australia and Fraser Island World Heritage Areas.

Southeast Queensland has a humid sub-tropical climate with mild winters and warm, wet summers. It is the most densely populated area of Queensland, accommodating over 70% of the state population (Queensland Treasury 2015), and is subject to a range of land uses including grazing, nature conservation, irrigated agriculture, urban uses (including industrial and residential) and rural living. The region's major agricultural products include dairy, fodder crops, cereal and a variety of horticultural produce.

The SEQ bioregion contains a great diversity of land types (Sattler & Williams 1999). The most widespread are the eucalypt forests and woodlands of the hills and ranges that contain a diversity of understorey grasses, shrubs and heaths. Rainforests occur on ranges and watercourses and wallum heaths occur closer to the coast. The bioregion contains 282 regional ecosystems (counting sub REs) encompassing 43 Broad Vegetation Groups (1:1 million) based on QLD Herbarium remnant vegetation mapping (v9.0). Of these, 28 REs have a biodiversity status of 'endangered', 82 are 'of concern' and 46 are 'not of concern'.

The current assessment utilised filtered records for 6,670 native plant species. Of these, 44 are listed as "Confidential" which includes many orchids and cycad species.

The main pressure on the biodiversity in SEQ is the impact of rapid population growth and concomitant growth of services that fragment the landscape. Other important threats are unsustainable land management practices, native vegetation clearing, point source and diffuse pollutants (from urban, industrial and agricultural areas) entering waterways and the impacts of introduced plants and animals.

There are 12 sub-regions within the Southeast Queensland Bioregion (Figure 2). The Department of Science, Information Technology and Innovation (DSITI) has mapped and classified regional ecosystems (RE) to a peer reviewed and published mapping and classification methodology. These RE maps were used as a platform for the conservation assessments reported here. BPAs accept the released RE maps unmodified and therefore, are limited by the REs inherent mapping and classification accuracy. Issues to do with RE mapping or classification errors are dealt with by DSITI's mapping update processes and are not part of a BPA.

2.2 SEQ Expert Panel Area

The Southeast Queensland bioregion has been divided into two areas (north and south) for expert panel reviews (Figure 2). The split is based on local government boundaries and is consistent with previous versions of the BPA. Although southern and northern panels were run for the SEQ bioregion for convenience, the results have been combined into a single expert panel report and BPA for the entire the bioregion. It has been desirable to continue to divide the bioregion for the convenience of expert panels because of the regional planning frameworks, the complex biodiversity of the bioregion and its relatively large size.

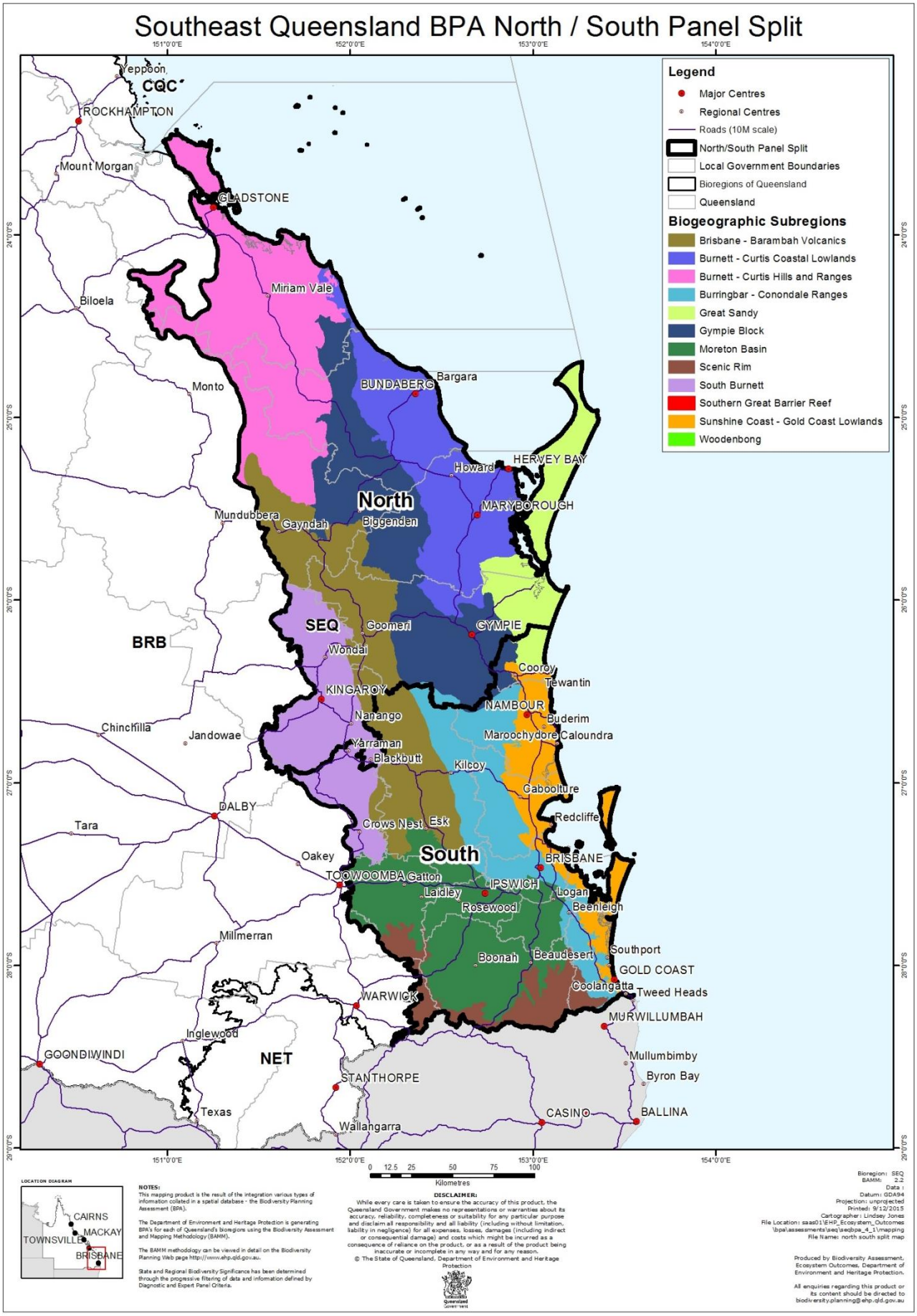


Figure 2 The Southeast Queensland Bioregion and its subregions showing the north/south panel split

2.3 Expert Panel

The expert panel plays a significant role in the development of a BPA through:

- reviewing the suitability of data used in and arising from the GIS analysis
- identifying other information sources including expert and local knowledge, technical reports and papers, and modelled maps
- providing expert opinion where quantitative data is not available uniformly across the bioregion

Specifically for flora and fauna, the biodiversity issues addressed at panel workshops are:

- evaluating point records for endangered (E), vulnerable (V) and near threatened (NT) taxa to improve spatial accuracy and precision
- capturing any additional records available from expert panel members for subsequent use in criteria A and H
- identifying areas with special biodiversity values (criteria I) important for the bioregion's flora
- identifying non-EVNT taxa to be treated as 'priority species' under criteria H
- identifying data gaps

The SEQ flora expert panel comprised invited persons with knowledge of the biodiversity and/or special biodiversity values of the SEQ Bioregion and a sound understanding of ecological conservation and management principles. As far as possible, the combined expertise of participants covered the whole SEQ Bioregion and a range of planning and assessment processes (e.g. local government, regional Natural Resource Management (NRM) bodies, state government). The terms of reference for expert panels are provided in the BAMM documentation on the EHP website. Two flora expert panels were convened, one for the northern half of the bioregion and one for the southern (Figure 2). All panel participants are listed in Table 1 and Table 2.

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, EHP.

Further, significance ratings of State or Regional are attributed to the decisions produced at the expert panels. In general, ratings were only given by the panel to areas of remnant REs, however some small areas of non-remnant vegetation have been given a biodiversity significance rating as part of corridors to improve landscape connectivity.

The ratings used by the panel were described as:

State significance—areas assessed as being significant for biodiversity at the bioregional or state scales. They also include 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.

Table 1 Northern SEQ flora expert panel participants on 9th February 2016 in Maryborough

Name	Organisation
Carl Moller	Bundaberg Regional Council
Greg Smyrell	Indigaflora
Michael Lowe	Cooloola Native Plants
David Francis	Cardno
Rod Buchanan	BMRG
Tony van Kampen	Consultant
Bill McDonald	DSITI – Queensland Herbarium
Jason Halford	DSITI – Queensland Herbarium
Melinda Laidlaw	DSITI – Queensland Herbarium
David Field	EHP - Maryborough
Alan Logan	
Support staff	
Lindsey Jones	EHP
Shane Chemello	EHP
Mark Kelton	EHP
Stephen Trent	EHP

Table 2 Southern SEQ flora expert panel participants on 2nd March 2016 in Brisbane

Name	Organisation
Paul Grimshaw	Consultant
David Jinks	Consultant
David Francis	Consultant
Ted Fensom	Brisbane Region Environment Council
Keith McCosh	Scenic Rim Regional Council
Candy Daunt	Redlands City Council
Naomi Christian	Gold Coast City Council
Frank McGrath	Gold Coast City Council
Zoe Sampson	Moreton Bay Regional Council
Peter Copping	Logan City Council
Darren McPherson	Somerset Regional Council
Rowena Thomas	QPWS
Bill McDonald	DSITI – Queensland Herbarium
Melinda Laidlaw	DSITI – Queensland Herbarium
Tim Ryan	DSITI – Queensland Herbarium
Steven Howell	EHP
Support staff	
Lindsey Jones	EHP
Shane Chemello	EHP
Stephen Trent	EHP

2.3.1 Expert panel format

The flora 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.

The resources made available to the participants during the workshop proceedings were:

- copy of the BAMM
- available regional ecosystem mapping and 1:100 000 topographic maps
- information from databases such as Herbrecs, Corveg, and WildNet
- published surveys
- informal sources
- ancillary GIS layers provided for local reference included roads and cadastral information, drainage, State forests and national parks and Landsat Thematic Mapper imagery; digital topographic maps where available.

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

2.3.2 Species considerations (criteria A and H)

Flora species considered by the expert panel were EVNT species listed under the Queensland *Nature Conservation Act 1992* (NCA) or the Australian Government *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) and priority (non-EVNT) taxa including those identified through the Back on Track species prioritisation framework and other natural resource assessments focused on the bioregion. Records were compiled using WildNet, Corveg 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 any species with existing models of habitat suitability that could be incorporated into the BPA and to nominate species that they thought possible to generate models for, based on knowledge of known preferences of species for particular habitat features, e.g. specific REs or geology and landscape position. Proposed changes in status under the NCA were also considered.

Species records were interactively reviewed using GIS commencing with EVNT species then priority taxa. 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 they were collected by a reliable source. They shifted 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
- cultivated records
- records which had obviously been placed at a degree or 10’ grid centroid
- duplicate records which had been cited by a number of sources
- records with a precision >2000 metres.

Individuals were consulted following the workshops to clarify some recommendations and to add records.

2.3.2.1 Habitat for Endangered, Vulnerable and Near-Threatened species (criterion A)

Species records were interactively reviewed on GIS in decreasing order of conservation status: E, V, NT. Experts were asked to accept, add, shift or exclude records based upon their detailed knowledge of those taxa. Species were excluded from the diagnostic analysis when the panel considered there to be a lack of reliable SEQ bioregion records, or when species were not known to occur in the SEQ bioregion.

These decisions were flagged in the spatial database and in the minutes, which identified the person submitting the information; habitat information and threatening processes for each species, and the nomination of additional experts to be consulted regarding certain records or species.

2.3.2.2 Core habitat for priority taxa (criterion H)

The panel reviewed a list of priority flora species, and their associated records, with potential to be endemic and/or have disjunct distributions within the SEQ bioregion. Based on the distribution of the records location and expert

knowledge, the panel determined whether the species should be considered to have a disjunct and/or endemic distribution with the SEQ bioregion.

Other priority taxa are identified for each bioregion on the basis of one or more special values and the written opinion of experts. These values may include:

- taxa at risk
- taxa of scientific interest as being relictual (ancient or primitive)
- endemic taxa
- significant species
- taxa important for maintaining genetic diversity such as complex spatial patterns of genetic variation
- disjunct species populations
- taxa functionally important to ecosystem integrity
- taxa performing a role as an ecological indicator of ecosystem integrity
- taxa vulnerable to impacts of climate change.

2.3.3 Special biodiversity values (criterion I)

The flora panels nominated areas of special flora biodiversity value for inclusion under criterion I. The panel assigned State or Regional significance to the nominated areas on the basis of presence of at least one of the following features:

- Criterion Ia—the area supports a number of taxa endemic to the SEQ bioregion
- Criterion Ib—wildlife refugia; natural wetland that is in good condition or continues to function as a major wildlife habitat when seasonal conditions permit
- Criterion Ic—the area supports a number of taxa that are present in other bioregions and have a limited number of occurrences in the SEQ bioregion (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 a high species diversity
- 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 a high density of hollow-bearing trees that provide animal habitat
- Criterion Ij—the area is used by significant numbers of individuals for roosting or breeding.
- Criterion Ik—climate change refuge.

The panel took into account combinations of the features present in deciding on an overall rating of State or Regional significance. The diagnostic criteria in BAMM use prescribed thresholds for determining the relative importance of individual criteria and standard rules for assigning significance based on combinations of values present. However, BAMM version 2.2 (Appendix 6) provides limited guidance on how expert panels are to assess criteria. The SEQ Bioregion 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, in others a bounding box was drawn as a shape file to indicate the general location of the area, and specific instructions given for the area to be more accurately mapped using RE polygons, geology, landform or some combination of these. Subsequently the areas were mapped, distributed to the expert panel for review, and then finalised.

3 Results and discussion

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

3.1 Flora species considerations (criteria A and H)

Criteria A and H attribute significance to areas based on the presence of EVNT taxa scheduled under the NCA or the EPBC, or presence of priority species. The SEQ bioregion flora expert panels considered and listed 284 species for inclusion in criterion A and 129 species for criterion H. Table 3 summarises the categories of species. It is the general convention under the BAMM that flora records are filtered to exclude records older than 1950, or with a precision greater than 2000 metres. The standard BAMM record filtering rules were used.

Table 3 Summary of flora taxa listed for criteria A and H

	Endangered NCA or EPBC	Vulnerable NCA or EPBC	Near Threatened NCA	Priority	Total
Number of taxa	79	142	62	129	412
Number of taxa for which the panel made comments	6	2	2	44	54

3.1.1 Habitat for endangered, vulnerable and near threatened flora species (criterion A)

The panels reviewed records of the listed EVNT species and provided comments for some species (Table 4). Only one species was excluded from implementation because there were no reliable records of the species in the SEQ bioregion. The records for *Aponogeton elongatus subsp. fluitans* were either too old or had very poor precision.

Table 4 Comments and recommendations of expert panel relating to endangered, vulnerable and near threatened flora species (criterion A)

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Acacia acrionastes		NT		
Acacia attenuata		V	V	
Acacia baueri subsp. *baueri*	tiny wattle	V		
Acacia eremophiloides		V	V	
Acacia grandifolia		C	V	
Acacia pedleyi		V		
Acacia saxicola	Mt. Maroon wattle	E		
Acacia sp. (Castletower N.Gibson TOI345)		V		
Acacia tingoorensis		V		
Acacia wardellii		NT		
Acianthus saxatilis		E		
Acronychia littoralis	scented acronychia	E	E	
Actephila bella		V		
Agiortia cicatricata		NT		
Alectryon ramiflorus		E	E	
Allocasuarina emuina	Mt. Emu she-oak	E	E	
Allocasuarina filidens	Mt. Beerwah she-oak	V		
Allocasuarina rigida		V		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Allocasuarina rigida subsp. *exsul*		V		
Allocasuarina thalassoscopica	Mt. Coolum she-oak	E	E	
Alloxylon pinnatum		NT		
Apatophyllum olsenii		E	V	
Apatophyllum teretifolium		NT		
Aponogeton elongatus		NT		
Aponogeton elongatus subsp. *elongatus*		NT		
Archidendron lovelliae	bacon wood	V	V	
Ardisia bakeri	ardisia	NT		
Arthraxon hispidus		V	V	
Arundinella grevillensis		V		
Arytera dictyoneura		NT		
Astonia australiensis		E		
Atalaya collina		E	E	
Backhousia oligantha		E		
Baloghia marmorata	jointed baloghia	V	V	
Banksia conferta		V		
Bertya ernestiana		V	V	
Bertya glandulosa		V		
Bertya opponens		C	V	

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Bertya pedicellata		NT		
Bertya pinifolia		V	V	
Bertya sharpeana	Mt. Coolum bertya	NT		
Blandfordia grandiflora	Christmas bells	E		Genetic studies have been conducted on southern populations. There is variation in colour forms in the Great Sandy region. (Michael Lowe). Gabriel Conroy (Sunshine Coast University) may have undertaken studies.
Boronia grimshawii		V		
Boronia keysii	Key's boronia	V	V	Alan Logan has recorded north of model. Old forestry map wildflower reserve.
Boronia rivularis	Wide Bay boronia	NT		
Bosistoa transversa	three-leaved bosistoa	C	V	Primarily NSW threatened species
Bothriochloa bunyensis	Bunya Mountains bluegrass	V	V	
Brachychiton sp. (Ormeau L.H.Bird AQ435851)		E	CE	
Brachyscome ascendens	Binna Burra daisy	V		
Bulbophyllum argyropus		V		
Bulbophyllum globuliforme		NT	V	
Bulbophyllum weinthalii subsp. *striatum*		V		
Bulbophyllum weinthalii subsp. *weinthalii*		V		
Callitris baileyi	Bailey's cypress	NT		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Carex breviscapa		V		
Cassia marksiana		V		
Cassinia collina		V		
Caustis blakei subsp. *macrantha*		V		
Chiloglottis sphyrnoides		V		
Clausena smyrelliana		E		
Clematis fawcettii		V	V	
Comesperma breviflorum		NT		
Commersonia leiperi		V		
Commersonia prostrata		C	E	
Coopernookia scabridiuscula	coopernookia	V	V	
Corchorus cunninghamii		E	E	
Corybas montanus	small helmet orchid	V	V	
Corynocarpus rupestris		V		
Corynocarpus rupestris subsp. *arborescens*	southern corynocarpus	V		
Cossinia australiana		E	E	
Croton mamillatus		E		
Cryptocarya floydii	gorge laurel	NT		
Cryptocarya foetida	stinking cryptocarya	V	V	

