



Biodiversity Planning Assessment using BAMB

for the Cape York Peninsula Heritage Area
Summary Report

Prepared by:

Steven Howell¹ Manager, Biodiversity Assessment
Lindsey Jones¹ Principal Biodiversity Planning Officer

¹ Ecosystem Outcomes Branch, Conservation and Sustainability Services Division, Queensland
Department of Environment and Heritage Protection, GPO Box 2454 BRISBANE QLD 4001

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Acronyms and abbreviations

ACA	Aquatic Conservation Assessment
AES	Areas of Ecological Significance
AquaBAMM	Aquatic Biodiversity Assessment and Mapping Methodology
BAMM	Biodiversity Assessment and Mapping Methodology
BPA	Biodiversity Planning Assessment
CYP	Cape York Peninsula
CYPLUS	Cape York Peninsula Land Use Strategy
DAFF	Department of Agriculture, Fisheries and Forestry
DNPRSR	Department of National Parks, Recreation, Sport and Racing
DSDIP	Department of State Development, Infrastructure & Planning
DSITIA	Department of Science, Information Technology, Innovation and Arts
EHP	Department of Environment and Heritage Protection
EVNT	Endangered, Vulnerable or Near threatened. May also appear as EVR
EVR	Endangered, Vulnerable or Rare (superseded by EVNT)
GIS	Geographic Information System
NRM	Natural Resource Management
QHFD	Queensland Historic Fauna Database
RE	Regional ecosystem
SEQ	South East Queensland

1 Introduction

This report briefly describes the scientific methodology that underpins the production of Biodiversity Planning Assessments (BPA) and summarises the overall results of the BPA for the Cape York Peninsula (CYP) Heritage Area. Outcomes from the BPA along with those generated by the aquatic conservation assessment (ACA) for the same study area (EHP 2012) are intended for use by the Department of State Development, Infrastructure and Planning (DSDIP) to inform the proposed statutory regional plan for the CYP.

BPAs are usually repeated every few years as new information becomes available or underlying data layers change. This report relates only to the CYP Heritage Area BPA v1.1.

1.1 Biodiversity Planning Assessments

The Biodiversity Assessment and Mapping Methodology (BAMB) was developed to provide a consistent approach for assessing biodiversity values at the landscape scale in Queensland. The BAMB is based on vegetation mapping from the Queensland Herbarium. It incorporates a range of biodiversity-related data and is focused primarily on assessing terrestrial values. The Department of Environment and Heritage Protection (EHP) uses the methodology to generate BPAs for each of Queensland's bioregions.

The BAMB involves 2 stages. The first stage uses existing data to assess ecological concepts such as rarity, diversity, fragmentation, habitat condition, resilience, threats and ecosystem processes in a uniform and reliable way across a bioregion. These criteria are used to filter available data and provide an initial determination of significance. This part of the assessment is generated using a geographic information system (GIS). The second stage uses expert opinion to refine the first-stage results and identify features such as wildlife corridors and areas with special biodiversity value (e.g. centres of endemism or wildlife refugia).

BPAs have been completed for 10 bioregions within Queensland. They provide a source of baseline conservation and ecological information to support natural resource management and planning processes. They can be used as an independent product or as an important foundation upon which a variety of additional environmental and socio-economic elements can be added and considered (i.e. an early input to broader 'triple-bottom-line' decision-making processes).

The final BPA is a powerful decision support tool that can be comprehensively interrogated through a GIS platform. A BPA can have application in:

- determining priorities for protection, regulation or rehabilitation of ecosystems
- on-ground investment in ecosystems
- contributing to impact assessment of large-scale development
- providing input to broader social and economic evaluation and prioritisation processes.

BPAs are used by EHP staff, other government departments, local governments, environmental consultants and members of the community to support a range of planning or decision making processes. Information from BPAs has contributed to:

- identification of significant ecological values on State Rural Leasehold Land Strategy leases which are pastoral/agricultural leases, comprising most of the leasehold land in Queensland
- identification of significant ecological values when assessing possible additions to the protected area estate
- identification of significant ecological values when assessing development applications
- species core habitat identification as part of the *Vegetation Management Act 1999* Essential Habitat and Essential Regrowth Habitat
- local government planning schemes

- identification of areas of ecological significance (AES)
- development of regional plans by the Department of State Development, Infrastructure and Planning
- the development of natural resource management plans
- community-based organisations' work to identify and prioritise areas of importance.

While the BAMB methodology does include aquatic biodiversity values, aquatic conservation values are specifically assessed through application of the Aquatic Biodiversity Assessment and Mapping Methodology (AquaBAMB, Clayton et al. 2006) to create aquatic conservation assessments.

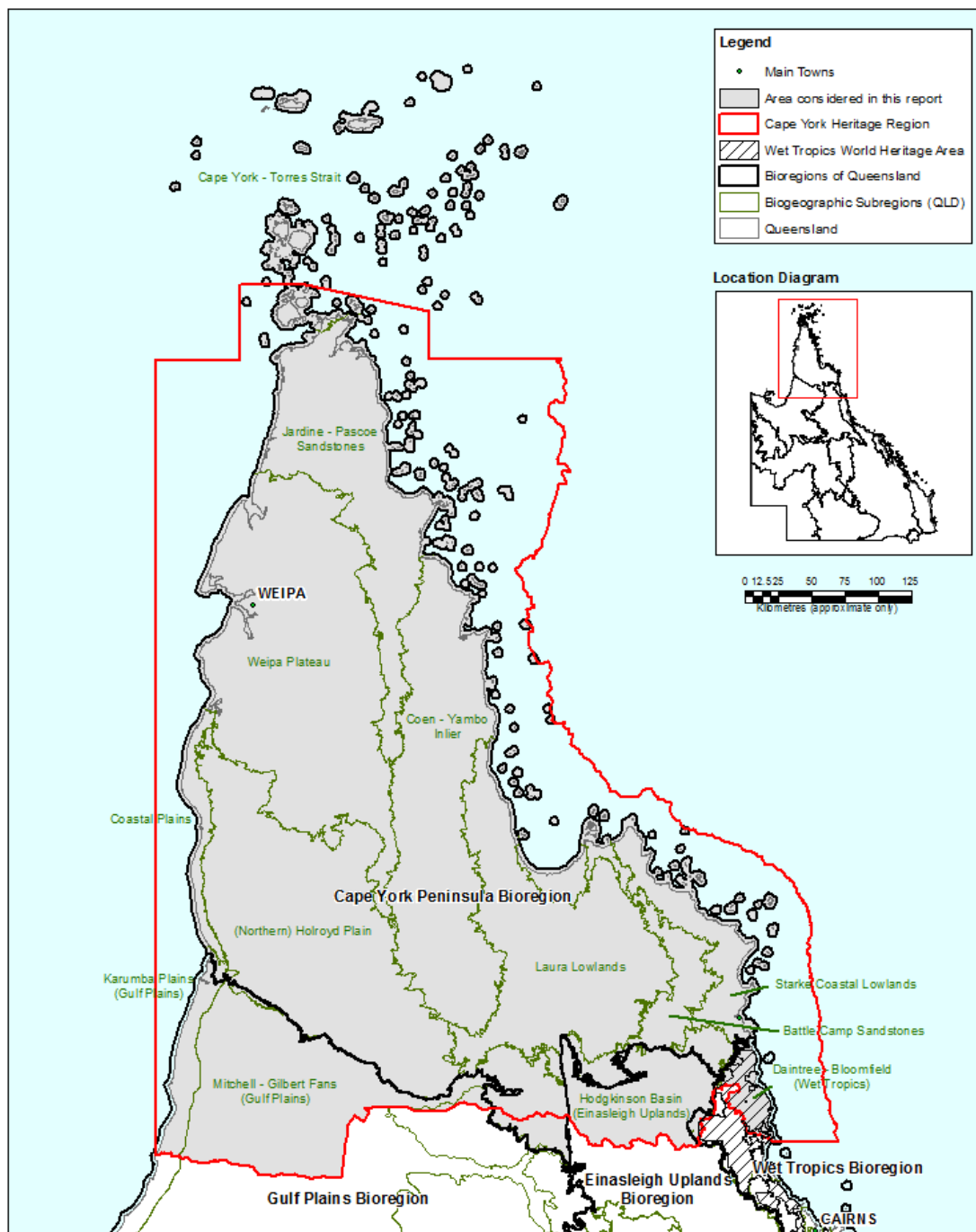


Figure 1. The CYP bioregion and surrounds where the BPA has been conducted.