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Cryptostylis hunteriana		C	V	
Cupaniopsis newmanii	long-leaved tuckeroo	NT		
Cupaniopsis shirleyana	wedge-leaf tuckeroo	V	V	Basically there are 3 taxa. Current listing is species in narrowest sense. Old record near Bingera - may need to be re-collected. (Bill McDonald)
Cupaniopsis tomentella	Boonah tuckeroo	V	V	
Cyathea cunninghamii	slender tree fern	NT		
Cycas megacarpa		E	E	
Cyperus clarus		V		
Cyperus rupicola		V		
Cyperus semifertilis		V	V	
Dansiea elliptica		NT		
Davidsonia johnsonii	smooth davidsonia	E	E	
Daviesia discolor		V	V	
Dendrobium schneiderae var. *schneiderae*		NT		
Denhamia parvifolia		V	V	
Dichanthium setosum		C	V	
Digitaria porrecta		NT		
Diploglottis campbellii	small-leaved tamarind	E	E	
Discaria pubescens		NT		
Diuris parvipetala		V		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Dodonaea rupicola		V	V	
Drynaria x *dumicola*		V		
Durringtonia paludosa	durringtonia	NT		
Eleocharis difformis		E		
Endiandra floydii		E	E	
Endiandra globosa	ball-fruited walnut	NT		
Endiandra hayesii	rusty rose walnut	V	V	
Eucalyptus codonocarpa	mallee ash	NT		
Eucalyptus conglomerata	swamp stringybark	E	E	
Eucalyptus curtisii	Plunkett mallee	NT		
Eucalyptus decolor		NT		
Eucalyptus dunnii	Dunn's white gum	V		
Eucalyptus hallii	Goodwood gum	V	V	
Eucalyptus kabiana	Mt. Beerwah mallee	V	V	
Eucalyptus raveretiana	black ironbox	C	V	
Eucalyptus taurina	Helidon ironbark	V		
Eucalyptus virens	shiny-leaved ironbark	V	V	
Eucryphia jinksii		E		
Eulophia bicallosa		NT		
Euphrasia bella	Lamington eyebright	E	V	

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Fimbristylis vagans		E		
Floydia praealta	ball nut	V	V	
Fontainea australis	southern fontainea	V	V	
Fontainea fugax		E		
Fontainea rostrata		V	V	
Fontainea venosa		V	V	
Gaultheria viridicarpa		V		
Genoplesium cranei		V		
Genoplesium sigmoideum		NT		
Germainia capitata		V	V	
Glycine argyrea		NT		
Gonocarpus effusus		V		
Gonocarpus hirtus		V		
Gossia fragrantissima		E	E	Badly affected by myrtle rust
Gossia gonoclada		E	E	Almost wiped out by myrtle rust
Gossia inophloia		NT		Susceptible to myrtle rust
Graptophyllum excelsum		NT		
Graptophyllum ilicifolium	holly-leaved graptophyllum	V	V	
Graptophyllum reticulatum	reticulated holly	E	E	
Grevillea hodgei		V		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Grevillea linsmithii		E		
Grevillea quadricauda		V	V	
Grevillea venusta	grevillea	V		
Gyrostemon osmus		E		
Habenaria harroldii		E		
Habenaria xanthantha		NT		
Haloragis exalata		V		
Haloragis exalata subsp. *velutina*		V	V	
Helicia ferruginea	rusty oak	V		
Hernandia bivalvis	cudgerie	NT		
Hibbertia hexandra		NT		
Hibbertia monticola	mountain guinea flower	NT		
Hicksbeachia pinnatifolia	red bopple nut	V		
Jasminum jenniae		E		
Lasiopetalum sp. (Proston J.A.Baker 17)		E	CE	
Lastreopsis silvestris		V		
Leionema elatius subsp. *beckleri*		E		
Leionema gracile		V		
Leionema obtusifolium		V	V	
Lenwebbia prominens		NT		Affected by myrtle rust - Lamington NP heavy defoliation

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Lenwebbia sp. (Blackall Range P.R.Sharpe 5387)		E		Badly affected by myrtle rust
Lepiderema pulchella	fine-leaved tuckeroo	V		
Lepidium peregrinum		C	E	
Leptospermum barneyense		V		
Leptospermum luehmannii		V		
Leptospermum oreophilum		V		
Leucopogon recurvisepalus		E		
Leucopogon sp. (Coolmunda D.Halford Q1635)		E	E	
Lilaeopsis brisbanica		E		
Liparis simmondsii		NT		
Lobelia membranacea		NT		
Lychnothamnus barbatus		V	E	
Macadamia integrifolia	macadamia nut	V	V	
Macadamia jansenii		E	E	
Macadamia ternifolia	bopple nut	V	V	
Macadamia tetraphylla		V	V	
Macarthuria complanata		NT		
Macropteranthes leiocaulis		NT		
Macrozamia cardiacensis		V		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Macrozamia lomandroides		E	E	
Macrozamia longispina		NT		
Macrozamia parcifolia		V	V	
Macrozamia pauli-guilielmi		E	E	
Mallotus megadontus		V		
Marsdenia coronata	slender milkvine	V		
Marsdenia longiloba		V	V	
Maundia triglochinoides		V		
Medicosma elliptica		V	V	
Melaleuca cheelii		NT		
Melaleuca formosa		NT		
Melaleuca groveana		NT		
Melaleuca irbyana		E		
Melaleuca williamsii subsp. *fletcheri*		V		
Micromyrtus vernicosa		V		
Muellerina myrtifolia		NT		
Myrsine serpenticola		E		
Niemeyera whitei		V		
Notelaea ipsviciensis		E	CE	
Notelaea lloydii	Lloyd's native olive	V	V	

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Nothoalsomitra suberosa		NT		
Ochrosia moorei	southern ochrosia	E	E	
Oldenlandia gibsonii		E		
Olearia heterocarpa	nightcap daisy bush	NT		
Olearia hygrophila	swamp daisy	E	E	
Owenia cepiodora	onion cedar	V	V	
Ozothamnus vagans		V	V	
Papillilabium beckleri		NT		
Pararistolochia praevenosa		NT		
Parsonsia kroombitensis		V		
Parsonsia larcomensis		V	V	
Parsonsia largiflorens		E		
Parsonsia sankowskyana		E		In need of targeted collection
Parsonsia tenuis	slender silkpod	V		
Paspalidium grandispiculatum		V	V	
Persicaria elatior		V	V	
Phaius australis	lesser swamp orchid	E	E	Laura Simmons' PhD has been undertaken on this species (Laura Simmons - QLD Herbarium)
Phaius bernaysii	yellow swamp orchid	E	E	
Phebalium distans		E	CE	

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Phlegmariurus varius		V		
Phyllanthus sp. (Bulburin P.I.Forster+ PIF16034)		V		
Picris conyzoides		V		
Picris evae		V	V	
Pimelea umbratica		NT		
Pittosporum oreillyanum	thorny pittosporum	NT		
Planchonella eerwah		E	E	
Plectranthus habrophyllus		E	E	
Plectranthus leiperi		V	V	
Plectranthus nitidus		E	E	
Plectranthus omissus		E	E	
Plectranthus torrenticola		E	E	
Pneumatopteris pennigera	lime fern	E		
Podolepis monticola	mountain podolepis	V		
Polianthion minutiflorum		V	V	
Pomaderris clivicola		E	V	
Pomaderris coomingalensis		E		
Pomaderris crassifolia		V		
Pomaderris notata		V		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Prasophyllum exilis		NT		
Prasophyllum wallum	Wallum leek orchid	V	V	
Prostanthera palustris			V	
Prostanthera spathulata		V		
Pseudanthus pauciflorus subsp. *pauciflorus*		NT		
Pterostylis bicornis	horned greenhood	V	V	
Pterostylis chaetophora		E		
Pterostylis nigricans		NT		
Pterostylis scoliosa		E		
Pterostylis sp. (Gundiah W.W.Abell AQ72188)		NT		
Pultenaea whiteana	Mt. Barney bush pea	V		
Randia moorei	spiny gardenia	E	E	
Rhaponticum australe		V	V	
Rhizanthella omissa		E		
Rhodamnia angustifolia		E		
Rhodamnia glabrescens		NT		
Ricinocarpos speciosus		V		
Romnalda strobilacea		V	V	
Samadera bidwillii		V	V	

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Sarcochilus fitzgeraldii	ravine orchid	E	V	
Sarcochilus hartmannii		V	V	
Sarcochilus weinthalii	blotched sarcochilus	E	V	
Selaginella andrewsii		C	V	
Solanum callium	brush nightshade	V		
Solanum mentiens		E		
Sophora fraseri	brush sophora	V	V	
Symplocos baeuerlenii	small-leaved hazelwood	V	V	
Symplocos harroldii	hairy hazelwood	NT		
Syzygium hodgkinsoniae	red lilly pilly	V	V	
Syzygium moorei	Durobby	V	V	
Tecomanthe hillii	Fraser Island creeper	NT		
Tetramolopium vagans		V		
Thelypteris confluens		V		
Thesium australe	toadflax	V	V	
Thismia rodwayi		NT		
Tinospora tinosporoides	arrow head vine	V		
Triunia robusta		E	E	
Uromyrtus lamingtonensis		V		
Wahlenbergia scopulicola		V		

Scientific Name	Common Name	NCA[1]	EPBC[2]	Expert Panel Comments
Westringia blakeana		NT		
Westringia grandifolia		E		
Westringia rupicola		V	V	
Westringia sericea	native rosemary	V		
Xanthostemon oppositifolius	southern penda	V	V	
Xylosma ovata		NT		
Zieria actites		E		
Zieria adenodonta		NT		
Zieria bifida		E	E	
Zieria collina		V	V	
Zieria exsul		E		
Zieria furfuracea subsp. *gymnocarpa*		E		
Zieria inexpectata		E		
Zieria montana		V		
Zieria verrucosa		V	V	

1 - E = endangered, V = vulnerable, NT = near threatened

2 - CE = critically endangered, E = endangered, V = vulnerable.

3.1.2 Core habitat for priority flora taxa (criterion H)

Priority species are non-EVNT species that are considered to be of particular conservation significance. The rationale for inclusion is based on eligibility relating to any of the following species characteristics:

1. **Taxa at risk** - Taxa that, from a bioregional perspective, are under threat and consequently have had significant population and/or range declines based on scientific evidence and/or expert opinion.
2. **Taxa of scientific interest as relictual (ancient or primitive)** - taxon (e.g. species or other lineage) that is the sole surviving representative of a formerly diverse group. Some flora and fauna taxa have been linked with important stages in the earth's evolutionary history.
3. **Endemic taxa** - Taxa which have at least 75% of their geographical range within one bioregion (Commonwealth of Australia 1995, Queensland CRA/RFA Steering Committee 1998).
4. **Significant taxa** - These species are identified by experts as important from a bioregional perspective as they exhibit characteristics such as: Taxa have limited distribution in Queensland mostly within relevant bioregion, or with a restricted range bordering two or more bioregions; the species may be found outside the State within Australia and/or overseas; the species in the bioregion exhibits characteristics or traits not evident elsewhere in its range; the bioregion is a stronghold for the species or the species is considered iconic.
5. **Taxa important for maintaining genetic diversity such as complex patterns of genetic variation** - species that exhibit a recognised variation in genetic composition across the bioregion, or with respect to other bioregions. This could include taxa that appear to comprise several cryptic taxa.
6. **Disjunct species populations** - Populations broken by climatic, topographic or edaphic barriers bridged by long distance dispersal of propagules; or be seen as insurmountable barriers to dispersal requiring a geological (historical) rather than a behavioural (ecological) explanation for their presence (Groves 1981).
7. **Taxa functionally important to ecosystem integrity** - There are plant or animal 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. They are often, but not always, a predator. A few predators can control the distribution and population of large numbers of prey species.
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.
9. **Taxa vulnerable to impacts of climate change** - Species that are 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 & cyclones). Species can only be listed under this reason if there is sufficient knowledge of species' biology and its interaction with climate that would support an assessed impact under climate change scenarios.

The eligibility characteristics listed above differ slightly from the list used in the previous BPA version (v3.5) in the following manner:

- The definitions of each characteristic have been further refined.
- Range limits themselves are now NOT considered important enough to justify inclusion.
- A new characteristic relating to climate change has been introduced.

A total of 129 species were listed for criterion H. The SEQ north flora panel nominated 26 species. The SEQ south panel nominated 118 species. The number of species pertaining to each eligibility characteristic is summarised in Table 5. Most species listed had more than one eligibility characteristic. Three of the species exhibited four eligibility characteristics.

Additional species were also identified post panel by panel members and the final list of priority species is shown in Table 6. The additional species related to those at extreme and high risk from myrtle rust and those impacted by

climate change.

For inclusion in the BPA the records were first subject to filtering rules for age of record and precision as applied to records for criteria A (see BAMM documentation, EHP 2014). Subsequently, all records were buffered by twice the precision (as for criteria 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 7.

Table 5 Criterion H taxa numbers pertaining to their rationale for listing

Eligibility characteristic	Taxa Number
1. Taxa at risk	28
2. Taxa of scientific interest as relictual (ancient or primitive)	12
3. Endemic taxa	37
4. Significant taxa	26
5. Taxa important for maintaining genetic diversity such as complex patterns of genetic variation	0
6. Disjunct species populations	40
7. Taxa functionally important to ecosystem integrity	3
8. Taxa performing a role as an ecological indicator of ecosystem integrity	0
9. Taxa vulnerable to impacts of climate change	23

Table 6 Comments and recommendations of expert panel relating to priority flora taxa (criterion H).

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
Abelmoschus moschatus subsp. *moschatus*		Data Deficient	4	Found elsewhere but only Australian occurrence is on Stradbroke island	Regional		Y
Acacia baeuerlenii			4		Regional		Y
Acacia bakeri	marblewood	Medium	3	Likes slightly poorer soils. Regenerates in shade in rainforest.	Regional	Y	Y
Acacia longissima			4		Regional		Y
Acacia pubicosta		Low	3		State	Y	
Acacia sp. (Bulburin W.J.McDonald 3208)		Low	3		Regional	Y	Y
Acacia sp. (Gayndah P.I.Forster+ PIF24863)			3		State	Y	
Acomis acoma		Low	3		State		Y
Acronychia baeuerlenii	Byron Bay acronychia	Low	2, 9		State		Y
Acronychia octandra	doughwood	Low	4		Regional		Y
Acronychia wilcoxiana	silver aspen	Low	4		Regional		Y

1 Back On Track rating as per NRM groups

2 Refer to Table 5 for descriptions

3 Myrtle rust comments taken from Biosecurity Queensland

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
Actephila grandifolia			1, 4	Springbrook to Wollongbar (near Lismore) - under threat - continuing loss of already fragmented habitat.	Regional		Y
Agathis robusta	kauri pine		6		Regional		Y
Alyxia stellata			6, 9		Regional	Y	
Anopterus macleayanus	Macleay laurel		2, 4, 9		State		Y
Archidendron muellerianum	veiny lace flower	Low	1, 4		State		Y
Argophyllum nullumense	silver leaf	Low	2, 3, 6, 9	Panel suggests Species Technical Committee be asked to review this species with regard to reinstatement as threatened species.	State	Y	Y
Arthropodium sp. (Mt Cordeaux P.I.Forster+ PIF22065)		High	3		Regional		Y
Austrobuxus swainii	pink cherry	Low	1, 6	Panel suggests Species Technical Committee be asked to review this species with regard to reinstatement as threatened species.	State		Y
Austrocynoglossum latifolium		Low	4, 6		Regional		Y
Austromyrtus dulcis	midgen berry		1	Myrtle rust - Highly Susceptible	Regional		Y
Austromyrtus glabra		Low	3	Likes rock substrate.	Regional		Y
Backhousia citriodora	lemon ironwood	Low	1	Myrtle rust - Highly Susceptible	Regional		Y
Backhousia sciadophora	shatterwood	Low	4		Regional		Y
Backhousia subargentea			3		State		Y

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
Baeckea diosmifolia	fringed baeckea	Low	4, 6		Regional		Y
Berberidopsis beckleri			4, 9		State		Y
Bertya cunninghamii subsp. *rupicola*			3		Regional	Y	Y
Beyeria lasiocarpa		Low	4		Regional		Y
Boronia bella		Low	3		Regional	Y	Y
Boronia parviflora	swamp boronia	Low	4, 6		Regional		Y
Brasenia schreberi		Low	6		State		Y
Brunoniella spiciflora		High	6		Regional		Y
Burmannia disticha		Low	6		Regional	Y	Y
Callicarpa pedunculata	velvet leaf	Low	1	Threatened by lantana	Regional		Y
Chamaecrista maritima		High	3		Regional		Y
Comesperma ericinum		Low	4	Edge of distribution. Only population in QLD.	State		Y
Croton lucens			3		State		Y
Crowea exalata subsp. *magnifolia*			6	Only 3 populations in QLD.	State		Y
Cryptocarya foveolata	mountain walnut		4, 9		State		Y
Cryptocarya meisneriana	thick-leaved cryptocarya		4, 6		State		Y
Cupaniopsis flagelliformis var. *australis*			3, 4, 9		State		Y
Cupaniopsis sp.			1, 3		State	Y	

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
(Biggenden J.Randall 600)							
Cupaniopsis sp. (Watalgan A.R.Bean 8611)			1, 3		Regional	Y	
Cyperus disjunctus			4, 9		State		Y
Cyttaria septentrionalis			2, 4, 9		State		Y
Decaspermum humile	silky myrtle		1	Myrtle rust - Extremely Susceptible	State		Y
Dendrobium falcorostrum	beech orchid	Low	2, 4, 6, 9		State		Y
Dinosperma melanophloia			4, 6		Regional	Y	Y
Diploglottis harpullioides			6		Regional	Y	
Dissiliaria muelleri	Mueller's redheart	Low	4		Regional		Y
Dockrillia pugioniformis	dagger orchid		4, 9		State		Y
Doryanthes palmeri	giant spear lily		3,		State		Y
Drymophila moorei	orange berry		4, 9		State		Y
Endiandra compressa		Low	6		Regional		Y
Endiandra lowiana	white apple		1, 3	Subject to habitat clearing.	State		Y
Erythrina numerosa			3	SEQ endemic	Regional		Y
Eucalyptus sp. (Glasshouse Mountains A.R.Bean 782)			3	Endemic - restricted to Glasshouse Mountains and Lamington NP (Daves Creek area)	State		Y
Eugenia reinwardtiana	beach cherry		1	Myrtle rust - Extremely Susceptible	State		Y
Eupomatia bennettii	small bolwarra		2, 4, 9		State		Y

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
Gahnia insignis		Low	2, 6, 9		State		Y
Galbulimima baccata		Low	6		State		Y
Genoplesium sp. (Raby Bay J.Elsol AQ462423)			3		State		Y
Gossia acmenoides			1	Myrtle rust - Highly Susceptible	Regional		Y
Gossia hillii			1	Myrtle rust - Highly Susceptible	Regional		Y
Gossia punctata			3		State		Y
Grevillea helmsiae			6	Significant outlying population near Beenleigh	Regional		Y
Helmholtzia glaberrima		Low	2, 4, 9		State		Y
Hibiscus sp. (Barambah Creek P.Grimshaw+ PG2484)		Low	4, 6		State		Y
Hygrophila angustifolia		Low	7	Key host species for endemic "chocolate soldier" butterfly.	State		Y
Lenwebbia sp. (Main Range P.R.Sharpe+ 4877)			1, 3, 9		State		Y
Lepiderema punctulata			4, 6		Regional	Y	Y
Lepidosperma quadrangulatum		Critical	4, 6		State		Y
Leptomeria drupacea		Low	4, 6		State		Y
Lycopodiella serpentina	bog clubmoss	Low	6		Regional		Y
Mazus pumilio	swamp mazus	Low	4, 6		Regional		Y

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
Medicosma forsteri		Medium	3		State		Y
Melaleuca decora			4, 6	Only population is in Logan in SEQ.	Regional		Y
Melaleuca fluviatilis			1	Myrtle rust - Highly Susceptible	Regional		Y
Melaleuca nervosa			1	Myrtle rust - Highly Susceptible	Regional		Y
Melaleuca nodosa			1	Myrtle rust - Highly Susceptible	Regional		Y
Melaleuca polandii			1	Myrtle rust - Highly Susceptible	Regional		Y
Melaleuca quinquenervia	swamp paperbark		1	Myrtle rust - Extremely Susceptible	State		Y
Melaleuca viridiflora			1	Myrtle rust - Highly Susceptible	Regional		Y
Mischocarpus ailae			4	Nightcap Range (NSW) and Springbrook only - not assessed yet, but under threat.	State		Y
Neisosperma poweri		Low	6		Regional		Y
Nematolepis squamea subsp. *squamea*			4, 6	More widespread than previously thought but still endemic.	Regional		Y
Nothofagus moorei	Antarctic beech		2, 4, 7, 9	Keystone species - host for beech orchid *Dendrobium falcorostrum* and beech fungus *Cyttaria septentrionalis*	State		Y
Olearia chrysophylla		Low	4, 6		Regional		Y
Olearia oppositifolia		Low	4		Regional		Y
Pandorea baileyana	large-leaved wonga vine	Low	2, 4, 9		State		Y
Pararistolochia laheyana	native dutchman's pipe	Low	3, 9		State		Y
Parsonsia induplicata	thin-leaved		4, 9		State		Y

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
	silkpod						
Phaleria chermsideana	scrub daphne		2, 6		State	Y	Y
Phebalium nottii	pink phebalium		1		Regional	Y	Y
Pisonia grandis		High	7		State	Y	
Platysace sp. (Mt Ninderry P.R.Sharpe+ 2092)		High	4, 6		Regional		Y
Plectranthus acariformis			3		State		Y
Plectranthus fragrantissimus			3		State	Y	Y
Plectranthus geminatus			3	Environs of Lamington NP. Published recommendation as Vulnerable D2	State		Y
Pomaderris aspera			6		State		Y
Prostanthera sp. (Mt Castletower I.R.Telford 10112)			3		State	Y	
Pseudovanilla foliata	giant climbing orchid	Low	6		Regional		Y
Quintinia sieberi			2, 4, 9		State		Y
Rhodamnia acuminata	cooloola ironwood		1, 3		Regional	Y	Y
Rhodamnia costata			1	Myrtle rust - Highly Susceptible	Regional		Y
Rhodamnia dumicola	rib-fruited malletwood		1	Myrtle rust - Highly Susceptible	Regional		Y
Rhodamnia maideniana	smooth scrub turpentine	Low	1, 4	Myrtle rust - Extremely Susceptible Panel suggests Species Technical Committee be asked to review this species	State		Y

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
				with regard to reinstatement as threatened species.			
Rhodamnia rubescens			1	Myrtle rust - Extremely Susceptible	State		Y
Rhodamnia whiteana	white malletwood		3		State		Y
Rhodomyrtus psidioides	native guava		1	Myrtle rust - Highly Susceptible	Regional		Y
Ripogonum fawcettianum	small supplejack		4, 9		State		Y
Samadera sp. (Mt Goonaneman J.Randall 738)		Low	3		State	Y	
Samadera sp. (Mt Nardi B.L.Walker AQ330746)		Low	4		Regional		Y
Samadera sp. (St Mary P.Grimshaw+ PG2159)		Low	3		State	Y	
Sannantha similis			3		Regional		Y
Sarcochilus dilatatus	brown sarcochilus	Low	3		Regional	Y	Y
Senna sulfurea		Low	6	Only found on a couple of mountain tops.	Regional		Y
Seringia sp. (Chermside S.T.Blake 23068)		High	4	One of only three main populations. Also disjunct.	State		Y
Smithia sensitiva		Low	6	Only substantial tree on Keys and also indicator for avian diversity.	Regional		Y
Stictocardia tiliifolia			6		Regional		Y
Syzygium oleosum	blue cherry		1	Myrtle rust - Highly Susceptible	Regional		Y
Tapeinosperma repandulum		Low	4	Two populations (North Coast district and Springbrook environs to Richmond River) - southern possibly a different taxon.	Regional		Y

Scientific Name	Common Name	BOT Rating[1]	Rationale for Listing[2]	Expert Panel Notes[3]	Significance	SEQ North Panel	SEQ South Panel
Tephrosia bidwillii		Low	6	Ecotonal species - Littoral zone. Very limited area for habitat growth. Couple of metres wide.	Regional		Y
Teucrium sp. (Ormeau G.Leiper AQ476858)		Data Deficient	6		State	Y	Y
Toechima dasyrrhache	blunt-leaved steelwood		3, 6		State		Y
Triflorensia cameronii			3	Kroombit Tops. Should be ultimately listed as threatened species.	Regional	Y	Y
Trimenia moorei	bitter vine		4, 9		State		Y
Xanthorrhoea pumilio			4, 6	Headlands 1770. Other populations are in the Wet Tropics.	Regional	Y	

Table 7 Method for assigning values for criterion H (Priority Taxa)

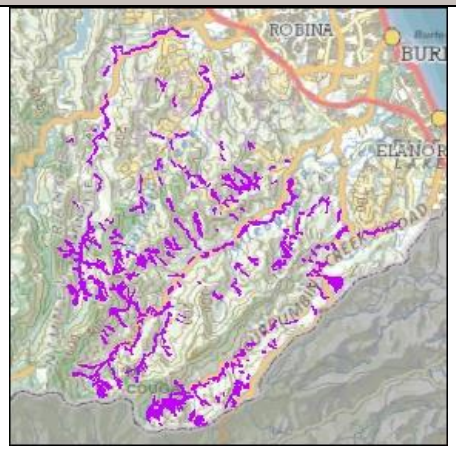
Low	Medium	High	Very High
The remnant has no confirmed records /models or otherwise defined areas of habitat for priority taxa	The area within the remnant unit has a precise record (precision =<500m), or core habitat for ONE “State significant” priority taxa OR The area within the remnant unit has precise records (precision <=500) or core habitat for only ONE or TWO “Regional significant” priority taxa OR The area within the remnant unit has imprecise records or non-core habitat for “State or Regional significant” priority taxa	The area within the remnant unit has precise records (precision =<500m), or core habitat for TWO “State significant” priority taxa OR The area within the remnant unit has precise records (precision =<500m), or core habitat for THREE “Regional significant” priority taxa OR The area within the remnant unit has precise records(precision =<500m), or core habitat for ONE “State significant” AND TWO “Regional significant” priority taxa	The area within the remnant unit has precise records (precision =<500m), or core habitat for a minimum of THREE “State significant” priority taxa OR The area within the remnant unit has precise records (precision =<500m), or core habitat for a minimum of FOUR “Regional significant” priority taxa OR The area within the remnant unit has precise records (precision =<500m), or core habitat for TWO “State significant” AND TWO OR THREE “Regional significant” priority taxa

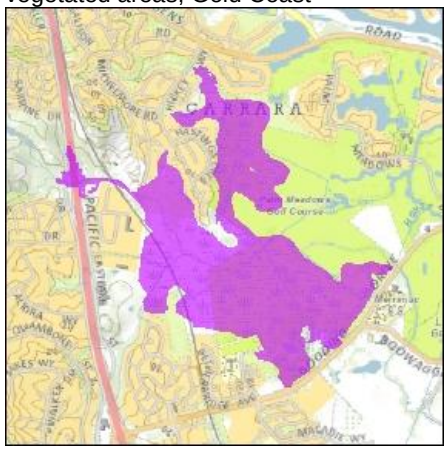
3.2 Special biodiversity values (criterion I)

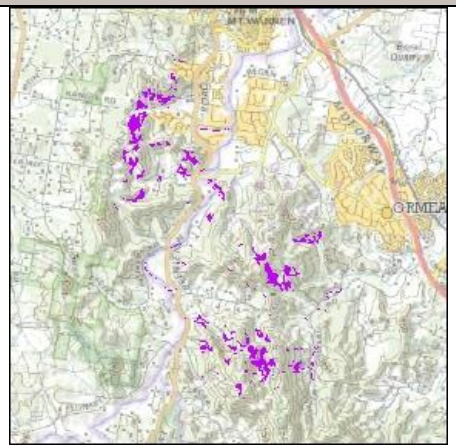
The panel was asked to identify areas with special biodiversity values within the SEQ bioregion under the BAMM supplementary criterion I. Areas with special biodiversity value are important because they contain multiple taxa in unique ecological and often highly biodiverse environments. Values can include 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. Using expert knowledge and available information (records, maps, GIS derived datasets), panel members defined 84 decisions for the southern part of SEQ and 44 for the northern part and describe their values. The special areas proposed by the panel are described in Table 8.

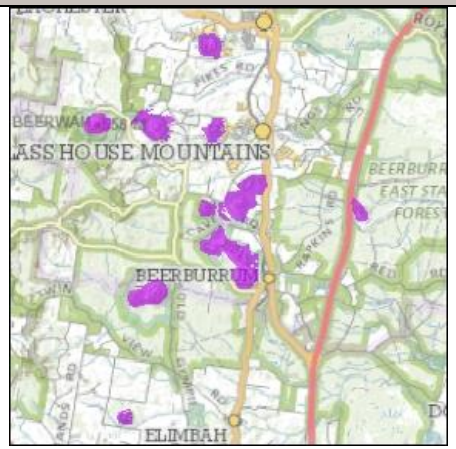
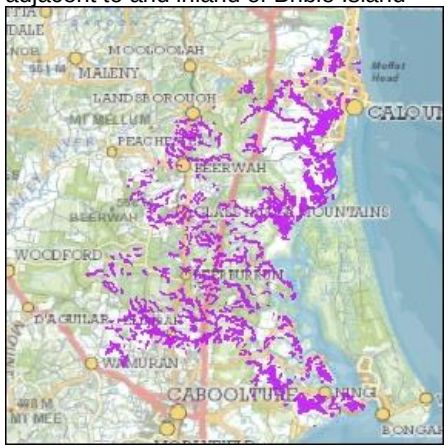
Table 8 Comments and recommendations relating to areas of special biodiversity value (criteria I)

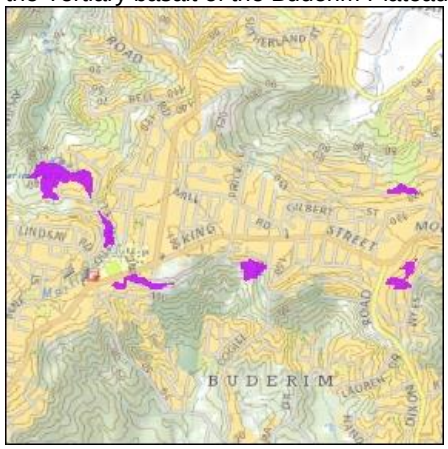
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
Flora South				
seqs_fl_01	Remnant coastal heath patches – Gold Coast 	State	• Wildlife refugia (Criterion Ib). • Taxa at or near limits of geographic range (Criterion Id) (especially northern limit): *Comesperma ericinum, Stylidium tenerum, Nematolepis squamea* subsp. *squamea*. • RE variation (Criterion Ig): distinctive species composition compared with coastal heaths in other parts of SEQ including species that are more usual in upland areas, e.g. *Acacia obtusifolia*. • Priority taxa: *Comesperma ericinum Stylidium tenerum, Leucopogon deformis, Burmannia disticha, Baeckea diosmifolia*. • Mainland remnant heath within the southern portion of the bioregion will be encompassed by the decisions seqs_fl_01, seqs_fl_58 and seqs_l_05.	Ib (wildlife refugia): VERY HIGH Id (limits of geographic range): HIGH Ig (ecosystem variation): HIGH
seqs_fl_02	Fringing forests that include lowland rainforest remnants and rainforest along Currumbin, Tallebudgera and Mudgeeraba Creeks behind the Gold Coast	State	• SEQ endemic taxa (Criterion Ia): some of which are narrow endemics: *Archidendron muellerianum, Acronychia octandra, Argophyllum nullumense, Gossia fragrantissima, Backhousia subargentea, Cupaniopsis newmanii, Diploglottis campbellii, Floydia praealta, Helicia ferruginea, Lepiderema pulchella, Macadamia integrifolia, M. tetraphylla, Randia moorei, Rhodamnia maideniana, Syzygium moorei, S. hodgkinsoniae*. Note: for similar lowland riparian rainforest decisions in the southern portion of the bioregion, refer to seqs_fl_19 and seqs_fl_84.	Ia (SEQ endemic taxa): VERY HIGH

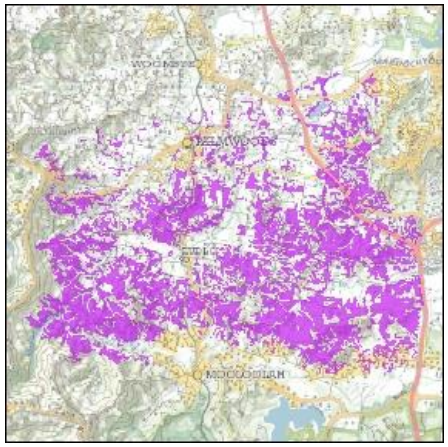
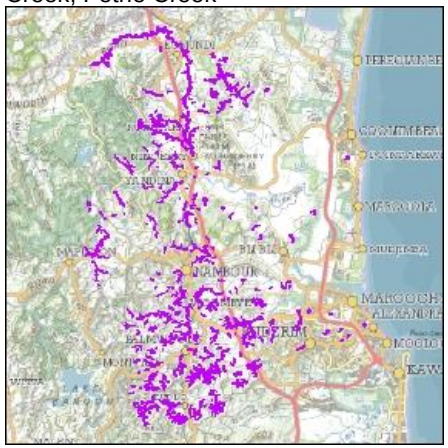
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
				
3	Gold Coast hinterland EVNT taxa records		Addressed in Criterion A - Habitat for EVNT taxa	
seqs_fl_04	Blackbutt forest remnants on metamorphic rocks, Gold Coast to Redlands 	Regional	Blackbutt (*Eucalyptus pilularis*) forest had a limited natural extent (all of which is on metamorphic rocks) in the Gold Coast/Redlands area and has been depleted and fragmented by urbanisation. Clearing relatively quickly. The area initially highlighted by the flora expert panel has been updated based upon more detailed local government mapping. • Wildlife refugia (Criterion Ib): remnant patches in a heavily fragmented peri-urban landscape. • Ecosystem variation (Criterion 1g): blackbutt forest is restricted on metamorphic rocks in SEQ.	Ib (wildlife refugia): HIGH Ig (ecosystem variation): HIGH