1.2 Cape York study area

Cape York Peninsula (CYP) is a diverse and important region of tropical Australia. It covers 13,720,000 hectares and had an estimated residential population of approximately 17,000 people (Earth Tech 2005). The bioregion has a tropical humid/maritime climate, with rainfall varying from 1000–1600mm. It is a place of special heritage, containing vast and relatively undisturbed landscapes with extraordinary biological significance and diversity and rich with Aboriginal traditions and customs.

The bioregion consists of a complex geology dominated by the Torres Strait Volcanics in the north. The metamorphic rocks and acid intrusive rocks of various ages of the Coen-Yambo Inlier run north-south along the eastern margin of the region and encompass the high-altitude/high-rainfall areas of Iron Range and McIlwraith Range. The deeply dissected sandstone plateaus and ranges of the Battle Camp Sandstones lie in the southern part of the region adjacent to the undulating Laura Lowlands which is composed of residual weathered sands and flat plains of colluvial and alluvial clays, silts and sands. The western part of the region is dominated in the south by the extensive Tertiary sand sheets dissected by the intricate drainage systems of the Holroyd Plain, the Tertiary laterite of the undulating Weipa Plateau and the low rises of Mesozoic sandstones. The northern extension of the Weipa Plateau and extensive coastal plains adjoin the Gulf of Carpentaria. Extensive aeolian dunefields lie in the east associated with Cape Bedford/Cape Flattery in the south and the Olive and Jardine Rivers (Sattler and Williams 1999).

There are 9 sub-regions within the Cape York Peninsular Bioregion (Figure 1). All sub-regions have high ecosystem diversity and endemism. The ecosystem diversity encompasses rainforests, woodlands, shrublands, heaths, sedgeland, grasslands and mangroves, all in a relatively intact condition (Sattler and Williams 1999).

One of the significant values of the bioregion is its relative intactness. The overall condition of Cape York Peninsula is good with some declines in ecosystems, wetlands, riparian vegetation and species. Only limited clearing of vegetation has occurred in the bioregion. A main potential agent of change in the bioregion is the impact of altered fire regimes on vegetation (Sattler and Williams 1999).

The Department of Science, Information Technology, Innovation and Arts (DSITIA) has mapped and classified regional ecosystems (RE) to a peer reviewed and published mapping and classification methodology¹. 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 inherent mapping and classification accuracy. Issues to do with RE mapping or classification errors are dealt with by DSITIA's mapping update processes and are not part of a BPA.

The study area considered in this assessment includes all subregions of the CYP bioregion, including the islands of the Torres Strait that contain ecosystems of the bioregion. The southern boundary of the study area is as defined under the *Cape York Peninsula Heritage Act 2007* (Figure 1), which incorporates parts of the Gulf Plains, Einasleigh Uplands, and Wet Tropics bioregions.

Area percentages quoted in this report refer to the percentage of the assessable area, which is all remnant vegetation within the Cape York Heritage Area (Figure 4).

¹ EHP regional ecosystem mapping and classification methodology is available at http://www.ehp.qld.gov.au/plants/herbarium/survey_and_mapping.html

Table 1. Subregions included in CYP Heritage Area BPA.

Subregion	Subregion area (ha)	Percentage remnant
Battle Camp Sandstones	504,564	99.9%
Cape York–Torres Strait	102,098	91.9%
Coastal Plains	288,595	95.8%
Coen–Yambo Inlier (North & South)	2,313,476	99.6%
Jardine–Pascoe Sandstones	1,451,290	98.8%
Laura Lowlands	1,791,536	99.1%
(Northern) Holroyd Plain	2,464,074	99.9%
Starke Coastal Lowlands	513,912	96.4%
Weipa Plateau	2,875,674	97.6%
Karumba Plains (Gulf Plains) ²	1,070,737	97.0%
Mitchell–Gilbert Fans (Gulf Plains) ²	5,262,816	94.8%
Hodgkinson Basin (Einasleigh Uplands) ²	1,607,220	93.4%
Daintree Bloomfield (Wet Tropics) ²	358,118	93.8%
Total	20,604,110	

² Only the portion of this subregion that falls within the Cape York Peninsula Heritage Area was included

2 Methods and implementation

2.1 BAMB

The CYP BPA was undertaken using BAMB version 2.1 (EPA 2002). Many factors contribute to the assessment of biodiversity values. The methodology focuses on a number of consistent and reliable criteria that are transparent, objective and scientifically defensible (Table 2). The criteria are in two groups. The first group is based on existing data, which are relatively uniform and reliable across a bioregion. These diagnostic criteria are used to filter available data and provide an initial determination of significance. This assessment is then refined using a second group of expert panel criteria.

The seven diagnostic criteria in Table 2 use reliable and uniformly available information that is usually accessible in database format, which can be queried to automatically generate significance classes based on individual or combinations of biodiversity values. While species data are included in the diagnostic criteria, it is acknowledged that fauna and flora surveys are far from complete in Queensland and that existing data do not provide a uniform coverage across any bioregion.

A filtering process is used to assess Remnant Units using criteria A to G (Table 4). It can also be used as a series of questions applied to a particular site in the absence of a completed BPA. Although the various data layers are integrated in a BPA, each layer can be interrogated to ensure transparency and allow for any combination of criteria to be used in isolation from others in decision making.

Table 2: BAMB criteria

Diagnostic criteria For analysis of uniformly available data	Expert panel criteria Assessed by expert panel using non-uniform data
A: Habitat for EVNT Taxa B: Ecosystem Value: at two scales – B1: State; B2: Regional; and C: Tract Size D: Relative Size of Regional Ecosystem: at two scales – D1: State; D2: Regional; and E: Condition F: Ecosystem Diversity G: Context & Connection (relationship to water, endangered ecosystems and physical connection between contiguous Remnant Units)	H: Essential and General Habitat for Priority Taxa I: Special Biodiversity Values J: Corridors K: Threatening Process (Condition)

Data for the expert panel criteria (H–K, Table 2) are primarily derived through elicitation of accumulated knowledge held by persons considered familiar with the biodiversity values of the bioregion. Such information may not be quantitative in nature nor widely available, e.g. in published reports. The expert’s role is to refine existing data and propose additional features not identified through the diagnostic criteria. For inclusion in the BPA, the experts must describe the values, their significance and where possible their spatial extent of the proposed features.

2.2 Datasets

Typically, a BPA using BAMB draws on a wide range of datasets with a wide range of formats. This will generally include published scientific documents, unpublished data (grey literature) and officially collated data from various Queensland Government sources including data from the Queensland Museum, Queensland Herbarium, and DSITIA. Information in other studies, e.g. Cape York Peninsula Land Use Strategy (CYPLUS, Abrahams et al. 1995), was used to help inform the assessment process.

A list of datasets used in the CYP BPA is included in Table 3.

Table 3. List of datasets used in the CYP BPA.

Dataset	Version	Release date	Custodian
RE	Draft Version 7	September 2011	DSITIA—Queensland Herbarium
Species	WildNet	26/06/2012	DSITIA
	Corveg	24/05/2012	DSITIA—Queensland Herbarium
	QHFD	27/09/2012	EHP—Biodiversity Assessment
Estates		12/07/2012	NPRSR
Nature refuges		12/07/2012	NPRSR
World Heritage Areas		05/2012	Australian Government Department of Sustainability, Environment, Water, Population and Communities
Directory of Important Wetlands		07/2006	EHP

For the CYP Heritage Area BPA, an expert panel was held in Cairns in August 2012 to address fauna, flora and landscape ecological values. Attachment A details the composition, role, findings and recommendations of this panel.