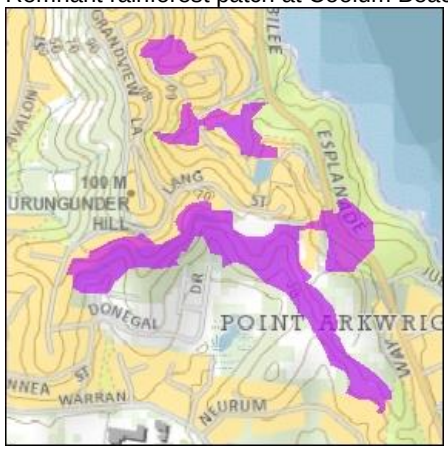
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_05	Remnant of Stevens Swamp, and adjoining vegetated areas, Gold Coast 	Regional	• Wildlife refugia (Criterion Ib).	Ib (wildlife refugia): HIGH
6	Coombabah Creek Corridor		Addressed in Landscape Panel decision seqs_l_22.	
7	Remnant scribbly gum forest at Gainsborough Greens, Pimpama		Addressed in Fauna Panel decision seq_fa_28.	
seqs_fl_08	Rainforest remnants at Lower Ormeau and on the end of the Darlington Range around Bahr's Scrub	State	• SEQ endemic taxa (Criterion Ia): including narrow endemic taxa: *Arytera distylis, Brachychiton* sp. (Ormeau L.H.Bird AQ435851), *Backhousia subargentea, Croton mamillatus, Dissiliaria baloghioides, Fontainea venosa, Graptophyllum spinigerum, Macadamia integrifolia, Pouteria eerwah, Randia moorei, Parsonsia paulforsteri, Plectranthus habrophyllus, Rhodamnia dumicola, Symplocos harroldii*. • Southern limits of geographic range (Criterion Id): *Grevillea helmsiae, Barklya syringifolia, Denhamia pittosporoides, Graptophyllum spinigerum*.	Ia (SEQ endemic taxa): VERY HIGH Id (limits of geographic range): MEDIUM Ie (high species richness): HIGH Ik (climate change refugia): VERY HIGH

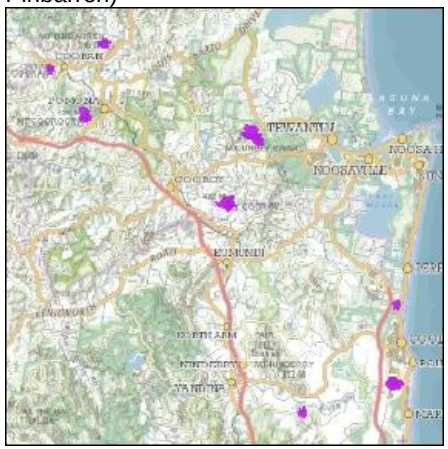
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
			• High floristic diversity (Criterion Ie): over 400 species of plants have been recorded for the Bahr's Scrub-Wolfdene area. • Climate Change Refugia (Criterion Ik)	
9	*Livistona australis* swamp forest on South Stradbroke Island		Addressed in Landscape Panel decision seqs_l_23.	
10	Remnant patches of scribbly gum (*Eucalyptus racemosa*) open forest on sedimentary rocks in the Belmont – Cleveland area		Addressed in Landscape Panel decision seqs_l_68	
11	Subcoastal wet heath patches near Brisbane		Addressed in Landscape Panel decision seqs_l_5.	
12	North and South Stradbroke and Moreton Island		Addressed in Landscape Panel decision seqs_l_23.	
seqs_fl_13	All tertiary volcanic plugs of the Glasshouse Mountains (Mts Beerwah, Coonowrin, Ngungun, Tibrogargan, Coochin Beerburrum, Tunbubudla, Tibberoowuccum, Saddleback, Miketeebumulgrai, Wildhorse Mountain)	State	Collectively, the Glasshouse Mts are outstanding in terms of: • SEQ endemic flora (Criterion Ia): including a number of narrow endemic taxa: *Acacia hubbardiana, Allocasuarina filidens, Arundinella montana, Banksia conferta* subsp. *conferta, Cryptandra propinqua subsp. propinqua, Dodonaea rupicola, Eucalyptus kabiana, Eucalyptus crebra*, , *Gonocarpus effusus, Grevillea hodgei, Lepidosperma clipeicola, Leucopogon recurvisepalus, Leptospermum luehmannii, Leptospermum oreophilum, Lomandra confertifolia* subsp. confertifolia, *Philotheca*	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): HIGH

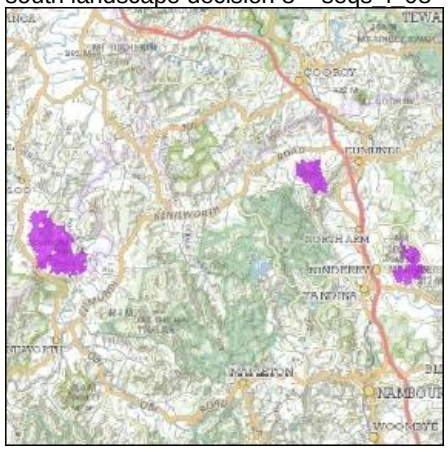
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
			*glasshousiensis, Philotheca queenslandica, Pultenaea maritima, Seringia hillii, Triplarina volcanica* subsp. *volcanica*. • They also function as wildlife refugias (Criterion Ib): they have not been cleared because of their rugged nature and are surrounded by farming, rural life style lands and pine plantations. • Taxa with disjunct distributions (Criterion Ic): *Calytrix tetragona, Daviesia mimosoides, Eucalyptus curtisii Melaleuca groveana, Micraira subulifolia, Mirbelia pungens, Monotaxis macrophylla, Prostanthera phylicifolia*.	
14	Riverine lowland rainforest patches in the Bribie – Caloundra coastal lowlands including Burpengary and Coochin Creeks		Addressed in seqs_fl_84.	
seqs_fl_15	Remnant paperbark swamps on mainland adjacent to and inland of Bribie Island 	Regional	Remnant paperbark swamps adjacent to Bribie Island, reflect some of the largest remnants of 12.3.5 in SEQ and are considered to provide important wetlands species habitat. In contrast, those which extend further inland through pine plantation provide connectively and refugia functions for wetland species within a fragmented landscape. • Wildlife refugia (Criterion Ib): remnants of once-extensive poorly drained, infertile coastal landscape.	Ib (wildlife refugia): VERY HIGH - remnants of once-extensive poorly drained, infertile coastal landscape.

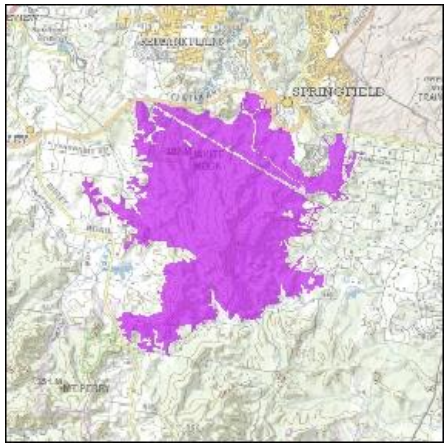
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_16	Southern Bribie Island Holocene beach ridges 	Regional	Ecosystem variation (Criterion Ig): relatively intact representative example of Holocene beach ridges with cypress pine present in places.	Ig (ecosystem variation): HIGH
seqs_fl_17	Remnant rainforest patches associated with the Tertiary basalt of the Buderim Plateau 	State	• SEQ endemic taxa (Criterion Ia): in particular the narrow endemic taxon *Graptophyllum reticulatum*; also *Corynocarpus rupestris* subsp. *arborescens, Macadamia integrifolia, Macadamia ternifolia, Bosistoa transversa, Pararistolochia laheyana*. Note: refer to seqs_fl_83 for values associated with remnant patches on the lower slopes of the Buderim plateau.	Ia (SEQ endemic taxa): VERY HIGH

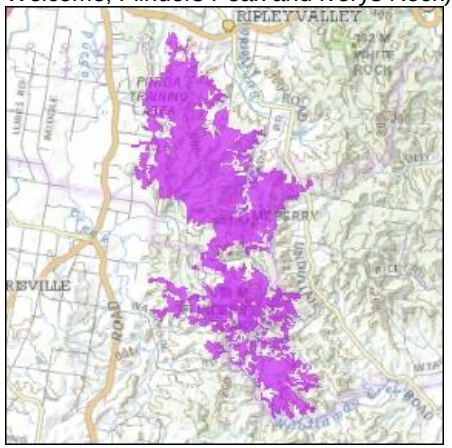
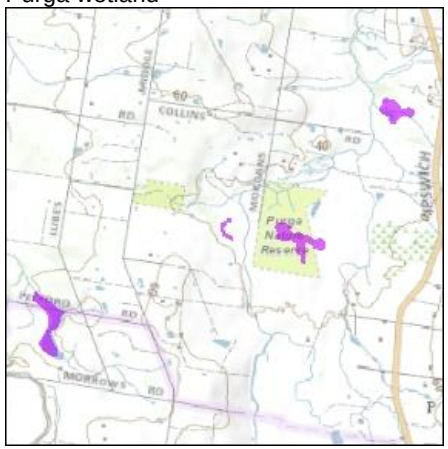
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_18	Lowland wet sclerophyll forest remnants between Mooloolah and Palmwoods 	Regional	The area delineated contains patches of wet and dry sclerophyll forest, gully rainforest with piccabeen palm thickets and riverine rainforest along larger watercourses. It is a high rainfall area. While the topography is undulating the altitude is less than about 180m. The geology comprises sedimentary rocks of the Landsborough Sandstone subject to local enrichment from basalts of the Blackall Range. Traditionally used for horticulture and timber production, now peri-urban over the past two decades. • Endemic taxa (Criterion Ia): endemic rainforest taxa, e.g. *Lenwebbia* sp. (Blackall Range P.R.Sharpe 5387). Area would benefit from further targeted survey. • Wildlife refugia (Criterion Ib). • Disjunct population (Criterion Ic): large fern *Angiopteris evecta*. • Ecosystem variation (Criterion Ig): this type of low altitude landscape is restricted in SEQ.	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM Ig (ecosystem variation): HIGH
seqs_fl_19	Riparian lowland rainforest remnants around Nambour. Watercourses include: Maroochy River; Yandina Creek; Rocky Creek; Paynter Creek; Petrie Creek 	State	Complex notophyll vine forest merging into palm forest and paperbark swamp with a rainforest understorey in poorly drained situations). • SEQ endemic taxa (Criterion Ia): including some narrow endemic species: *Argyrodendron* sp. (Kin Kin W.D.Francis AQ81198), *Backhousia subargentea, Corynocarpus rupestris* subsp. *arborescens Lenwebbia* sp. (Blackall Range P.R.Sharpe 5387), *Floydia praealta, Gossia inophloia, Macadamia integrifolia, M. ternifolia, Medicosma cunninghamii, Pararistolochia praevenosa, Planchonella eerwah, Syzygium hodgkinsoniae, Triunia robusta.* • Wildlife refugia (Criterion Ib): linear lowland rainforest remnants along streams in a variegated landscape transitioning from horticulture and sugar growing to life style development.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH

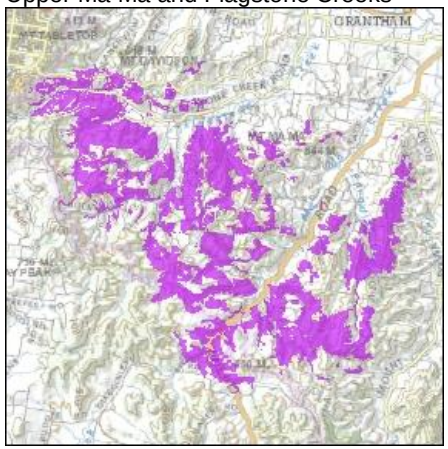
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
20	Lowland rainforests - North Pine River, Caboolture River, Burpengary Creek		Addressed in seqs_fl_14.	
21	Mooloolah River Corridor		Addressed in seqs_l_49.	
seqs_fl_22	Remnant rainforest patch at Coolum Beach 	State	• SEQ endemic taxon (Criterion Ia): *Cryptocarya foetida*. • Ecosystem variation (Criterion Ig): rainforest adjacent to the coast is uncommon. It is uncertain whether the rainforest is growing entirely on sand or on sand that has some parent rock influence.	Ia (SEQ endemic taxa): HIGH Ig (ecosystem variation): HIGH

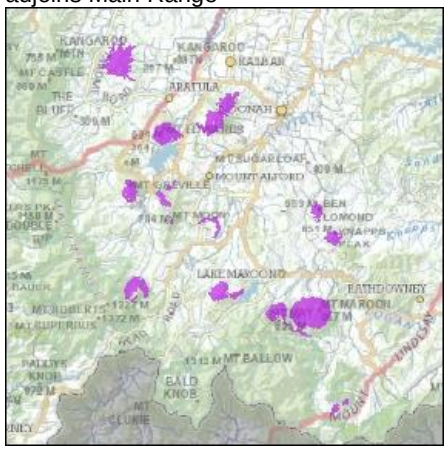
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_23	Intrusive volcanic plugs of Tertiary age in the central and northern Sunshine Coast (Mts Cooroora, Tinbeerwah, Dunethin Rock, Coolum, Cooran, Emu, Cooroy, Eerwah, Pinbarren)  	State	Mountains Eerwah and Cooroy support rainforest whilst the other plugs are covered in shrubby eucalyptus forest with patches of montane heath. Collectively, the Tertiary volcanic plugs of the central and northern Sunshine Coast are outstanding in terms of: • SEQ endemic flora (Criterion Ia): including a number of narrow endemic taxa. SEQ endemic taxa: *Agiortia pedicellata, Argyrodendron* sp. (Kin Kin W.D.Francis AQ81198), *Arytera distylis, Astrotricha umbrosa, Allocasuarina rigida* subsp. *exsul, Allocasuarina thalassoscopica, Baloghia marmorata, Citrus australis, Leucopogon rupicola, Leptospermum oreophilum, Medicosma cunninghamii, Philotheca difformis* subsp. *smithiana, Philotheca glasshousiensis, Plectranthus torrenticola, Rhodamnia dumicola, Seringia hillii*. • Several plugs are becoming increasingly isolated by residential land use and as such function as wildlife refugias (Criterion Ib). • Taxa with disjunct distributions (Criterion Ic): *Sannantha collina, Bertya sharpeana, Logania albiflora, Lasiopetalum ferrugineum* var. *ferrugineum, Lepidosperma quadrangulatum, Westringia glabra*.	Ia (SEQ endemic flora): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM

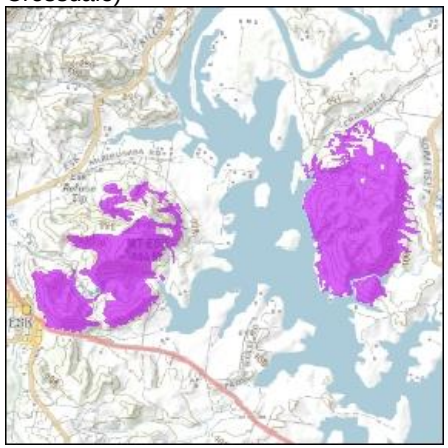
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_24	Localised mountains +/- rock outcrops that are remnants of the Triassic North Arm Volcanics (Kenilworth Bluff, Mt Ninderry, Mt Eerwah). Note: Swains Peak and Mt Bottle and Glass are part of this group but are included within south landscape decision 8 – seqs_l_08 	Regional	• SEQ endemic taxa (Criterion Ia): especially rainforest taxa - *Araucaria bidwillii, Arytera distylis, Bosistoa transversa, Citrus australis, Dissiliaria baloghioides, Doodia heterophylla, Gossia punctata, Macadamia ternifolia,, Mallotus megadontus, Philotheca difformis* subsp. *smithiana, Platysace* sp. (Mt Ninderry P.R.Sharpe+ 2092), *Plectranthus torrenticola, Seringia hillii Toechima tenax, Triunia robusta*. • Wildlife refugia (Criterion Ib): parts of surrounding country have been heavily fragmented. • Disjunct taxon (Criterion Ic): *Sannantha collina*.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): HIGH Ic (disjunct taxa): MEDIUM
26	Greenbank – White Rock corridor		Addressed in Landscape Panel decision seqs_l_22.	

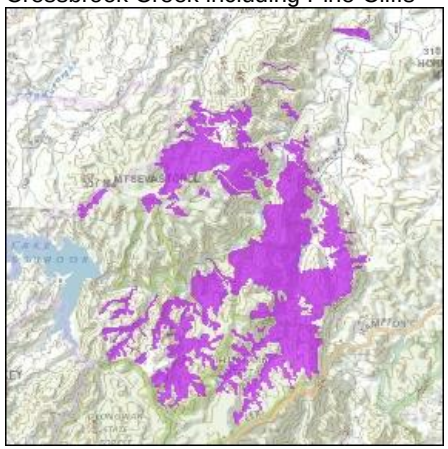
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_27	White Rock – Spring Mt shrubby forest and woodland on sandstone 	Regional	• SEQ endemic taxa (Criterion Ia): *Eucalyptus major, Notelaea lloydii, Plectranthus habrophyllus, Marsdenia coronata*. • Wildlife refugia (Criterion Ib): close proximity to Brisbane-Ipswich urban corridor. • Disjunct taxa (Criterion Ic): *Corymbia henryi, Eucalyptus curtisii, Indigofera baileyi, Grahamia australiana*.	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM
28	Daly's Lagoon		Addressed in seq_fa_27	
29	The Gap Corridor, Ipswich City		Landscape corridors are addressed through the Landscape Panel decision seqs_l_22.	