2.3 Implementation

The BAMB version 2.1 (EPA 2002) was followed in the compilation of this assessment. Python scripts and ArcGIS ModelBuilder toolbox was used to apply BAMB and create the BPA.

For criterion C (tract size), the following thresholds were calculated:

- Low: 643.387 hectares
- Low to Medium: 1044.166 hectares
- Medium to High: 3570.461 hectares.

For criterion F (ecosystem diversity), the calculated buffer distance was 254.612 metres.

2.4 Transparency of results

After running the BAMB tool, BPA results are available at a range of levels, despite its initial presentation as a single score of biodiversity significance. The results are also available through the use of user-defined queries that may interrogate one or more levels within the assessment in an almost-infinite number of possible combinations. This transparency provides the BPA end user (e.g. scientists, resource managers and conservation organisations) with a unique level of flexibility for BPA interrogation, interpretation and presentation. Links between the BPA results and a GIS environment facilitates this interrogation and provide a means of visualising the BPA results (Figure 2).

This data access and interrogation flexibility enables investigation of the contribution of different data to the overall conservation value, investigation of missing data and an ability to tailor the BPA output for a particular purpose.

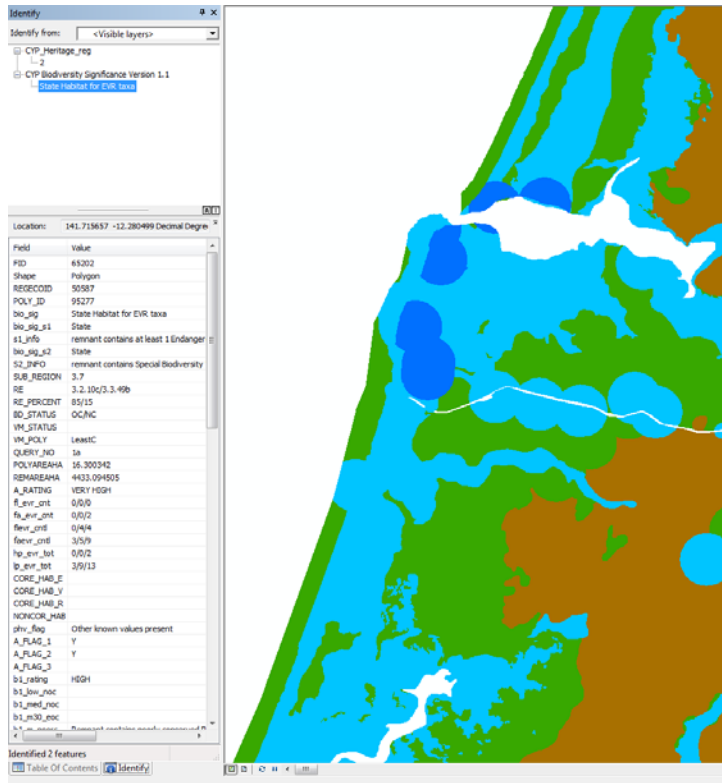


Figure 2. Interrogating the BPA results for a spatial unit in the GIS environment.

2.5 Filter table

For each assessment unit, a single diagnostic biodiversity significance is derived by combining all of the Diagnostic Criteria scores/ratings. This diagnostic significance is then combined with the expert panel significance and the maximum value assigned as the overall biodiversity significance.

BAMB uses a criterion rating combination table (or filtering decision table) that provides an ordered series of decisions that are tested against the final criterion ratings for each spatial unit (Table 4). Each decision is a unique combination of criterion ratings that is associated with a final conservation significance category. The decisions are effectively a number of 'if-then' statements and are tested in sequence for each spatial unit. A score is assigned immediately when a match is achieved between the criterion rating combination of the decision and that of the assessment unit.

The filtering combination table was not changed for the CYP Heritage Area BPA.

Table 4. Filter table as used for the CYP BPA.

Biodiversity Significance of Remnant Units	Query No.	A: Essential Habitat for EVNT spp.		B: Ecosystem Value		C: Tract Size		D: Relative Size of Ecosystem		E: Condition		F: Ecosystem Diversity		G: Context & Connection
S: State	1	A: very high	or	B1: very high		n/r		n/r		n/r		n/r		n/r
or	2	n/r		B1: high		n/r	&	D1: very high		n/r		n/r		n/r
or	3	n/r		B1: high	&	C: high	&	D1: high	&	E: very high ¹	or	F: very high ¹	or	G: very high ¹
or	4	n/r		n/r		C: very high	&	D1: very high	&	E: very high		n/r		n/r
or	5	n/r		n/r		n/r		D1: very high	&	E: very high ¹	or	F: very high ¹	or	G: very high ¹
R: Regional	6	A: high	or	B1: high		N/r		n/r		n/r		n/r		n/r
or	7	n/r		B2:very high		N/r		n/r		n/r		n/r		n/r
or	8	n/r		B2: high	&	C: very high	or	D2: very high		n/r		n/r		n/r
or	9	n/r		n/r		C: very high	&	D2: very high	&	E: very high		n/r		n/r
or	10	n/r		n/r		C: very high		n/r	&	E: very high	&	F: very high	or	G: very high
or	11	n/r		B2: high	&	C: high	&	D2: high ²	or	E: vh or high ²	or	F: vh or high ²	or	G: vh or high ²
or	12	n/r		N/r		n/r		D2: very high	&	E: vh or high ²	or	F: vh or high ²	or	G: vh or high ²
L: Local	13	n/r		B2: high		n/r		n/r		n/r		n/r		n/r
or	14	n/r		B3:very high		n/r		n/r		n/r		n/r		n/r
or	15	n/r		B3: high	&	C: very high	or	D3: very high		n/r		n/r		n/r
or	16	n/r		n/r		C: very high	&	D3: very high	&	E: very high		n/r		n/r
or	17	n/r		n/r		C: very high		n/r	&	E: vh or high ²	or	F: vh or high ²	or	G: vh or high ²
or	18	A: medium	or	B3: high	or	C: high	&	D3: high ²	or	E: vh or high ²	or	F: vh or high ²	or	G: vh or high ²
or	19	n/r		n/r		n/r		D3: very high	&	E: vh or high ²	or	F: vh or high ²	or	G: vh or high ²

Notes:

The assessment is progressive i.e. a query is 'triggered' only if the preceding set has not been satisfied.

Criteria B & D vary according to the scale (State, Regional, Local)—all other criteria are independent of scale.

N/R = Not Relevant.

Very High¹: A single 'Very High' score is not sufficient—at least two of the criteria marked as Very High¹ must be rated as Very High to qualify as significant.

High²: A single 'High' score is not sufficient - at least two of the criteria marked as High² must be rated as 'High' to qualify as significant.

'or' = Options which apply only to the query immediately preceding the 'or' (i.e. A & B or C or D means A+B or A+C or A+D; A or B & C means A+C or B+C; A or B & C or D means A+C or A+D or B+C or B+D).

3 Results

3.1 Conservation value categories

The conservation value results are referential within each bioregion, but each value category has characteristics in common. BAMB uses combinations of criterion level scores to determine the final biodiversity significance and based on these combinations, the following descriptions provide context for each value category.

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.

Local significance and or other values—Areas assessed as not being significant for biodiversity at State or Regional scales. Local values are of significance at the local government scale.

Non bioregional ecosystem—A regional ecosystem outlier from an adjacent bioregion.

3.2 Positional accuracy

The positional accuracy of the BPA results is primarily dependant on the accuracy of the *Herbarium Regional Ecosystem (RE) Mapping Version 7* (September 2011), which is recorded in that metadata as a scale of 1:100,000. The RE data has a minimum remnant polygon area of 5 hectares or minimum remnant width of 75 metres. The precision of polygon boundaries or positional accuracy of linework is 100 metres. Positional accuracies of other datasets are unknown, but at 1:100,000 scale, at least 100 metres should be anticipated.

3.3 CYP bioregion overall results

A BPA was conducted for the CYP Heritage Area. A summary of the results is provided below.

Overall, 64% (9.8 million ha) of the CYP Heritage Area was found to have biodiversity values that are of State significance of which 2% (292,000 ha) is State Habitat for EVR (EVNT) taxa (Figure 3 and Figure 4).

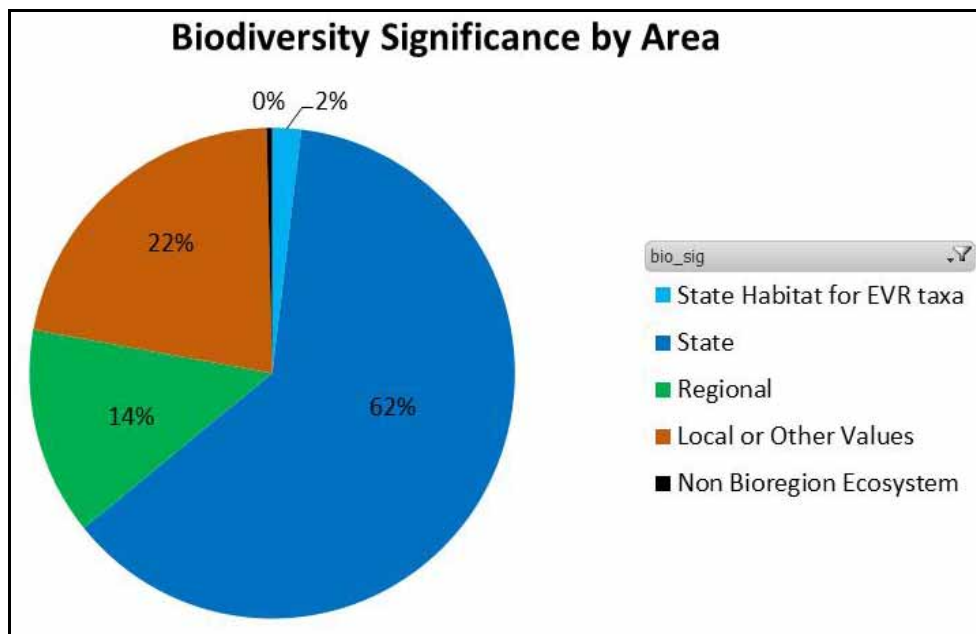


Figure 3. Summary of biodiversity assessment overall results.

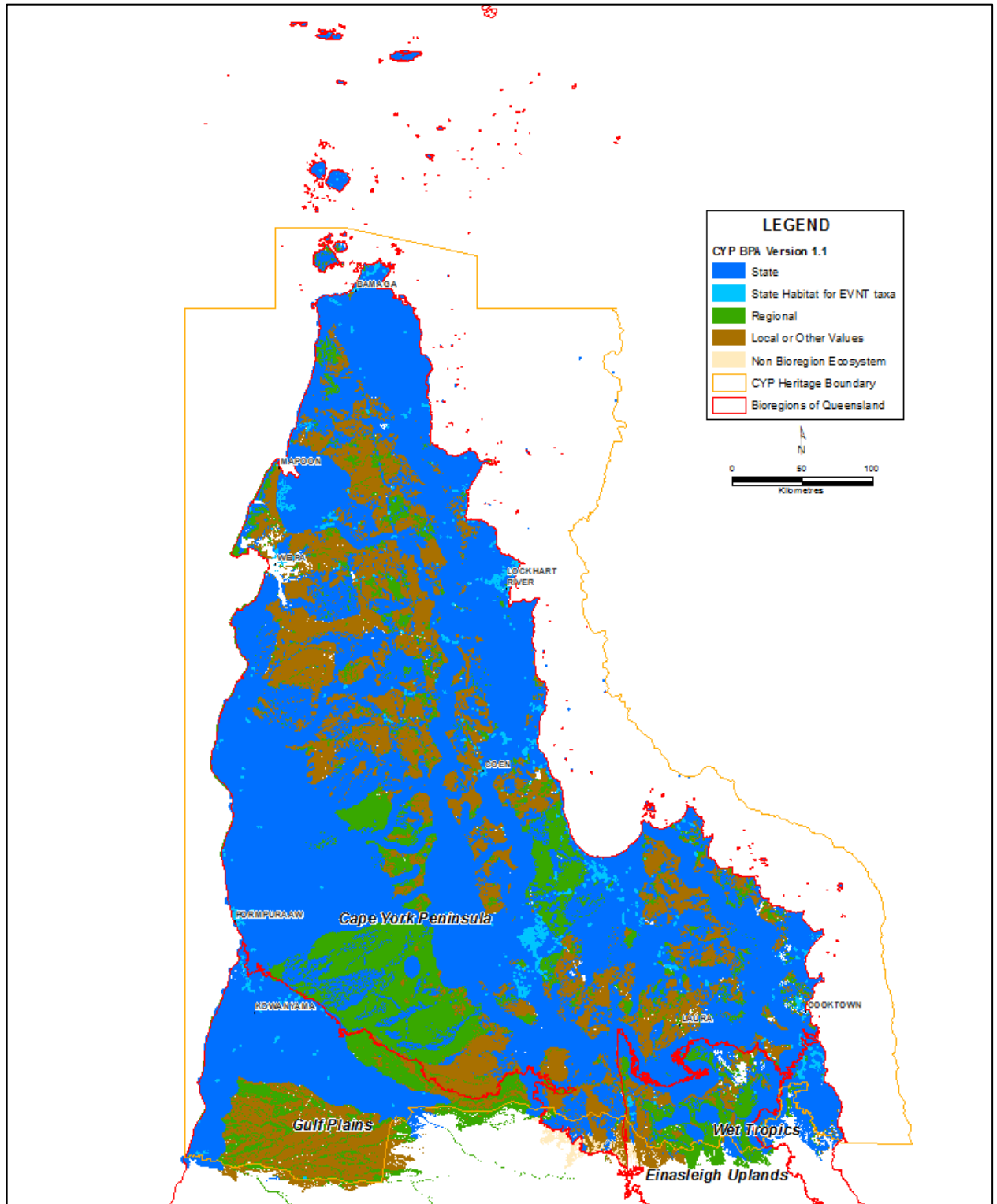


Figure 4: Overall biodiversity significance.

As outlined in Table 2, the overall biodiversity significance is the results of a number of criteria which are assessed separately. Figure 5 shows the results for the individual criteria within the diagnostic and expert panel criteria.