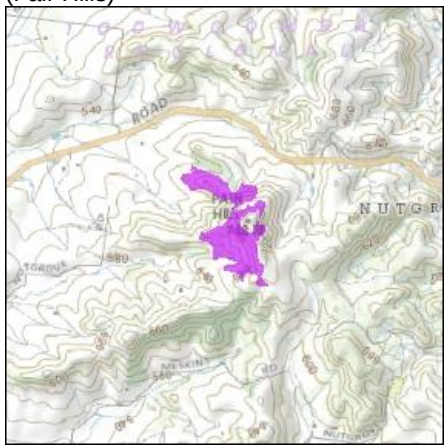
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_30	Teviot Range – Flinders Peak centred on a cluster of intrusive volcanic plugs of Tertiary age (Mts Blaine, Catherine, Goolman, Perry, Welcome, Flinders Peak and Ivorys Rock) 	Regional	• SEQ endemic taxa (Criterion Ia): *Arundinella montana, Cupaniopsis tomentella, Eucalyptus major, Marsdenia coronata, Notelaea lloydii, Planchonella eerwah, Rhodamnia dumicola, Tephrosia* sp. (The Grampians L.H.Bird AQ565381), *Zieria scopulus* (Note – some of the above taxa are based on input at Panel and are not listed in WILDNET). • Wildlife refugia (Criterion Ib): area to west is changing from rural to urban as part of implementation of SEQ Regional Plan. • Taxa at limits of geographic range Criterion Id): *Acacia obtusifolia, Melaleuca comboynensis* – both species occur along Border Ranges to south.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): HIGH Id (limits of geographic range): MEDIUM
seqs_fl_31	Purga wetland 	Regional	• Wildlife refugia (Criterion Ib): wetland contains an unusual floodplain with anastomotic channels in deep cracking clay soils, with adjacent slopes containing *Melaleuca irbyana* seasonally flooded forests. Area includes tributaries, floodplain, elevated intermittent marshes and seasonal to permanent low-lying waterholes.	Ib (wildlife refugia): VERY HIGH

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
32	Ebenezer – Remnant woodland with patches of Melaleuca irbyana in a highly fragmented landscape		Will be addressed in Criterion A: Habitat for EVR taxa	
33-36	Ipswich City Council clusters		Addressed in Landscape Panel decision seqs_l_22 - terrestrial bioregional corridors.	
37	Little Liverpool Range corridor		Landscape corridors are addressed through the Landscape Panel decision seqs_l_22.	
38	Sandy Creek, Carole Park		No longer implemented as much of site has been cleared.	
seqs_fl_39	Upper Ma Ma and Flagstone Creeks 	State	Collectively, the area delineated has very high flora and habitat values. It is an area of sedimentary rocks. In some areas there is a capping of, or enrichment by basalt of the Main Range volcanics. It is also one of the lowest rainfall parts of SEQ. • SEQ endemic taxa (Criterion Ia): *Melaleuca formosus, Callitris baileyi*. • Wildlife refugia (Criterion Ib). • Disjunct taxa (Criterion Ic): particularly species from sandstone areas in the Brigalow Belt: *Acacia ixiophylla, Allocasuarina inophloia, Bertya opponens, Boronia splendida, Dillwynia sieberi, Dodonaea stenophylla, Eucalyptus bakeri, E. melanoleuca, E. sideroxylon, Hibbertia cistoidea, Melaleuca groveana, Indigofera baileyi, Mentha grandiflora, Micrantheum ericoides, Mirbelia pungens, Prostanthera parvifolia, Seringia corollata*. • Eastern and western limits of range for a number of taxa (Criterion Id): e.g. Western – *Angophora woodsiana, Corymbia gummifera, Eucalyptus tindaliae*; eastern – e.g. *Allocasuarina inophloia*. • Ecosystem variation (Criterion Ig): species assemblages associated with the juxtaposition of sandstone and basalt geology, complex topography and relatively low rainfall are unusual in SEQ regional context.	Ia (SEQ endemic taxa): MEDIUM Ib (Wildlife refugia): VERY HIGH Ic (disjunct populations): VERY HIGH Id (limits of geographic range): HIGH Ig (ecosystem variation): HIGH

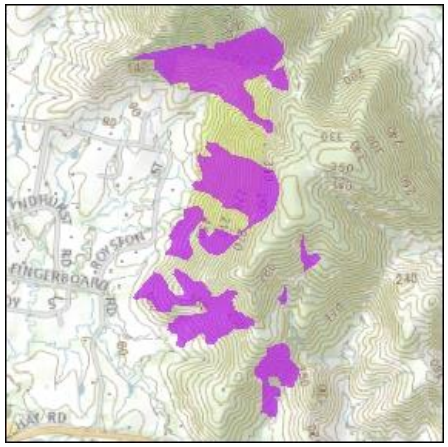
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
40	Paradise Mountain portion of north-south spur running off Great Dividing Range south of Gatton		Addressed in Flora Panel decision seqs_fl_39.	
41	Silky Oak Creek – Razorback Ridge portion of north-south spur running off Great Dividing Range south of Gatton		Addressed in Flora Panel decision seqs_fl_39.	
42	Block adjoining Dwyer's Scrub Conservation Park		Addressed in Flora Panel decision seqs_fl_39.	
seqs_fl_43	South-west SEQ - Intrusive volcanic plugs of Tertiary age including the Moogerah Peaks. Mts French, Edwards, Greville, Fraser, Maroon, Moon, May, Gillies, Toowoonan; Ben Lomond, Knapps Peak, Minto Crags and Campbells Folly; also Mt Bangalore that adjoins Main Range 	State	Collectively, the peaks are outstanding in terms of: • SEQ endemic flora (Criterion Ia): including a number of narrow endemic taxa. SEQ endemic flora: *Acacia acrionastes, Acacia brunioides* subsp. *brunioides, Acacia saxicola Arundinella grevillensis, Arundinella montana, Astrotricha pauciflora, Bertya ernestiana, Bertya pinifolia, Bosistoa pentacocca subsp. pentacocca, Bossiaea rupicola, Brachyscome ascendens, Comesperma breviflorum, Corybas montanus, Eucalyptus dura, Genoplesium parvicallum, Hakea florulenta, Coronidium lindsayanum, Hibbertia hexandra, Hibbertia monticola, Hovea similis, Seringia hillii, Leionema gracile, Marsdenia coronata, Plectranthus alloplectus, Lepidosperma clipeicola, Leptospermum barneyense, Plectranthus alloplectus, Pomaderris lanigera* var. (Mt Maroon L.S.Smith 12161), *Pultenaea whiteana, Commersonia salviifolia, Scaevola* sp. (Mt Ernest S.T.Blake 4333), *Seringia hillii, Syncarpia verecunda, Tetramolopium vagans, Westringia sericea, Zieria smithii*. • They also function as wildlife refugia (Criterion Ib): not cleared. because of their rugged nature and are surrounded by rural lands, and: • Taxa with disjunct distributions (Criterion Ic) *Acacia adunca, Acacia venulosa, Actinotus gibbonsii, Actinotus helianthi, Correa reflexa* var. *reflexa, Cryptandra amara* var. *amara, Daviesia mimosoides, Gahnia subaequiglumis, Eucalyptus codonocarpa, Eucalyptus*	Ia (SEQ endemic flora): VERY HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): VERY HIGH Id (limits of geographic range): VERY HIGH

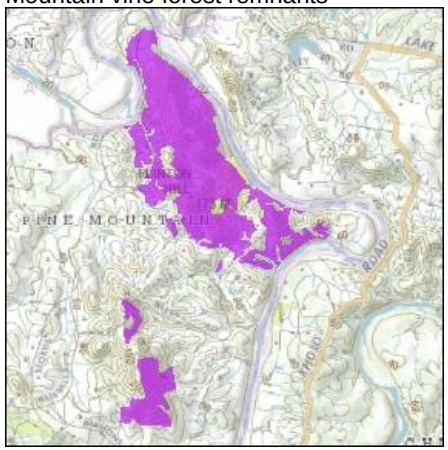
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
			interstans, Gonocarpus elatus, Gonocarpus hirtus, Grevillea linsmithii, Hakea sericea, Isotoma axillaris, Lasiopetalum ferrugineum var. *cordatum Leionema elatius* subsp. *beckleri Leucopogon neoanglicus, Melaleuca groveana, Mirbelia pungens, Monotaxis macrophylla, Pomaderris crassifolia, Pomaderris ledifolia, Prostanthera nivea, Pultenaea pycnocephala, Stylidium laricifolium, Tephrosia* sp. (The Grampians L.H.Bird AQ565381) *Zieria fraseri*. • Taxa associated with the mountain ranges of New South Wales reach their northern limit of distribution (Criterion Id): eg *Nothofagus moorei*.	
44	Mt Bangalore		Addressed in Flora Panel decision seqs_fl_43.	
45	Mt Gillies		Addressed in Flora Panel decision seqs_fl_43.	
46	Tamborine Corridor		Landscape corridors are addressed through the Landscape Panel decision seqs_l_22.	
seqs_fl_47	Volcanic hills near Esk (Mt Esk and Crossdale) 	Regional	• SEQ endemic taxa (Criterion Ia): *Plectranthus leiperi, Kunzea flavescens, Leptospermum oreophilum, Eucalyptus dura, E. helidonica, Leptospermum oreophilum, Cryptandra propinqua subsp. propinqua, Philotheca difformis* subsp. *smithiana*. • Wildlife refugia (Criterion Ib). • Disjunct taxa (Criterion Ic): *Sannantha collina, Bertya opponens, Corymbia henryi, Seringia corollata*.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM

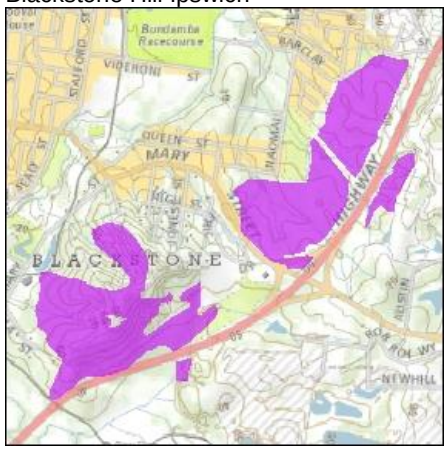
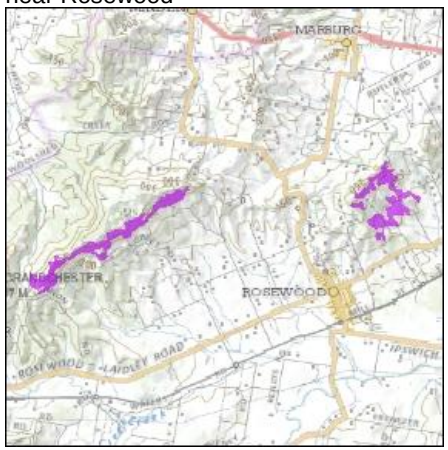
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
48	Diana's Bath – Mt Mee scarp		Addressed in Landscape Panel decision seqs_l_48.	
seqs_fl_49	Remnant rainforest patches, upper Cressbrook Creek including Pine Cliffs 	Regional	South-west limit of range for *Araucaria bidwillii*. • Wildlife refugia (Criterion Ib)	Ib (wildlife refugia): HIGH
50	Biarra Range – Blackbutt Range corridors		Landscape corridors are addressed through the Landscape Panel decision seqs_l_22.	
51	Great Dividing Range between Mistake Plateau and Hirstglen		Landscape corridors are addressed through the Landscape Panel decision seqs_l_22.	
52	Bald Hills Creek near Crows Nest		Addressed in Landscape Panel decision seqs_l_21.	

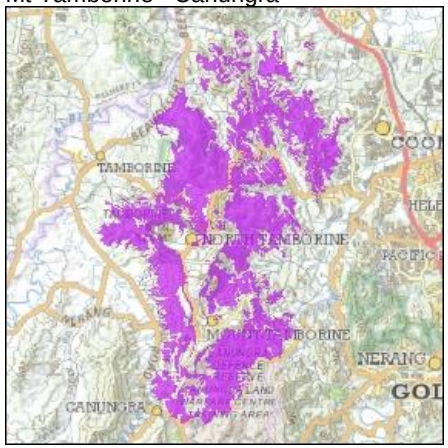
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_53	Elevated country on Tertiary volcanics on SEQ-BRB boundary south-west of Cooyar (Fair Hills) 	Regional	• SEQ endemic taxa (Criterion Ia): *Eucalyptus montivaga, Bertya cunninghamii* subsp. *rupicola*. • Wildlife refugia due to clearing of surrounding country (Criterion Ib) • Disjunct taxa (Criterion Ic): in particular species typical of NET and BRB: *Leucopogon neoanglicus, Bertya oleifolia, Dillwynia sieberi, Isotoma axillaris, Stylidium laricifolium*.	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): HIGH
54	Remnant vegetation between and including Crow's Nest NP and Helidon Hills		Addressed in Landscape Panel decision seqs_l_21.	
55	Kin Kin Creek		Original decision related to riparian vegetation - now addressed in Landscape Panel decision seqs_l_57.	
56	Doonan Ck - Peregian West		Addressed in Landscape Panel decision seqs_l_7.	

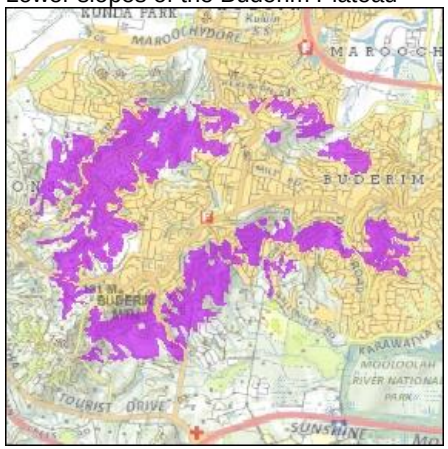
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_57	Remnant patches of open forest with Eucalyptus dura on metamorphics in the Beenleigh area 	Regional	• Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): of *Indigofera baileyi, Marsdenia coronata*. • Ecosystem variation (Criteria Ig): Eucalyptus dura forest generally occurs on acid volcanic rocks such as rhyolite and sandstone in more western parts of the region.	Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM Ig (ecosystem variation): HIGH
seqs_fl_58	Coastal heaths between Bribie Island and Noosa 	State	Collectively, the remnant mainland coastal heaths have very high flora and habitat values including: • SEQ endemic taxa (Criterion Ia): *Acacia cincinnata, Acacia hubbardiana, A. attenuata, Agiortia pedicellata, Allocasuarina emuina, Astrotricha glabra, E. conglomerata, Genoplesium psammophilum, Grevillea leiophylla, Haemodorum tenuifolium, Hakea actites, Macarthuria complanata, Monotoca* sp. (Fraser Island P.Baxter 777), *Petrophile shirleyae, Philotheca queenslandica, Schoenus ornithopodioides, Strangea linearis, Westringia tenuicaulis, Xylomelum benthamii*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): *Callitris rhomboidea*, (may no longer be present on mainland), *Lepidosperma quadrangulatum, Podocarpus spinulosus, Schoenus scabripes*. • Limits of range of main area of distribution (Criterion Id): e.g. *Baeckea imbricata, Boronia safrolifera, Pultenaea paleacea, Schoenus scabripes, Stackhousia spathulata*.	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM Id (limits of geographic range): MEDIUM

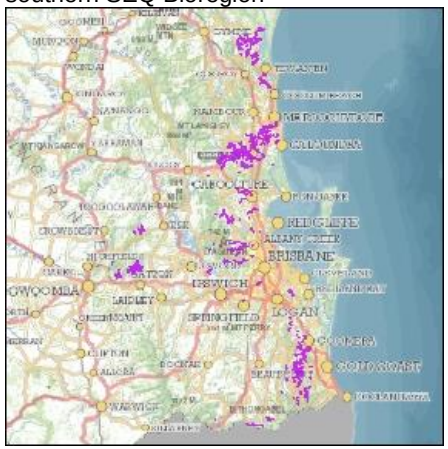
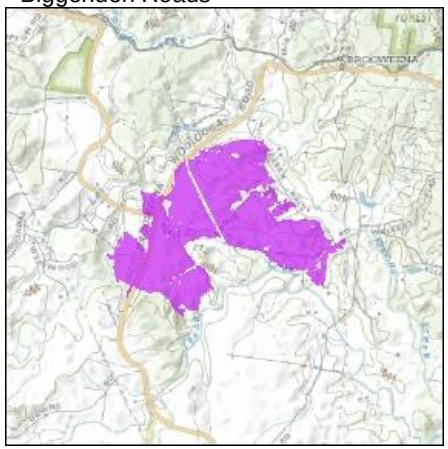
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_59	Rainforest on Dayboro Tonalite at Franz Mountain south-west of Caboolture 	Regional	• Wildlife refugia (Criterion Ib): remnant is surrounded by extensively modified landscape. Also, other patches of rainforest on Dayboro Tonalite nearby have been cleared or degraded. • Ecosystem variation (criterion Ig): rainforest on tonalite is uncommon in SEQ.	Ib (Wildlife refugia): MEDIUM Ig (ecosystem variation): MEDIUM
60	Woodland with *Eucalyptus bancroftii*		Not implemented. Remnant patches of shrubby woodland and open woodland containing *Eucalyptus bancroftii*. Largely depleted. Remnants at Emu Mt and junction of Monack and Murdering Ck Rd, western side of Coolum section of Noosa NP, northern boundary of Coolum State School and Coolum section of Noosa NP, adjacent to southern boundary of west Coolum section Noosa NP and Mooloolah River NP. Assigned an RE (12.2.7d) but not mapped in the current RE mapping.	
61	Mt Coolum		Addressed in Flora Panel decision seqs_fl_23	
62	Emu Mountain		Addressed in Flora Panel decision seqs_fl_23	
63	Mt Nindeery		Not implemented. Should be incorporated in seqs_fl_23 in next version.	
64	Mt Cooroora		Addressed in Flora Panel decision seqs_fl_23	