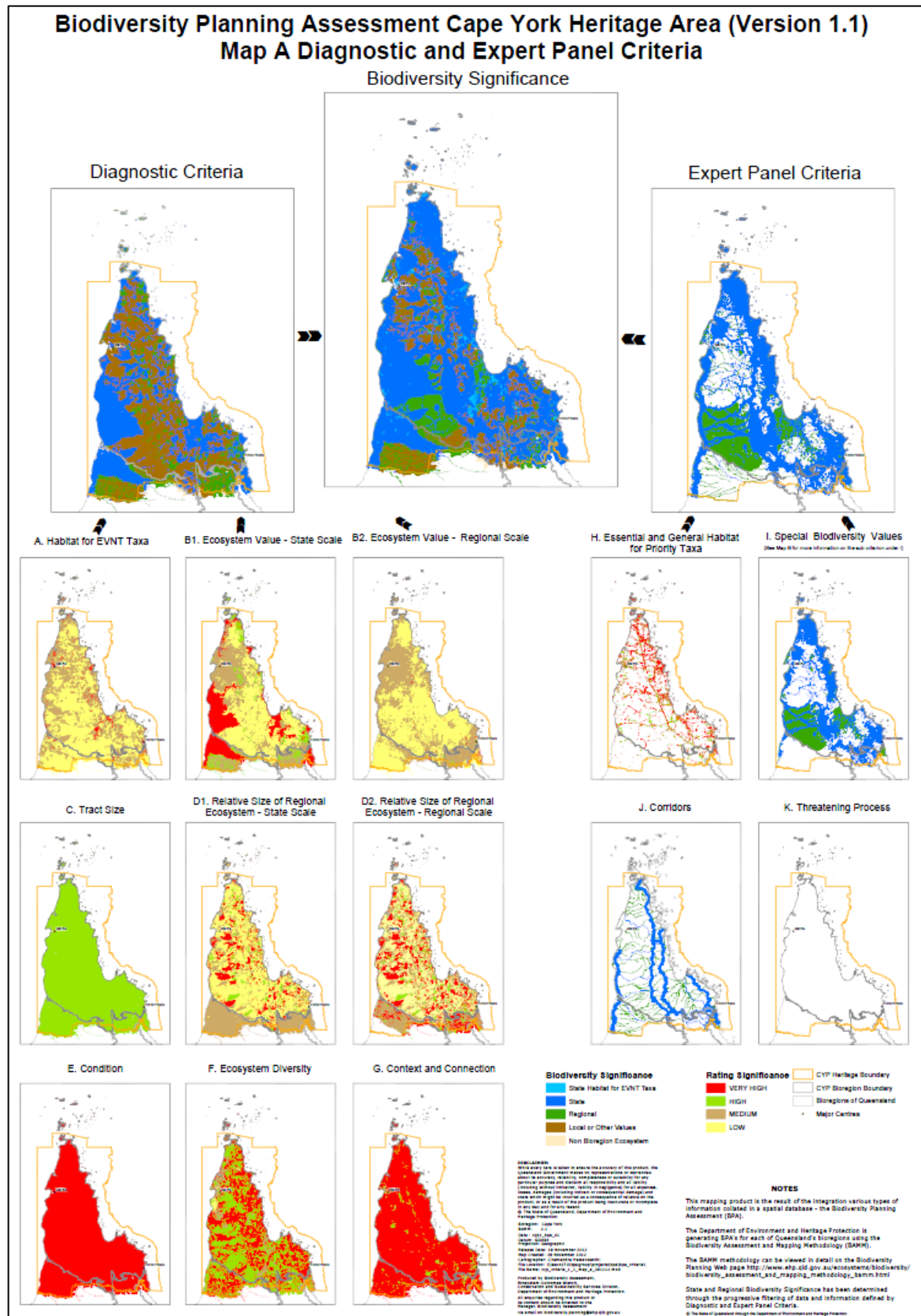


Figure 5. Diagnostic and expert panel criteria.

3.4 Diagnostic results

From the diagnostic criteria, 40% of the CYP Heritage Area (6.1 million ha) was found to have biodiversity values that are of State significance. Regional significance was attributed to 13% (1.9 million ha) of the CYP Heritage Area (Figure 6 and Figure 7).

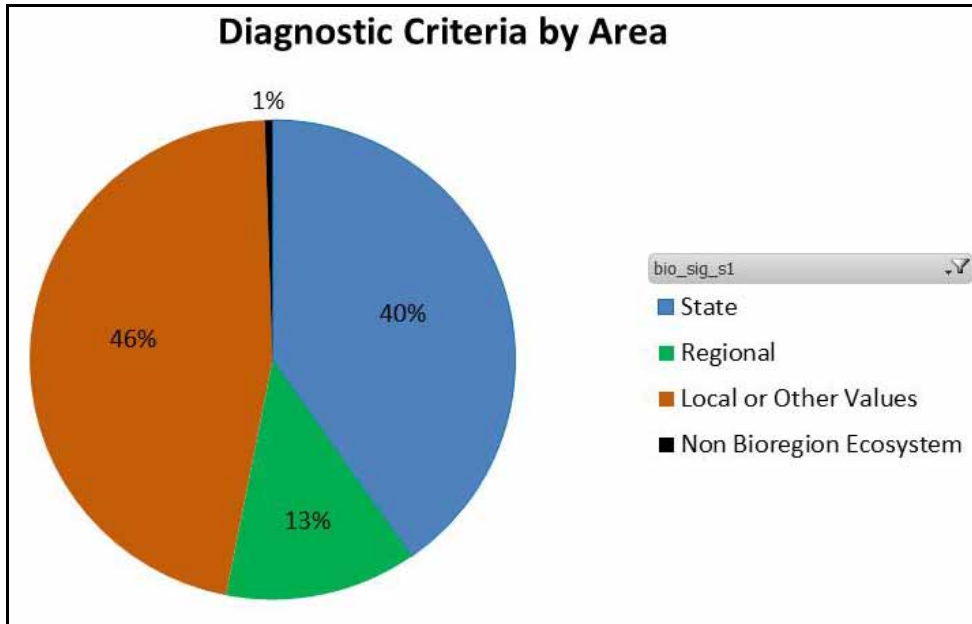


Figure 6. Summary of biodiversity assessment diagnostic criteria results.

To determine which biodiversity criteria were contributing to the extent of CYP Heritage Area being assessed as of state or regional significance a hit analysis was performed. For this analysis hits equate to the area of land assigned significance under the various individual or combinations of criteria as defined in the queries of Table 4. The results of the hit analysis for the diagnostic criteria are as follows:

Table 5. Diagnostic criteria hit analysis results. Query number as per Table 4

Query No.	Area (ha)	Significance	Percentage of total area
1a	291,829.50	State	4%
1b	3,396,729.81	State	42%
2a	209,138.25	State	3%
5a	989,443.76	State	12%
5b	1,241,762.70	State	15%
6a	67,239.22	Regional	1%
6b	655,878.36	Regional	8%
7a	36,384.31	Regional	< 1%
8b	12,971.42	Regional	< 1%
12c	13,694.55	Regional	< 1%
12d	1,154,765.70	Regional	14%

The results of the hit analysis (Table 5) reveal that 42% of remnant area that was of State or Regional significance (3.4 million ha) was triggered as having State significance because of query number 1b. Criterion B1 is Very High, due to the presence of an Endangered RE, Nationally Important Wetland or World Heritage Area. This result is expected given the large number of Directory of Important Wetland sites, many of a substantial size in Cape York (Blackman 2001).

The second most common combination to trigger State significance is query 5b (15% or 1.24 million ha). This query is due to a Very High criterion D1 rating, indicating that it is one of the largest examples of an RE in the bioregion, and Very High for criterion G, indicating that the remnant is connected to its surrounding remnants by over 75% of its perimeter, or borders an endangered RE or wetland. Again, this is expected due to the intact landscape of well-connected remnants, and proximity of most remnants to wetlands.

The most common combination to trigger Regional significance is query 12d, with 14% (1.15 million ha) being triggered. This query is due to Very High rating for criterion D2, indicating that the remnant is one of the largest examples of a RE at the subregional scale.

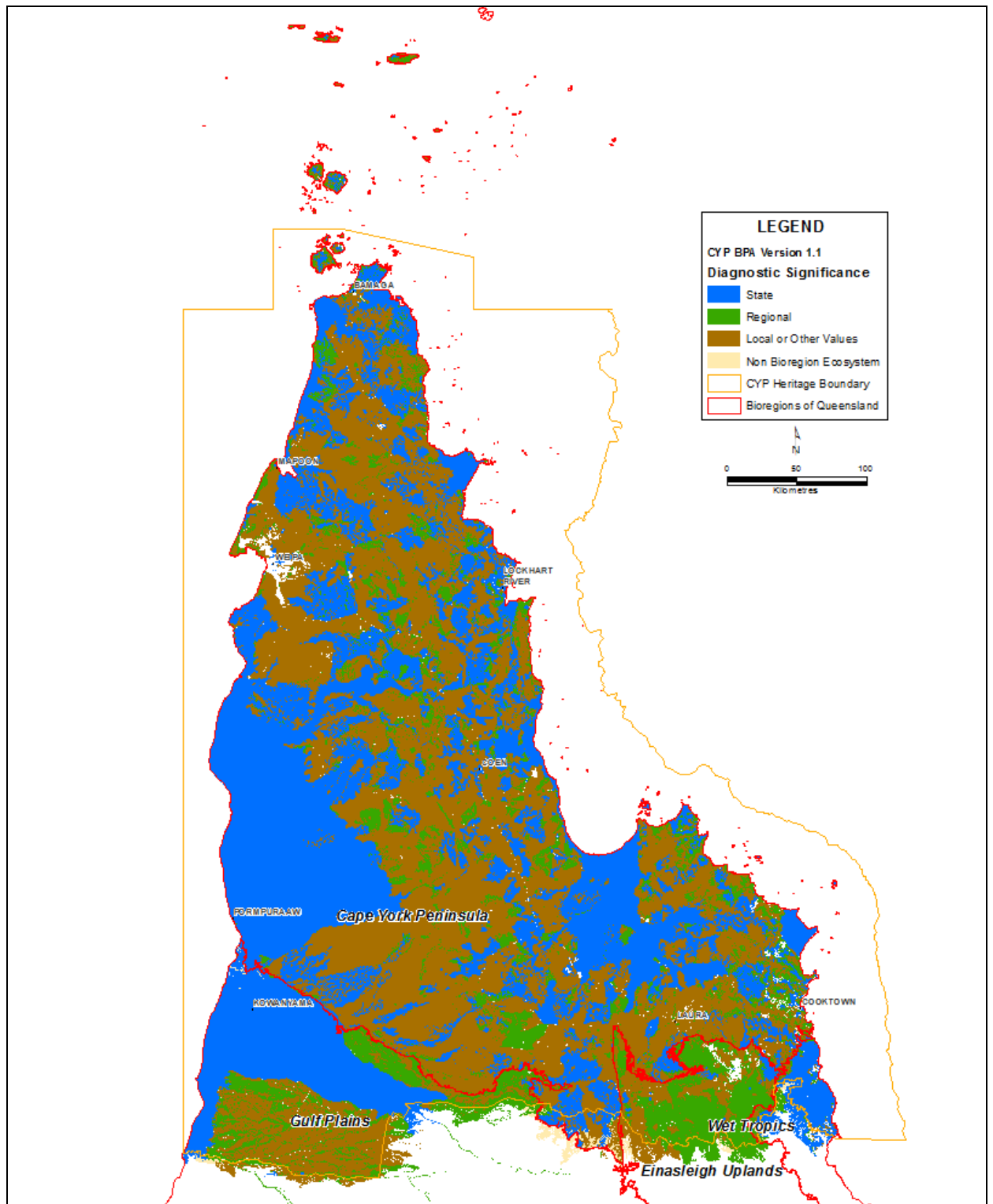


Figure 7. Diagnostic significance.

3.5 Expert panel results

From the expert panel criteria, 40.3% (6.2 million ha) of the CYP Heritage Area was found to have biodiversity values that are of State significance. Regional significance was attributed to 14.6% (2.2 million ha) of the CYP Heritage Area (Figure 8 and Figure 9). Overall, 54.9% of the Heritage Area was seen to have particular value by the expert panel. While there is a high level of confidence that the most important areas of the CYP Heritage Area were identified by consulting internal experts and using existing data such as CYPLUS, this figure would likely increase if full expert panels had been held.

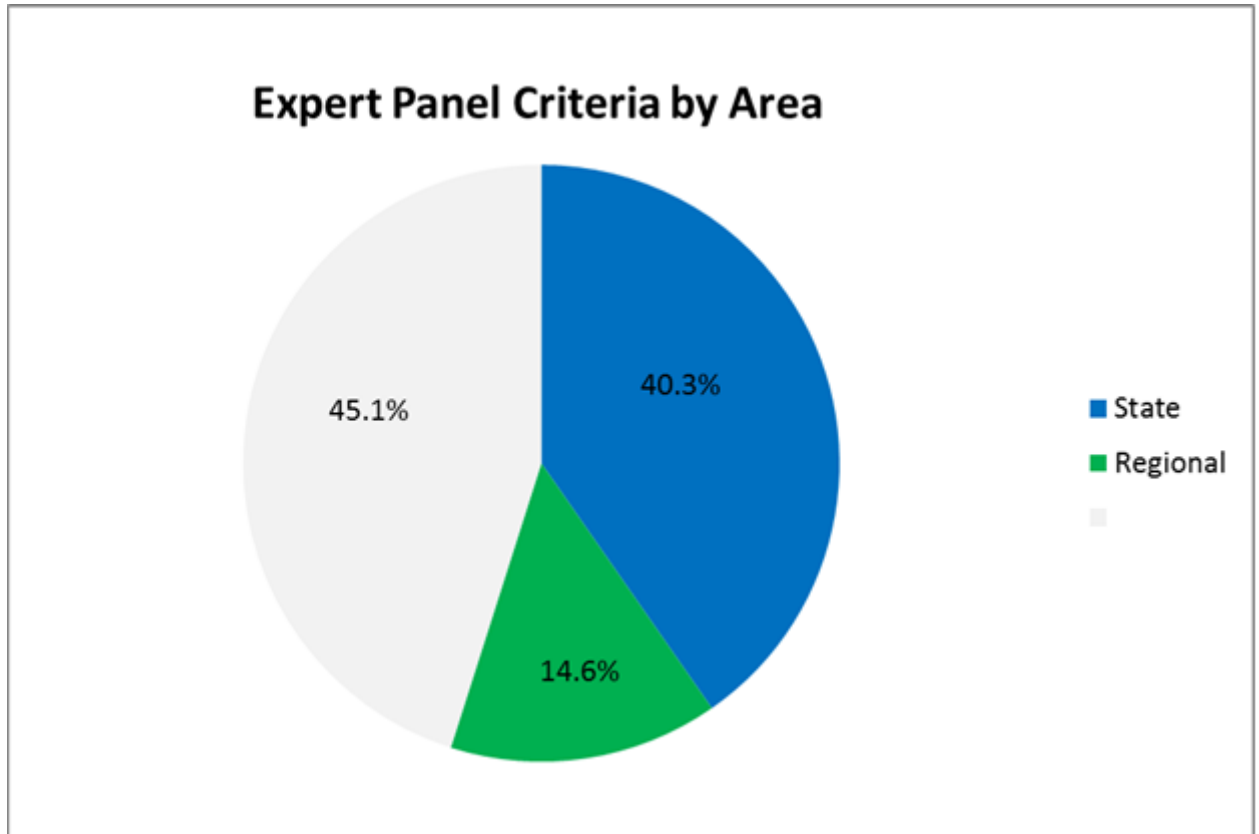


Figure 8. Summary of biodiversity assessment expert panel criteria results.