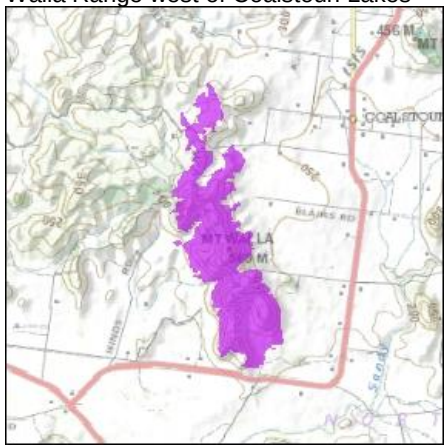
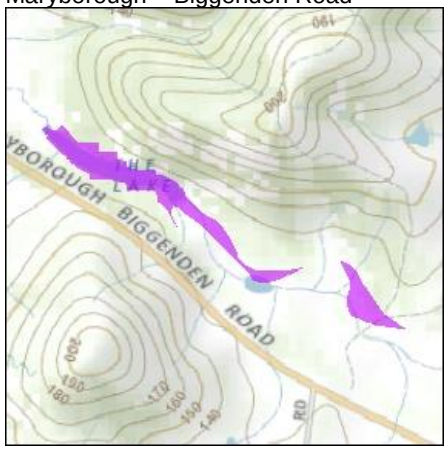
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
65	Hell Hole Gorge		Addressed in Flora Panel decision seqs_l_24	
66	Main Range from Wilson's Peak to Mistake Plateau		Addressed in Landscape Panel decision seqs_l_24	
seqs_fl_67	Sapling Pocket – World's End and Pine Mountain vine forest remnants 	Regional	• SEQ endemic rainforest taxa (Criterion Ia): *Callitris baileyi, Backhousia subargentea, Citrus australis, Cryptocarya sclerophylla, Hernandia bivalvis, Erythrina* sp. (Croftby P.I.Forster+ PIF6209), *Marsdenia coronata, Notelaea lloydii, Parsonsia paulforsteri, P. leichhardtii, Rhodamnia dumicola, Toechima tenax, Triflorensia cameronii*. • Wildlife refugia (Criterion Ib).	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): HIGH

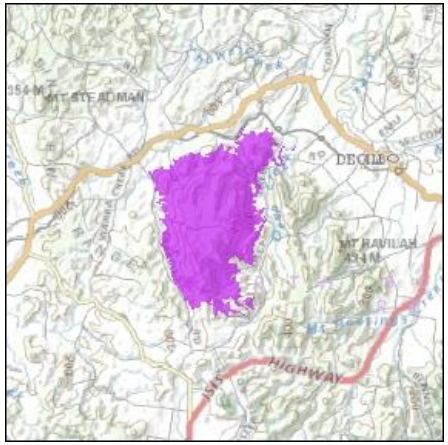
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_68	Remnant vegetation on sandstone around Blackstone Hill Ipswich 	Regional	• SEQ endemic taxa (Criterion Ia): *Eucalyptus dura, Marsdenia coronate, Notelaea lloydii* and *Notelaea ipsviciensis*. • Wildlife refugia (Criterion Ib): surrounding area modified by coal mining and urban uses.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): HIGH
seqs_fl_69	Rainforest remnants and associated eucalyptus woodland and open forest on Tertiary basalt at The Bluff and Perry's Knob near Rosewood 	Regional	• SEQ endemic taxa (Criterion Ia): *Callitris baileyi, Sophora fraseri, Notelaea lloydii* • Wildlife refugia (Criterion Ib): remnants of extensive patches of rainforest/vine thicket around Rosewood known colloquially as the "Rosewood Scrub".	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH

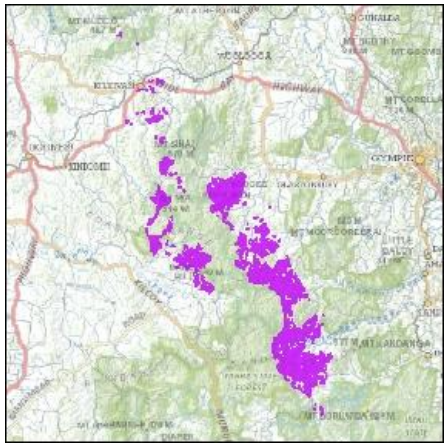
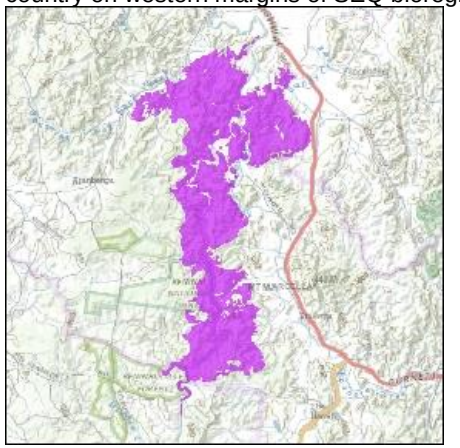
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_70	Mt Tamborine –Canungra 	State	Mt Tamborine is an outlying northern remnant of the Tweed Volcano. It is connected to the McPherson Range by the Darlington and Beechmont Ranges which contain a mix of metamorphic, Triassic volcanic and sedimentary rocks. • SEQ endemic taxa (Criterion Ia): including narrow endemic taxa - *Baloghia marmorata, Cassia marksiana, Cryptocarya foetida, Cupaniopsis newmanii, Dissiliaria baloghioides, Hakea florulenta, Jasminum jenniae, Macadamia tetraphylla, Owenia cepiodora, Westringia blakeana, Zieria collina*. • Wildlife refugia (Criterion Ib): the plateau country and country to the east and west of Mt Tamborine is very fragmented. • Disjunct populations (Criterion Ic): *Acacia hispidula, Sannantha collina, Endiandra compressa, Eucalyptus curtisii, Hibbertia cistoidea, Logania pusilla*.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM
71	Mt Mee		Addressed in Landscape Panel decision seqs_l_48.	
72	Montane Heath on rock pavement on summit of Mt Tinbeerwah		Addressed in Flora Panel decision seqs_fl_23.	
73	Mt Cooroy		Addressed in Flora Panel decision seqs_fl_23.	
74	Veresdale Scrub in North Beaudesert		Small remnant of a large patch of dry rainforest that was cleared for agriculture. Insufficient information to implement.	
75	Mt Barney – Mt Maroon – Mt Ballow portion of the Scenic Rim		Addressed in Landscape panel decision seqs_l_25.	
76	Mts Lindsay – Mt Chinghee, western McPherson Range portion of the Scenic Rim		Addressed in Landscape panel decisions seqs_l_25 and seqs_l_26.	

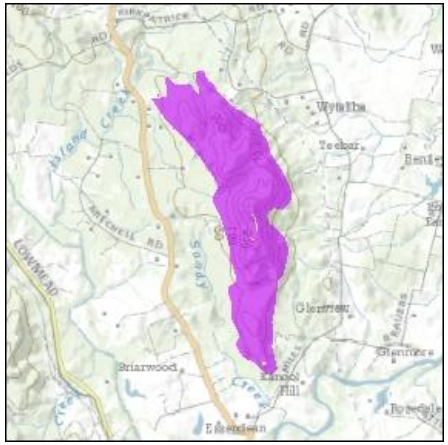
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
77	Lamington–Springbrook portion of Scenic Rim		Addressed in Landscape panel decision seqs_l_27.	
78	Conondale NP and surrounds including parts of Conondale FR1, and Kenilworth FR		Addressed in Landscape panel decision seqs_l_28.	
79	High precision records for priority taxa of State significance are contained within the remnant.		Not implemented as a special area decision in version 4.1 - refer to section 3.1.2 relating to priority species.	
80	High precision records for priority taxa of Regional significance are contained within the remnant.		Not implemented as a special area decision in version 4.1 - refer to section 3.1.2 relating to priority species.	
81	Low precision records for priority taxa of State significance are contained within the remnant.		Not implemented as a special area decision in version 4.1 - refer to section 3.1.2 relating to priority species.	
82	Low precision records for priority taxa of Regional significance are contained within the remnant.		Not implemented as a special area decision in version 4.1 - refer to section 3.1.2 relating to priority species.	
seqs_fl_83	Lower slopes of the Buderim Plateau 	State	• SEQ endemic taxa (Criterion Ia): in particular the narrow endemic taxon *Graptophyllum reticulatum*; also *Corynocarpus rupestris* subsp. *arborescens, Macadamia integrifolia, Macadamia ternifolia, Bosistoa transversa, Pararistolochia laheyana*. Note: refer to seqs_fl_17 for values associated with rainforests remnants located on the plateau.	Ia (SEQ endemic taxa): VERY HIGH

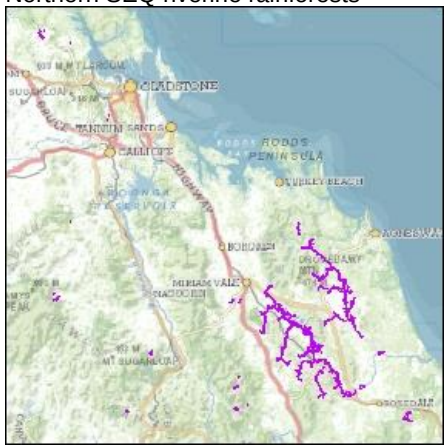
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqs_fl_84	Lowland riparian /gallery rainforest in the southern SEQ Bioregion 	State	Localised linear patches of lowland riparian rainforest in fragmented landscapes in the southern part of the bioregion. They provide refugia for animal and plant species more commonly associated with the higher rainfall parts of SEQ. • SEQ endemic taxa (Criterion Ia): • Wildlife refugia (Criterion Ib): Note: refer also to seqs_fl_02 and seqs_fl_19 for specific values associated with riparian rainforest communities within southern Gold Coast and Nambour areas respectively.	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): VERY HIGH
seqn_fl_01	Patch of tall open forest on Tertiary sediments near junction of - Woolooga and Maryborough - Biggenden Roads 	Regional	• Wildlife refugia (Criterion Ib). • Disjunct population of *Eucalyptus carnea* (Criterion Ic): northern outlier approximately 80 km from closest known occurrence to the south-east. • RE variation (Criterion Ig).	Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM Ig (ecosystem variation): MEDIUM

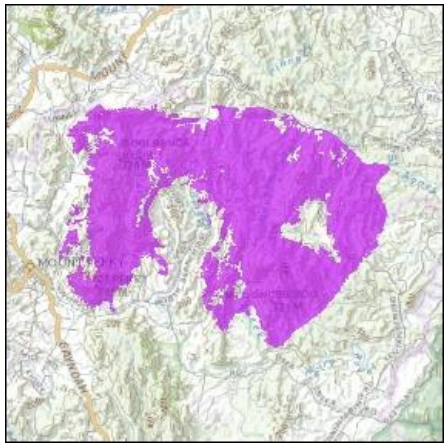
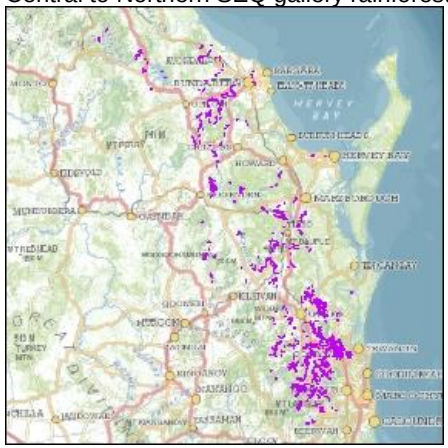
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_02	Walla Range west of Coalstoun Lakes 	State	Low mountain range in western part of bioregion near Coalstoun Lakes township. Much of the range is remnant vegetation. Vegetation consists of dry sclerophyll forest and dry rainforest on metamorphics and granitoid rocks. • SEQ endemic taxa (Criterion Ia) *Pomaderris clivicola* and *Zieria vagans* are narrow endemic taxa; other SEQ endemic taxa are present including: *Cycas megacarpa* (expert sighting), *Phebalium distans, Eucalyptus major, Parsonsia leichhardtii*. • Wildlife refugia (Criterion Ib) – island surrounded by cleared agricultural lands. • Open forest and rainforest taxa at or near western limits of geographic range (e.g. *Acacia irrorata, Pleioluma queenslandica, Flindersia schottiana*) (Criterion Id).	Ia (SEQ endemic taxa):VERY HIGH Ib (wildlife refugia): HIGH Id (limits of geographic range): MEDIUM
seqn_fl_03	Wetland complex with permanent waterhole and ephemeral swamp at Lakeside on Maryborough – Biggenden Road 	Regional	• Wildlife refugia (Criterion Ib). • Wetland taxa at or near western limits of geographic range (*Melaleuca quinquenervia, Lepironia articulata*) (Criterion Id).	Ib (wildlife refugia): HIGH Id (limits of geographic range): MEDIUM

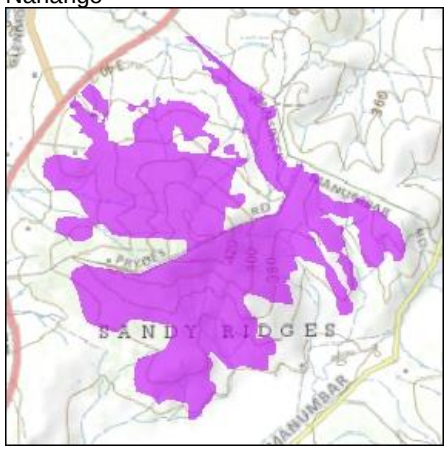
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_04	Large area of remnant vegetation on Bin Bin Range/Stony Creek headwaters north of Coalstoun Lakes 	State	Elevated tableland up to 500 m on granite and andesite north of Coalstoun Lakes. The rugged eastern and northern slopes have patches of Araucarian-type rainforest while the granite tableland area is predominantly grassy open forest/woodland. • SEQ endemic rainforest taxa (Criterion Ia): including *Arytera foveolata, Arytera microphylla, Bosistoa transversa, Backhousia subargentea, Corynocarpus rupestris* subsp. *arborescens, Hernandia bivalvis, Rhodamnia dumicola*. • Wildlife refugia (Criterion Ib): the remnant area includes relatively undisturbed eucalyptus forest on a plateau with woodland and rainforest patches on the slopes. • Disjunct populations (Criterion Ic): *Backhousia oligantha, Cupaniopsis simulata, Cycas megacarpa, Dinosperma melanophloia*. • Southern limit of range (Criterion Id): e.g. *Eugenia reinwardtiana.* • Species-rich area based upon WILDNET (Criterion Ie): with 440 taxa recorded from locality including broad range of grasses.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM Id (limits of geographic range): MEDIUM Ie (high species richness): MEDIUM

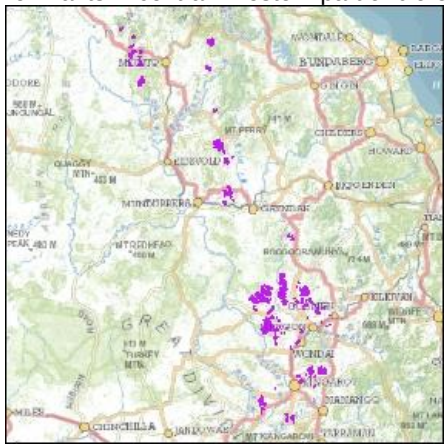
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_05	Serpentinite country between Yabba Creek and Mount Mudlo 	State	The serpentinite woodlands in the mid-Mary Valley – Kilkivan – Gallangowan areas are distinctive in terms of floristics and vegetation structure and contrast with surrounding country. There is often a dense understorey of grass trees or shrubs. Floristic patterns need further investigation as there is variation from site to site. • SEQ endemic taxa (Criterion Ia): including narrow endemic species – *Acomis acoma, Hakea florulenta, Macrozamia longispina*, *Plectranthus omissus. Philotheca difformis* subsp. *smithiana*. • Disjunct taxa (Criterion Ic) - *Astrotricha biddulphiana, Daviesia genistifolia, Leucopogon imbricatus, L. mitchellii, Logania albiflora, L. pusilla*. • Ecosystem variation associated with geology (the vegetation is very distinctive in terms of floristic composition and vegetation structure) (Criterion Ig).	Ia (SEQ endemic taxa): VERY HIGH Ic (disjunct populations): MEDIUM Ig (ecosystem variation): HIGH
seqn_fl_06	Barambah Creek Gorge and surrounding country on western margins of SEQ bioregion 	State	Rugged country along western margins of SEQ bioregion on volcanics (landzone 12) and duricrust remnants (Land zone 7) containing the incised watercourse of Barambah Creek, a major tributary of the Burnett River. Vegetation comprises shrubby open forests and woodlands of ironbarks and bloodwoods, small patches of vine thicket and riparian vegetation. The geology of the area includes Triassic volcanics including the remains of a caldera and the dissected remains of an old Tertiary surface with exposed duricrust in places. • SEQ and SEQ-BRB ecotone endemic taxa (Criterion Ia): including narrow endemic taxon (Criterion Ia): *Acacia grandifolia, Cryptandra propinqua subsp. propinqua, Eucalyptus dura, Hibiscus* sp. (Barambah Creek P.Grimshaw+ PG2484), *Pultenaea bracteamajor*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): *Acacia caroleae, Allocasuarina inophloia, Sannantha collina, Dodonaea heteromorpha, D. stenophylla, Grevillea floribunda* subsp.	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): HIGH Ii (hollow bearing trees): MEDIUM

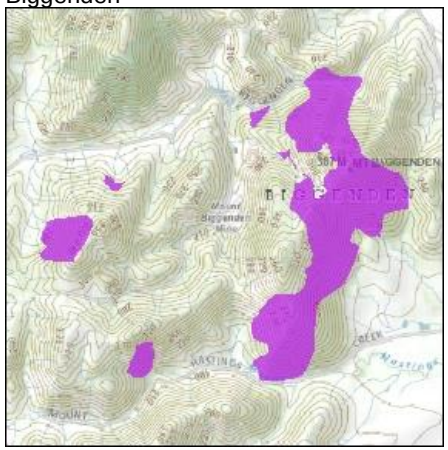
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
			floribunda, Mirbelia pungens, Phebalium nottii, Pultenaea borea. • Patches of unlogged/relatively undisturbed forest including hollow trees based upon expert knowledge (Criterion Ii).	
7	Coonarr Beach		Addressed in seqn_l_17	
seqn_fl_08	Mt Maria east of Lowmead 	Regional	Topographic isolate with flora of conservation interest. • SEQ endemic taxa (Criterion Ia) including *Kunzea flavescens, Goodenia* sp. (Mt Castletower M.D.Crisp 2753), *Prostanthera sp. (Mt Castletower I.R.Telford 10112)*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic) including *Babingtonia collina, Mirbelia pungens*.	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM
9	North and South Mt Goomboorian		Version 3.5 Panel reconsidered decision and decided it did not meet criteria for inclusion.	
10	Mt Abbotsford		Version 3.5 Panel reconsidered decision and decided it did not meet criteria for inclusion.	
11	Miara/lower Kolan River		Addressed in seqn_l_16	
12	Norval Park		This decision was not implemented in the previous and current SEQ BPA implementation. A floristic species list was provided by the 4.1 northern Panel – to be reviewed for future iterations.	

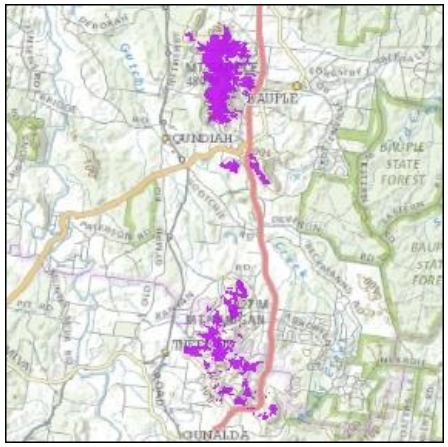
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_13	Northern SEQ riverine rainforests 	State	Localised linear patches of complex notophyll type lowland rainforest (RE 12.3.1) in northern part of region especially along Granite Creek that flows east from Bulburin. These patches are restricted in the landscape although they may be more extensive than the current mapping indicates. • SEQ endemic taxa (Criterion Ia): including *Cupaniopsis shirleyana, Phyllanthus sauropodoides, Rhodamnia glabrescens* • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): isolated populations of species characteristic of high rainfall southern SEQ rainforests, e.g. *Brachychiton acerifolius, Endiandra pubens, Cinnamomum oliveri, Eupomatia bennettii*. • Geographic limits of range especially southern limits (Criterion Id): *Atalaya rigida, Aidia racemosa, Cryptocarya vulgaris, Nauclea orientalis, Neolitsea brassii, Litsea fawcettiana, Rhodamnia glabrescens*. • Ecosystem variation (Criterion Ig): patches contain isolated populations of species characteristic of high rainfall southern SEQ rainforests, e.g. *Brachychiton acerifolius, Endiandra pubens, Cinnamomum oliveri, Eupomatia bennettii*. Note: refer also to seqn_l_17 for a similar decision addressing riparian rainforest communities covering the central to northern areas of the SEQ bioregion).	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM Id (limits of geographic range): HIGH Ig (ecosystem variation): MEDIUM
14	Rules Beach		Not implemented due to clearing - original values lost.	
15	Yarrol Scrub/Old Cannindah		To be implemented as part of next BRB version - combine with brbs_fl_35.	

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_16	Hogback , Gongeriboo Ranges, Boolbunda Rock 	State	Extensive rugged upland area with several peaks >680m. Vegetation includes *Eucalyptus* forest, montane heath and heath-woodland, notophyll-type gully rainforest and patches of Araucarian microphyll rainforest. • SEQ endemic taxa (Criterion Ia): including *Goodenia* sp. (Mt Castletower M.D.Crisp 2753), *Eucalyptus montivaga, E. decolor, E. dura, E. major, Macrozamia mountperriensis,, Leucopogon* sp. (Boolbunda Rock K.M.Sparshott+ KMS623), *Seringia hillii, Triplarina volcanica* subsp. *borealis*. • Wildlife refugia (Criterion Ib). • Disjunct taxa (Criterion Ic): including *Cycas megacarpa, Pultenaea borea, Callitris rhomboidea*. • Relatively species-rich area (Criterion Ie).	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM Ie (high species richness): MEDIUM
seqn_fl_17	Central to Northern SEQ gallery rainforests 	State	Localised linear patches of complex notophyll type lowland rainforest (RE 12.3.1) in fragmented landscapes in central part of region. They provide refugia for animal and plant species more commonly associated with the higher rainfall parts of SEQ especially the coastal lowlands south of Gympie and Granite Creek near Miriam Vale. These patches are restricted in the landscape although they are more extensive than the current mapping indicates which pretty much restricts the type to Tinana Creek and Coondoo Creek, one of its major tributaries. These streams rise in the Wolvi and Beenham Ranges on the south-western margins of Cooloola and flow northwards towards Maryborough where Tinana Creek drains into the Mary River. In places the streams retain vegetated corridors through areas planted with exotic pine in Toolara and Tuan State Forests and there are patches of riverine rainforest that contain species of special conservation interest. The Kin Kin Creek catchment lies immediately south of the Tinana -Coondoo system. Kin Kin Creek has a similar riparian corridor identified by the	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): HIGH Id (limits of geographic range): HIGH Ig (ecosystem variation): HIGH

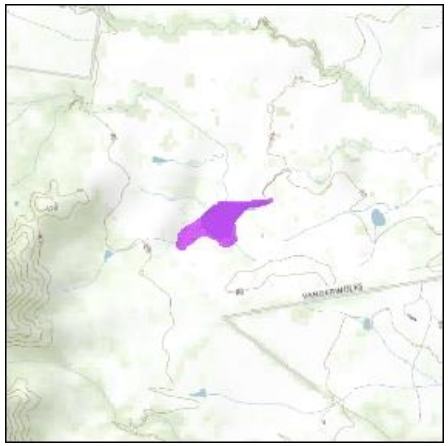
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
			Southern SEQ expert panel. Other streams known to support lowland complex notophyll rainforest remnants include Harwood Creek south-west of Lenthall's Dam, Gregory River, Burnett River and Gin Gin Creek. The key values identified for Tinana-Coondoo Creeks include: • SEQ endemic taxa especially rainforest taxa – *Acacia bakeri, Acacia attenuata, Argyrodendron* sp. (Kin Kin W.D.Francis AQ81198), *Arytera microphylla, Backhousia subargentea, Cossinia australiana, Fontainea rostrata, Macrozamia parcifolia, M. pauli-guilielmi, Melaleuca cheelii, Pilidiostigma rhytispermum, Quassia bidwillii Symplocos harroldii, Rhodamnia acuminata, R. dumicola, Xanthostemon oppositifolius.* • Wildlife refugia especially refugia from clearing (Criterion Ib) • Disjunct populations (Criterion Ic): *Agathis robusta, Doodia linearis, Podocarpus spinulosus, Quassia bidwillii*. Note: refer also to seqn_l_13 for a similar decision addressing riparian rainforest communities in eastern catchments north of (and including) the Granite Creek area.	
seqn_fl_18	Tertiary sediments near Pryde's Road north of Nanango 	Regional	• Wildlife refugia (Criterion Ib): • Disjunct populations of Brigalow Belt sandstone taxa (Criterion Ic): including *Allocasuarina inophloia*, *Boronia glabra, Prostanthera cryptandroides* subsp. *euphrasioides, Grevillea floribunda* subsp. *floribunda, Polianthion minutiflorum*.	Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM

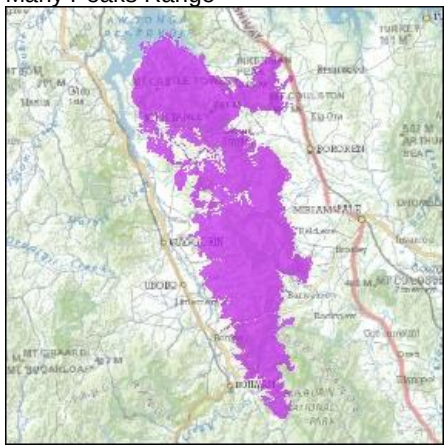
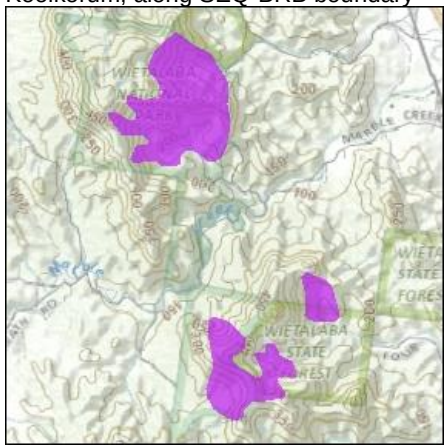
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_19	Remnant vegetation on Tertiary plateau remnants in central –western part of bioregion 	State	Remnants of old pediplains of Tertiary age are conspicuous between Kingaroy in SEQ and Monto just west of the SEQ-BRB boundary. While the development of these surfaces has involved material sourced from basalt flows in many instances (being iron-rich this has resulted in the red colouration of soils and cemented rock-like material called duricrust or ferricrete) this is not always the case and in some cases the old surfaces are associated with granite and acid volcanics and sedimentary and metamorphic rocks. Collectively the Tertiary plateau remnants have outstanding flora values because of the presence of narrow endemic, regional endemic and disjunct taxa, especially shrub species. The vegetation is typically grassy tall open forest on plateau remnants with powdery or “snuffy” red soils, shrubby woodland where erosion has stripped soil to expose duricrust (e.g. narrow ridgelines and tops of scarps) and dry rainforest on steep scarp slopes and lower slopes with redistributed red soils. The deeper red soils have been extensively cleared for agriculture although there is a trend for retirement of marginal country or replacement of agriculture with tree crops (*Duboisia* for pharmaceuticals and native hardwood plantations). • SEQ endemic taxa (Criterion Ia): including narrow endemic taxa - *Arytera foveolata, A. microphylla, Melaleuca formosa, Cossinia australiana, Eucalyptus dura, Lasiopetalum* sp. (Proston J.A.Baker 17), *Paspalidium grandispiculatum, Phebalium distans, Pomaderris clivicola*. • Wildlife refugia (Criterion Ib). • Disjunct taxa (Criterion Ic)	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): VERY HIGH

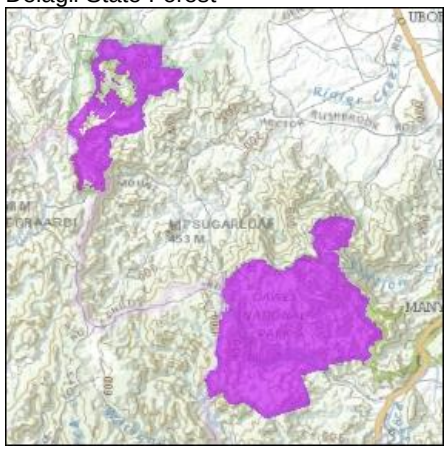
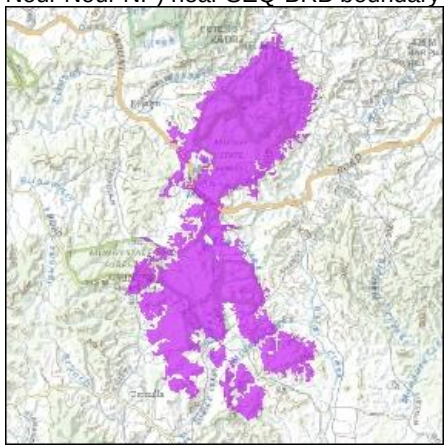
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
20	Fringing forest with fuzzy box (*Eucalyptus conica*)		Not implemented. Deferred pending detail mapping. Fringing forest with fuzzy box (*Eucalyptus conica*) on lower slopes adjacent to watercourses (known locations are Rocky Creek north of Yarraman, near Peach Trees camping area at Jimna and Jones Gully north of Crows Nest). • Ecosystem variation (Criterion Ig): Fringing forests adjacent to the areas discussed by the Expert Panel are predominantly *Eucalyptus tereticornis*. • The patches of *E. conica* are disjunct from the main area of distribution of the species in Queensland (Nandewar region part of NET Criterion Ic) and may reflect the sifting of vegetation associated with Pleistocene climate change.	
seqn_fl_21	Remnant vine thicket and rainforest, Mt Biggenden 	Regional	• SEQ endemic taxa (Criterion Ia): *Arytera microphylla, Bosistoa transversa, Hernandia bivalvis*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): *Backhousia oligantha, Cupaniopsis simulata, Dinosperma melanophloia*. • Species richness (Criterion Ie): Maxent modelling by DSITI suggests area is likely a flora hot spot for EVNT flora species.	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM Ie (high species richness): HIGH – based upon DSITI's Maxent Modelling

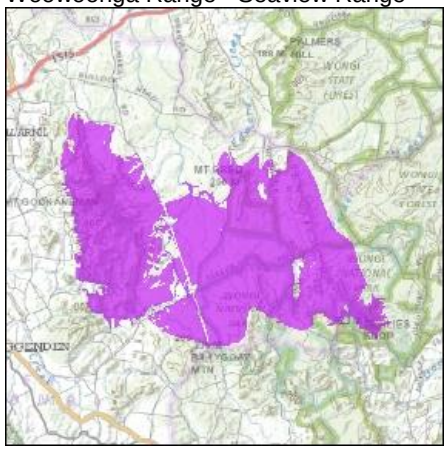
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_22	Rainforest remnants, Mount Bauple to Glenwood 	State	Small mountain ranges (associated with Mount Bauple, Glassy Mountain and Mount Theebine) with complex rainforest flora. • SEQ endemic rainforest taxa (Criterion Ia): *Acacia bakeri, Argyrodendron* sp. (Kin Kin W.D.Francis AQ81198), *Arytera distylis, A. foveolata, A. microphylla, Backhousia subargentea, Cossinia australiana, Cupaniopsis serrata, Fontainea rostrata, Gossia punctata, Macadamia integrifolia, Medicosma cunninghamii, Rhodamnia dumicola*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): *Agathis robusta, Barklya syringifolia, Cassia brewsteri*, *Cupaniopsis simulata, Dinosperma melanophloia, Dissiliaria muelleri, Quassia bidwillii, Rhodamnia pauciovulata*.	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM
23	Rainforest on Grassy Mountain near Bauple		Addressed in seqn_fl_22.	
seqn_fl_24	Burrum to River Heads, Hervey Bay rainforest remnants 	State	• SEQ endemic rainforest taxa (Criterion Ia): *Acacia bakeri, Argyrodendron* sp. (Kin Kin W.D.Francis AQ81198), *Arytera foveolata, Clausena smyrelliana, Fitzalania bidwillii, Rhodamnia acuminata, R. dumicola*. • Wildlife refugia (Criterion Ib). • Southern/near-southern limits of range (Criterion Id), e.g. *Aidia racemosa, Emmenosperma cunninghamii, Litsea fawcettiana*. • RE variation (Criterion Ig) – the rainforest patches are growing on transported coastal sand as well as bedrock-derived soils and have a mix of coastal (“littoral”), mesic and dry rainforest elements. The Expert Panel noted that assessment of the conservation values of the remnants would benefit from more detailed ground survey and mapping information.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): HIGH Id (limits of geographic range): HIGH Ig (ecosystem variation): HIGH

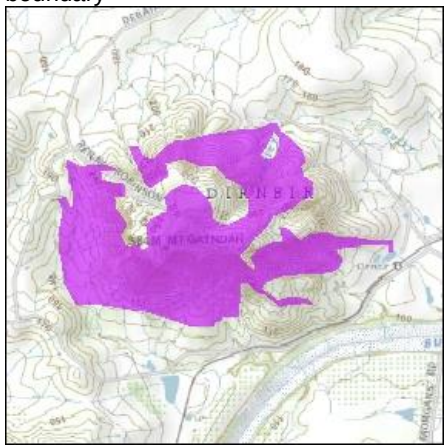
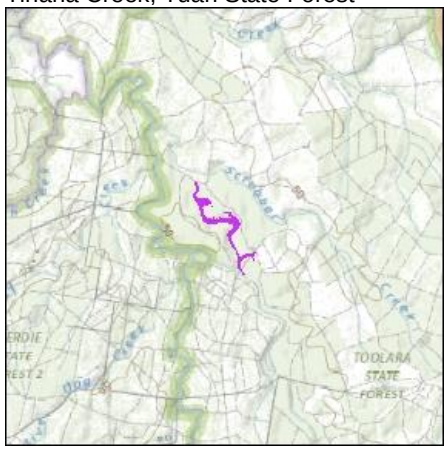
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
25	Patch of blackbutt forest on sedimentary rocks near Hervey Bay		Not implemented. Deferred pending on-ground investigation. The patch is about 65 km north of the edge of the main area of *Eucalyptus pilularis* in mainland SEQ (*E. pilularis* is present further north on Fraser Island.). The patch may be refugial reflecting Pleistocene climate change. *Eucalyptus racemosa* another coastal taxon has a similar northern limit of extent and has an outlier to the north on the Elliott River near Bundaberg. The patch is not formally mapped at present so ground survey is required.	
26	Sharon Gorge		This decision was not implemented in the previous and current SEQ BPA implementation. A floristic species list was provided by the 4.1 northern Panel – to be reviewed at future iterations.	
27	Branyan Creek		Not implemented. Insufficient information to progress.	
28	Woongara Scrub remnant		Not implemented. Considered not to not meet criteria – local value is more appropriate.	
29	Mon Repos pasturage		Addressed in seqn_l_32.	
30	Tinana Creek riparian corridor		Addressed in seqn_fl_17 and seqn_l_13.	