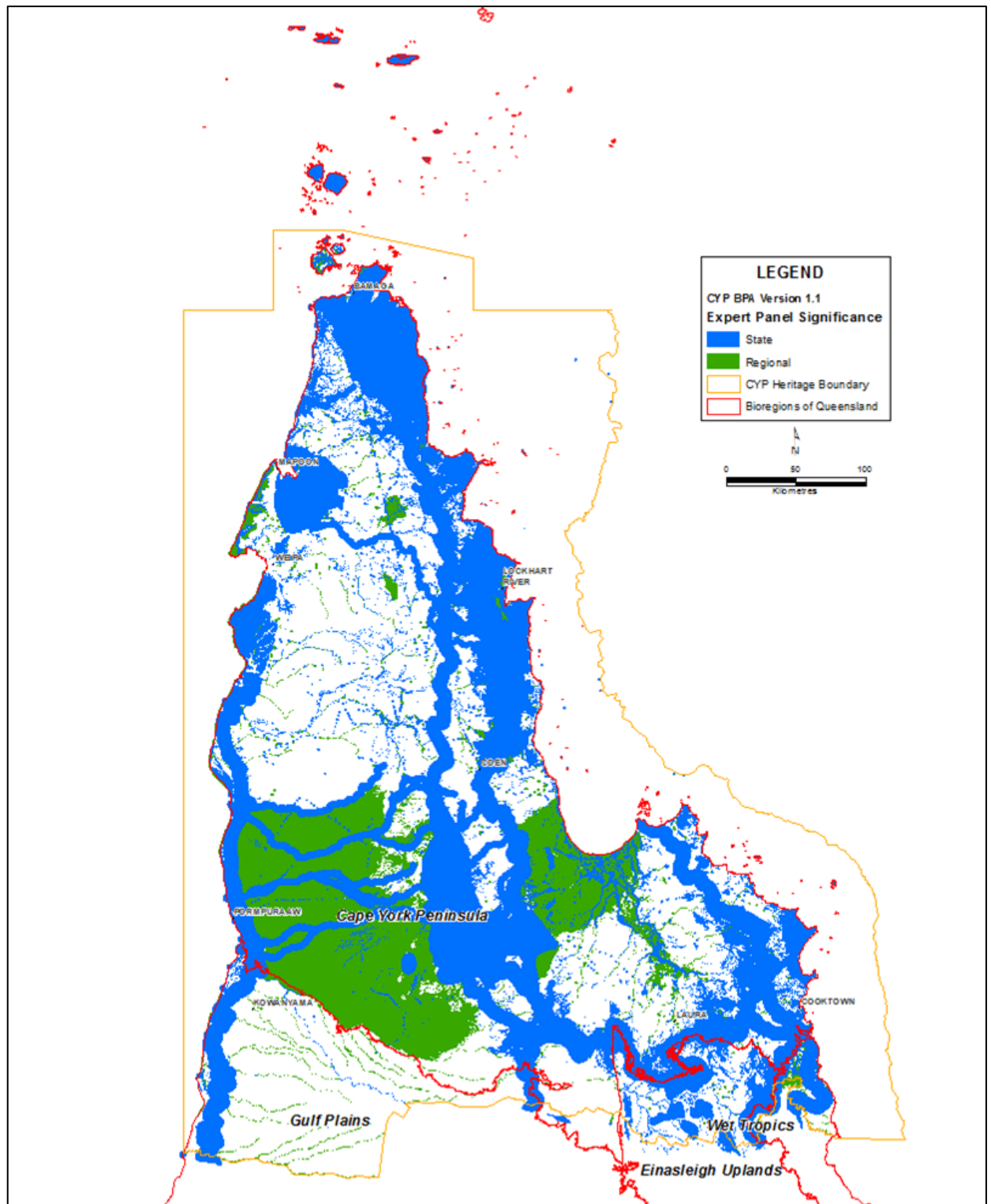


Figure 9. Expert panel significance.

Within the expert panel criteria, criterion I consists of a number of sub criteria. Each of these sub criteria were assessed and valued separately by the expert panel and the results are shown in Figure 10.

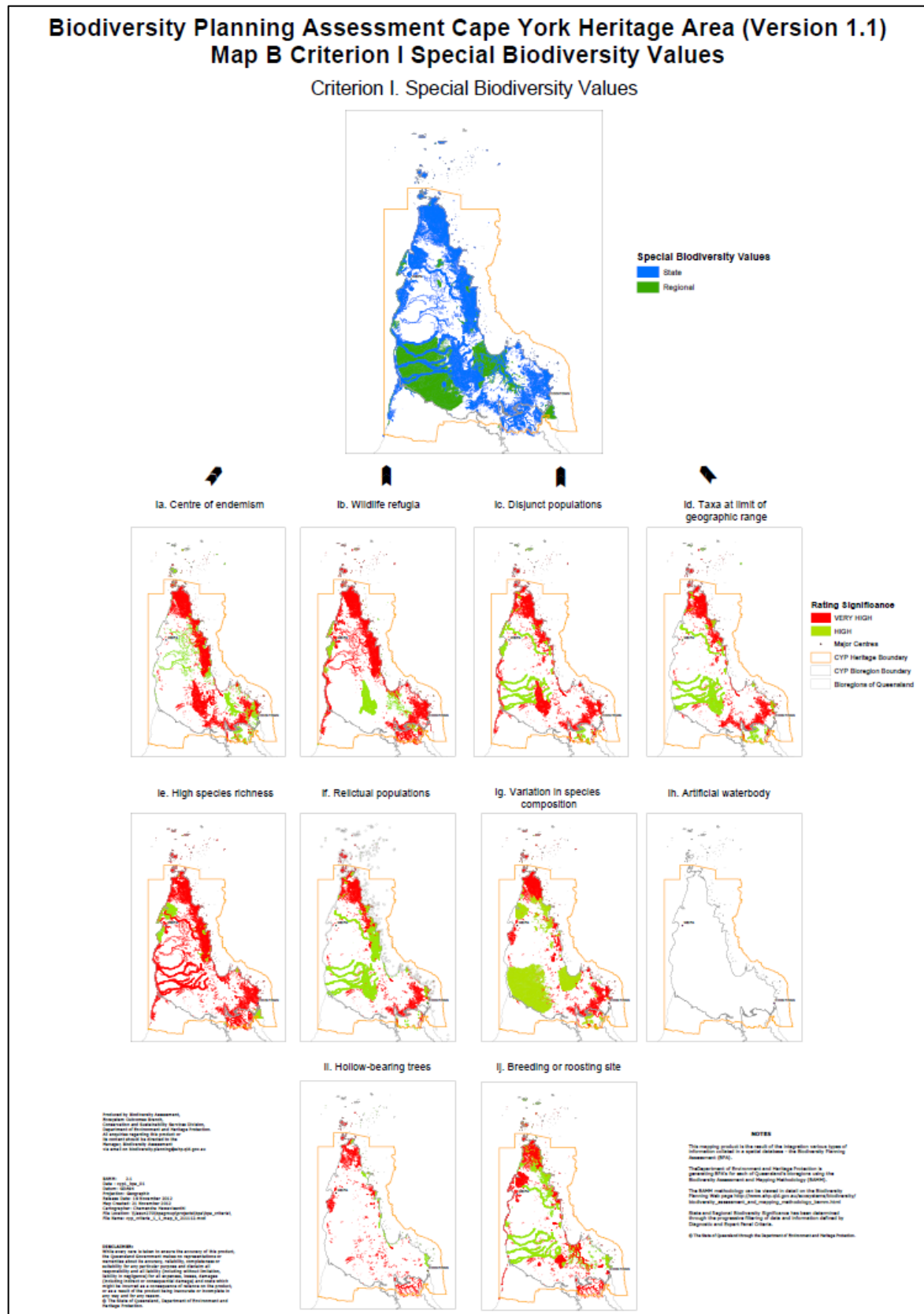


Figure 10. Criterion I Special Biodiversity Values.

3.6 Assessment caveats and limitations

While this BPA does cover the CYP bioregion, the actual CYP Heritage Area includes portions of adjoining bioregions. This means that some of the criteria values calculated at landscape scales will be different from those if the BPA was based solely on the CYP bioregion.

Due to severe time constraints, full expert panels could not be completed. In a standard assessment the panels are run over several days allowing experts time to provide more detailed information on the flora, fauna and landscape values being examined. For this assessment only internal experts could be consulted whereas it is usual to seek a broader range of both internal and external experts.

Some data layers are not spatially uniform across the bioregion, e.g. 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 Cape York Natural Resource Management (NRM) Group or Indigenous groups.

Whenever lines are drawn on a map, e.g. from the expert panels or extracted from coverages produced as part of other assessments (Abrahams et al. 1995, Blackman 2001), there is a risk that the boundary may be approximate at the scale of the individual spatial unit. For these types of decisions the boundary should always be considered at the appropriate scale. The RE mapping is the fundamental spatial input into this BPA and the polygons are mapped at a scale of 1:100,000.

4 Summary and recommendations

Over 75% of the CYP Heritage Area was assessed as being of either state or regional significance. This high proportion is not unexpected. The region is large, relatively undisturbed and contains a wide range of habitat types that reflect the variable underlying geomorphology and climatic gradients. Geographical position in terms of both climate (tropical–wet dry monsoon) and proximity to extant influences (Papua-New Guinea) also contribute to the peninsula’s rich and often unique biodiversity values.

The results of a BPA can be used in a number of ways and for a number of purposes. Well founded ecological or conservation values for ecosystems are a useful input to many natural resource management decision making processes including regional planning, development assessment, tenure negotiations or protected area estate review. In addition to the use of BPA scores, subordinate elements from each assessment may also be used for management and planning purposes. An example of this is prioritising natural resource management actions within a bioregion for rehabilitation.