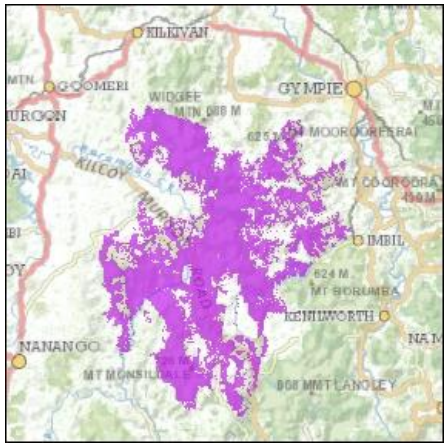
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_31	*Eleocharis equisetina* swamp at base of Bulburin National Park near Miriam Vale 	Regional	• Wildlife refugia (Criterion Ib).	Ib (wildlife refugia): HIGH
32	Acid swamp wetlands, Wongi		Near-coastal wetland complex containing a deep series of waterholes that persists under normal and drought conditions. • Wildlife refugia (Criterion Ib). Implemented as seqn_l_49.	

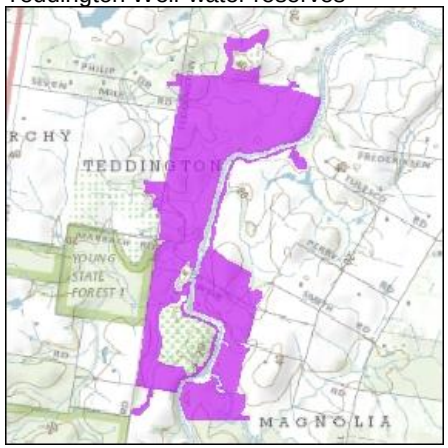
Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_33	Many Peaks Range 	State	• SEQ endemic taxa including narrow endemic taxa (Criterion Ia) - *Acacia* sp. (Bulburin W.J.McDonald 3208), *Acomis acoma, Apatophyllum olsenii, Argophyllum nullumense, Boronia bella, Cassinia collina, Eucalyptus decolor, E. major, E. montivaga, Goodenia* sp. (Mt Castletower M.D.Crisp 2753), *Kunzea flavescens, Leucopogon rupicola, Philotheca difformis* subsp. *smithiana, Prostanthera* sp. (Mt Castletower I.R.Telford 10112), *Rhodamnia dumicola*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criteria Ic): *Allocasuarina inophloia, Bertya opponens, Comesperma esulifolium, Cupaniopsis simulata, Cycas megacarpa, Doodia linearis, Grevillea venusta, Lepidosperma elatius, Logania albiflora, Mirbelia pungens, Persoonia amaliae, Pultenaea borea*. • Southern limits or close to southern edge of range (Criterion Id): e.g. *Melaleuca polandii, Hovea densivellosa, Gonocarpus acanthocarpus, Rhodamnia spongiosa*.	Ia (SEQ endemic taxa): VERY HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): HIGH Id (limits of geographic range): HIGH
seqn_fl_34	Boyne Valley Rainforest. Wietalaba - Koolkorum, along SEQ-BRB boundary 	State	• SEQ and BRB endemic taxa (Criterion Ia): including narrow endemic species – *Backhousia subargentea, Fontainea venosa, Macropteranthes leiocaulis, Oldenlandia gibsonii, Rhodamnia angustifolia, Sophora fraseri*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): *Atalaya rigida, Barklya syringifolia, Bosistoa pentacocca subsp. connaricarpa, Cupaniopsis simulata, Graptophyllum spinigerum*.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_35	Northern Parts of Dawes National Park and Delagil State Forest 	State	The highest point, Mt Robert is > 900m altitude. The elevated area is strategically located between the elevated massifs of Kroombit Tops and Bulburin. • SEQ endemic taxa (Criterion Ia) including *Acacia* sp. (Bulburin W.J.McDonald 3208), *Eucalyptus montivaga, Phyllanthus sauropodoides* • Wildlife refugia (Criterion Ib): particularly due to its ecological function as a cool, moist topographic isolate. • RE variation (Criterion Ig): isolated occurrences of wet sclerophyll forest with *Eucalyptus saligna* and notophyll vine forest.	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): VERY HIGH Ig (ecosystem variation): HIGH
seqn_fl_36	Hungry – Hills – Possum Range (including Nour Nour NP) near SEQ-BRB boundary 	State	• Wildlife refugia (Criterion Ib). • Disjunct/edge populations (Criteria Ic): especially species characteristic of sandstone and duricrust in the southern Brigalow Belt – *Acacia blakei* subsp. *blakei, A. brachycarpa, A. holotricha, Allocasuarina inophloia, Harmogia densifolia, Boronia glabra, Eucalyptus rhombica, E. virens, Hakea plurinervia, Logania albiflora, Melaleuca groveana, Mirbelia pungens, M. speciosa* subsp. *ringrosei, Notelaea* sp. (Barakula A.R.Bean 7553), *Pultenaea bracteamajor*. • RE variation (Criterion Ig): many of the disjunct populations are growing on duricrust associated with material originally sourced from acid volcanic rocks whereas much of the duricrust in western SEQ is associated with material sourced from basalt and sedimentary rocks.	Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): HIGH Ig (ecosystem variation): HIGH

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
37	Remnant vegetation west and south-west of Gladstone on margins of SEQ-BRB. Includes Mt Stowe, Beecher, Mt Martin SFs and Calliope CP		Addressed in seqn_l_47.	
seqn_fl_38	Woowoonga Range - Seaview Range 	State	• SEQ endemic taxa including narrow endemic taxa (Criterion Ia): *Acomis acoma, Argyrodendron* sp. (Kin Kin W.D.Francis AQ81198), *Arytera microphylla, Backhousia subargentea, Eucalyptus major, E. montivaga, Macrozamia parcifolia, Pilidiostigma rhytispermum, Pomaderris andromedifolia* subsp. *andromedifolia, Samadera sp. (Mt Goonaneman J.Randall 738)*, *Rhodamnia dumicola, Solanum gympiense*. • Wildlife refugia (Criterion Ib). • Disjunct populations (Criterion Ic): *Acacia oshanesii, Agathis robusta, Commersonia viscidula, Cupaniopsis simulata, Cycas megacarpa, Rhodamnia pauciovulata* • Moist open forest species and rainforest species in northern part of geographic range, e.g. *Melaleuca salicina, Eucalyptus grandis* (further north it is restricted to mountains), *E. propinqua, Pilidiostigma rhytispermum, Stenocarpus sinuatus* (Criterion Id). • RE variation (Criterion Ig): associated with east – west and altitudinal gradients.	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Ic (disjunct populations): MEDIUM Id (limits of geographic range): HIGH Ig (ecosystem variation): HIGH

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_39	Montane heath and shrubby woodland on volcanics on Mt Gayndah, SEQ – BRB boundary 	Regional	• Taxa endemic to SEQ and SEQ-BRB boundary (Criterion Ia) – *Acacia grandifolia, Pultenaea bracteamajor, Seringia hillii*. • Wildlife refugia (Criterion Ib): surrounding area very heavily impacted by clearing. • Disjunct populations (Criterion Ic) – *Bertya pedicellata.*	Ia (SEQ endemic taxa): MEDIUM Ib (wildlife refugia): HIGH Ic (disjunct populations): MEDIUM
seqn_fl_40	Acid swamp wetlands, Murphys Lakes - near Tinana Creek, Tuan State Forest 	Regional	Unusual wetland feature with Fraser Island flora affinities. Has unique geomorphological and flora values, i.e. *Macrozamia pulmagrunei*. • Wildlife refugia (Criterion Ib).	Ib (wildlife refugia): VERY HIGH Ig (distinct geomorphology): HIGH

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
41	Area between Tinnanbar and mouth of Mary River		Addressed in seqn_l_34.	
seqn_fl_42	Remnant tract encompassing Yabba State Forest and surrounding Protected Area Estate 	State	• SEQ endemic taxa including narrow endemic taxa (Criterion Ia): *Acomis acoma, Araucaria bidwillii, Arytera distylis, A. foveolata, Backhousia subargentea, Eucalyptus dura, E. montivaga, Macrozamia longispina, Marsdenia coronata, Citrus australis, Pilidiostigma rhytispermum, Plectranthus omissus, Rhodamnia dumicola*. • Wildlife refugia (Criterion Ib). • Northern limit of range (Criterion Id): of wet sclerophyll and complex notophyll vine forest species, e.g. *Eucalyptus pilularis* (apart from Fraser Id), *Sloanea woollsii*. • Area of high species richness (Criterion Ie).	Ia (SEQ endemic taxa): HIGH Ib (wildlife refugia): VERY HIGH Id (limits of geographic range): HIGH Ie (high species richness): HIGH
43	Deepwater National Park		Addressed in seqn_l_15	

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
seqn_fl_44	Teddington Weir water reserves 	State	State reserves, managed by council. The area contains unique combinations of vegetation communities inclusive of species such as hoop pine, kauri pine and melaleuca species which once were more extensive from Maryborough south to Kooroy. The Teddington Water Reserves contains the largest and most diverse area of what now remains, with communities in good condition with few weeds present.	Ia (SEQ endemic taxa): VERY HIGH Id (limits of geographic range): VERY HIGH Ie (high species richness): VERY HIGH Ig (ecosystem variation): HIGH
Brigalow Belt BPA Version 1.3 Decisions that overlap the SEQ bioregion				
brbs_fl_10	Callide Range	State	Sandstone ranges on the boundary of the SEQ and Brigalow Belt bioregions with shrubby woodlands, shrublands and vine thicket. A species rich area (290 taxa within 10,000ha) which is largely a consequence of habitat diversity and overlap of flora between bioregions (e.g. 4 taxa of *Boronia*). Also a hotspot for threatened or rare plant taxa including *Cossinia australiana*, *Grevillea hockingsii*, *Polianthion minutiflorum*, *Quassia bidwillii*, *Acacia pedleyi*, *A. pubicosta*, *Cerbera dumicola* and *Desmodium macrocarpum*. Populations of the endemic and disjunct taxa *Eucalyptus suffulgens* and *E. bakeri* are also present.	Ia (centre of endemism): y Ic (disjunct populations): y Id (geographic range limits): y Ie (high species richness): y Ig (variation in species composition): y
brbs_fl_13	Poplar box *Eucalyptus populnea* open woodland on alluvium, Eastern Darling Downs	State	Variation in structure of this RE compared to the rest of its range – a more open woodland occurs in the Eastern Darling Downs subregion. Provides habitat for threatened or rare plant taxa including *Homopholis belsonii* and other priority taxa in a highly cleared landscape. Also subregionally endangered (7% remaining in Eastern Darling Downs).	Ia (centre of endemism): y Ib (wildlife refugia): y Ig (variation in species composition): y

Decision number	Description	Panel recommended significance	Identified values in BPA	Criteria values
brbs_fl_21	Part of Coominglah SF	Regional	Values include narrow endemic taxa (*Grevillea hockingsii, Pomaderris coomingalensis, Zieria hydroscopica* , *Solanum lythrocarpum*, *Eucalyptus corynodes, Pultenaea palasepala*, high species richness, disjunct populations of *Hakea fraseri, Melaleuca formosa* and *A. polybotrya*, several threatened or rare species such as *Acacia calantha, A. islana, Polianthion minutiflorum*, range limits of *Olearia gravis*, *Kunzea flavescens*; part of a significant tract linking with SEQ.	Ia (centre of endemism): y Ib (wildlife refugia): y Ic (disjunct populations): y Id (limits of geographic range): y Ie (high species richness): y Ig (distinct variation in species composition): y
brbs_fl_29	Western side of Bunya Mts	Regional	Endangered vine thicket and brigalow vegetation communities which include the western and northern range limits for several species such as *Clematis fawcettii*, *Callitris baileyi*.	Id (limits of geographic range): y Ie (high species richness): y Ig (distinct variation in species composition): y

3.3 Data collection

Data collection has not been spatially uniform with regards to species records. Many areas are under surveyed relative to areas with high densities of records and known values. Poorly sampled areas can be identified relatively easily using species record datasets. Areas such as roads are clearly more heavily sampled, while ranges and escarpments and interior parts of major floodplain wetland systems are underrepresented and should be the focus of future survey effort. Access to private lands may be more achievable in the future by forming joint projects with the NRM Groups.

3.4 Data access and conditions

The public will be able to access the information contained in the BPA on the Queensland Government Spatial Catalogue website at http://qldspatial.information.qld.gov.au. Specific details for point records will not be included, thus end users will need to seek further advice from EHP when this detail is required.

4 Summary

The flora expert panel has made a significant contribution to biodiversity assessment and planning in the SEQ bioregion. Refining and validating existing species records, and providing additional records for the bioregion, could not have been achieved without the cooperation of these experts and their local knowledge. Similarly, the refinement of special features identified by previous expert panels and the identification of new areas significant for flora could not have been as comprehensively completed without the help and guidance of the panel.

Several matters were raised by the panel in relation to the flora of the Southeast Queensland bioregion as follows:

Climate change - There was awareness of modelling limitations within SEQ. Current modelling is mainly focussed on vertebrate fauna. There is work in progress to expand this to other elements of the 'comprehensive, adequate and representative' scientific framework (CAR). Much of this work is being undertaken in universities.

Species listings under NCA - the panel did not agree with many of the species downgrades (from Near Threatened to Least Concern) which were adopted in 2015. The panel nominated some of these species to be included in the "Priority species" list (criterion H). It was viewed that there has been a long time lag between the last round of Species Technical Committee (STC) change nominations and implementation, and during this time conditions have changed dramatically for some species.

Threatened species - the panel greatly assisted in identifying suspect species records which were most likely cultivated specimens.

Priority species - the panel for this version placed additional emphasis on species at risk of climate change and those significantly affected by myrtle rust.

Special features - 56 flora special features were ultimately implemented in the final product. Most of these features were identified by previous panels. Boundaries were refined in many cases and all were updated to version 9 of the regional ecosystem mapping. A small number of additional areas not previously nominated, were implemented in this BPA version.

The resulting planning assessment is now a useful basis for a variety of applications including the protection and management of areas of high conservation value, development assessment, local government planning, vegetation management and internal EHP policy and procedures.

5 Bibliography

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Appendix 1 Acronyms and Abbreviations

BAMM	Biodiversity Assessment and Mapping Methodology
BPA	Biodiversity Planning Assessment
BRB	Brigalow Belt bioregion
BVG	Broad Vegetation Group
CORVEG	The site survey database maintained by the Queensland Herbarium
DCDB	Digital Cadastral Database—a spatial database of Queensland property boundaries.
DNRM	Department of Natural Resources and Mines
DSITI	Department of Science, Information Technology and Innovation
EHP	Department of Environment and Heritage Protection
EVNT	Endangered, vulnerable or near threatened under the Queensland *Nature Conservation Act 1992* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
EPA	Environmental Protection Agency (former Queensland Government department)
EPBC	*Environmental Protection and Biodiversity Conservation Act 1999*
GIS	Geographic information system
HERBRECS	Specimen based register of plants held by Queensland Herbarium
NCA	*Nature Conservation Act 1992*
NET	New England Tableland bioregion
QPWS	Queensland Parks and Wildlife Service (an agency within Department of National Parks, Recreation, Sport and Racing)
RE	Regional ecosystem
REDD	Regional Ecosystems Description Database
SDRN	State Digital Road Network
SEQ	Southeast Queensland bioregion
WILDNET	Department of Science, Information Technology and Innovation (DSITI)'s corporate wildlife application containing records and other information on Queensland flora and fauna

Appendix 2 Datasets 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 SEQ study area local government areas

Local government boundaries

Pastoral holdings database

Places

Towns

State Digital Road Network (SDRN)

Stockroutes.

Vegetation

Regional Ecosystem Description Database (REDD)

Draft pre-clearing vegetation

Remnant (RE09) RE mapping

Certified updates to remnant mapping.

Species

All fauna species records were obtained from Queensland Historical Fauna and WildNet databases. Flora species records were obtained from Herbrecs, WildNet and Corveg databases.

BriMapper (Herbrecs species records viewer).

Wetlands

Queensland Wetland Mapping

Directory of Important Wetlands

Drainage network—rivers

Drainage network—creeks.

Biodiversity Planning Assessment data

Queensland bioregion and subregion boundaries

Terrestrial and riparian state bioregional corridors

Results from SEQ bioregion BPA v3.5.

Protected areas

EPA estates

Nature refuges

Coordinated conservation areas.

Imagery

Landsat mosaic of the SEQ bioregion

SPOT imagery (10 metres).

Documents available electronically

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

Hard copy maps

SEQ bioregions and subregions (Queensland)

Statewide corridors

SEQ BPA v3.5 outputs.