Interpretation of the CYP BPA results for the purposes of management priority or for development of management actions will be undertaken as part of finalising the Cape York Ecosystem Management Framework.

An analysis of the filtering table and how many spatial units triggered at each decision was performed. There does not appear to be any major inconsistencies in the hit analysis. In the longer term the hit analysis for all the BPAs should be compared to see if there are any redundant decisions or decisions that are inconsistent.

Species records were used in the BPA; however future BPA versions should incorporate habitat models and pest habitat mapping.

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6 Attachments

Attachment A Flora, fauna and landscape expert panel report



A Biodiversity Planning Assessment for the Cape York Peninsula Heritage Area

Flora, fauna and landscape expert panel report

Prepared by:

Steven Howell¹ Manager, Biodiversity Assessment

Lindsey Jones¹ Principal Biodiversity Planning Officer

¹ Ecosystem Outcomes Branch, Conservation and Sustainability Services Division, Queensland Department of Environment and Heritage Protection, GPO Box 2454 BRISBANE QLD 4001

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1 Introduction

This report summarises the proceedings and the output of an expert panel convened in Cairns on 7–8 August 2012 to discuss the biodiversity values of the Cape York Peninsula (CYP) study area (Figure 2). This report documents the panel's findings using the draft regional ecosystem (RE) mapping dated September 2011.

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

- fauna
- flora
- landscape.

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

The Biodiversity Assessment and Mapping Methodology (BAMM, EPA 2002) has been prepared 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 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 advise 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 such as 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 using 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 2.1.

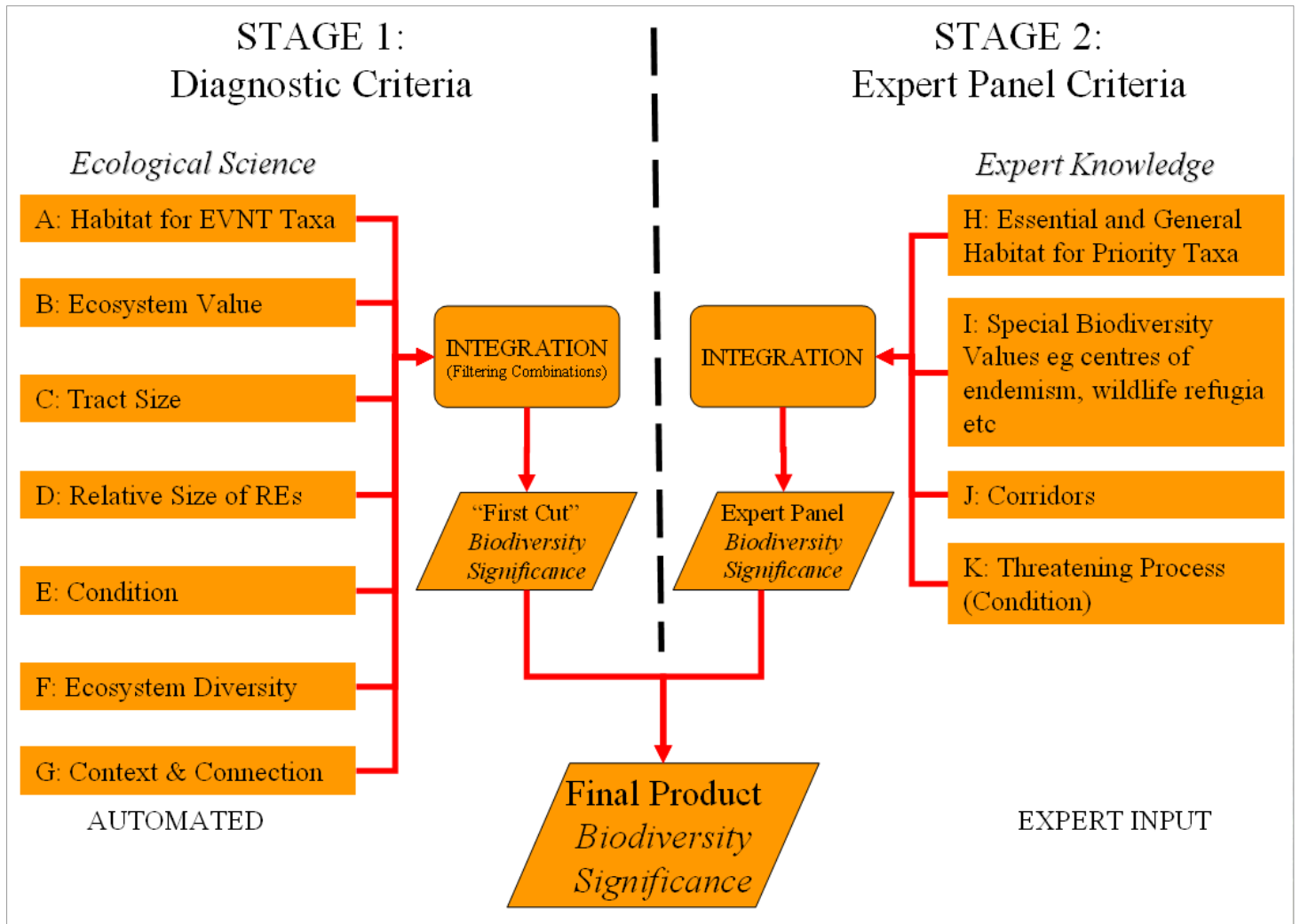


Figure 1. Biodiversity Assessment and Mapping Methodology (BAMM) process.

2 Method

2.1 Study area

Cape York Peninsula (CYP) is a diverse and important region of tropical Australia. It covers 13,720,000 hectares and has an estimated residential population of approximately 17,000 people (Earth Tech 2005). The bioregion has a tropical humid/maritime climate, with rainfall varying from 1000—1600mm. It is a place of special heritage, containing vast and relatively undisturbed landscapes with extraordinary biological significance and diversity, and rich with Aboriginal traditions and customs.

The bioregion consists of a complex geology dominated by the Torres Strait Volcanics in the north. The metamorphic rocks and acid intrusive rocks of various ages of the Coen-Yambo Inlier run north-south along the eastern margin of the region and encompass the high-altitude/high-rainfall areas of Iron Range and McIlwraith Range. The deeply dissected sandstone plateaus and ranges of the Battle Camp Sandstones lie in the southern part of the region adjacent to the undulating Laura Lowlands composed of residual weathered sands and flat plains of colluvial and alluvial clays, silts and sands. The western part of the region is dominated in the south by the extensive Tertiary sand sheets dissected by the intricate drainage systems of the Holroyd Plain, the Tertiary laterite of the undulating Weipa Plateau and the low rises of Mesozoic sandstones. The northern extension of the Weipa Plateau and extensive coastal plains adjoin the Gulf of Carpentaria. Extensive aeolian dunefields lie in the east associated with Cape Bedford/Cape Flattery in the south and the Olive and Jardine Rivers (Sattler and Williams 1999).

There are 9 sub-regions within the Cape York Peninsula Bioregion. All sub-regions have high ecosystem diversity and endemism. The ecosystem diversity encompasses rainforests, woodlands, shrublands heaths, sedgeland, grasslands and mangroves, all in a relatively intact condition (Sattler and Williams 1999).

One of the significant values of the bioregion is its relative intactness. The overall condition of Cape York Peninsula is good with some declines in ecosystems, wetlands, riparian vegetation and species. Only limited clearing of vegetation has occurred in the bioregion. A main potential agent of change in the bioregion is the impact of altered fire regimes on vegetation (Sattler and Williams 1999).

The study area considered in this assessment includes all subregions of the Cape York Peninsula bioregion, including the islands of the Torres Strait that contain ecosystems of the bioregion. The southern boundary of the study area is as defined under the *Cape York Peninsula Heritage Act 2007* (Figure 2), which incorporates parts of the Gulf Plains, Einasleigh Uplands, and Wet Tropics bioregions. However, it will exclude the Queensland Wet Tropics World Heritage area in the south-east.

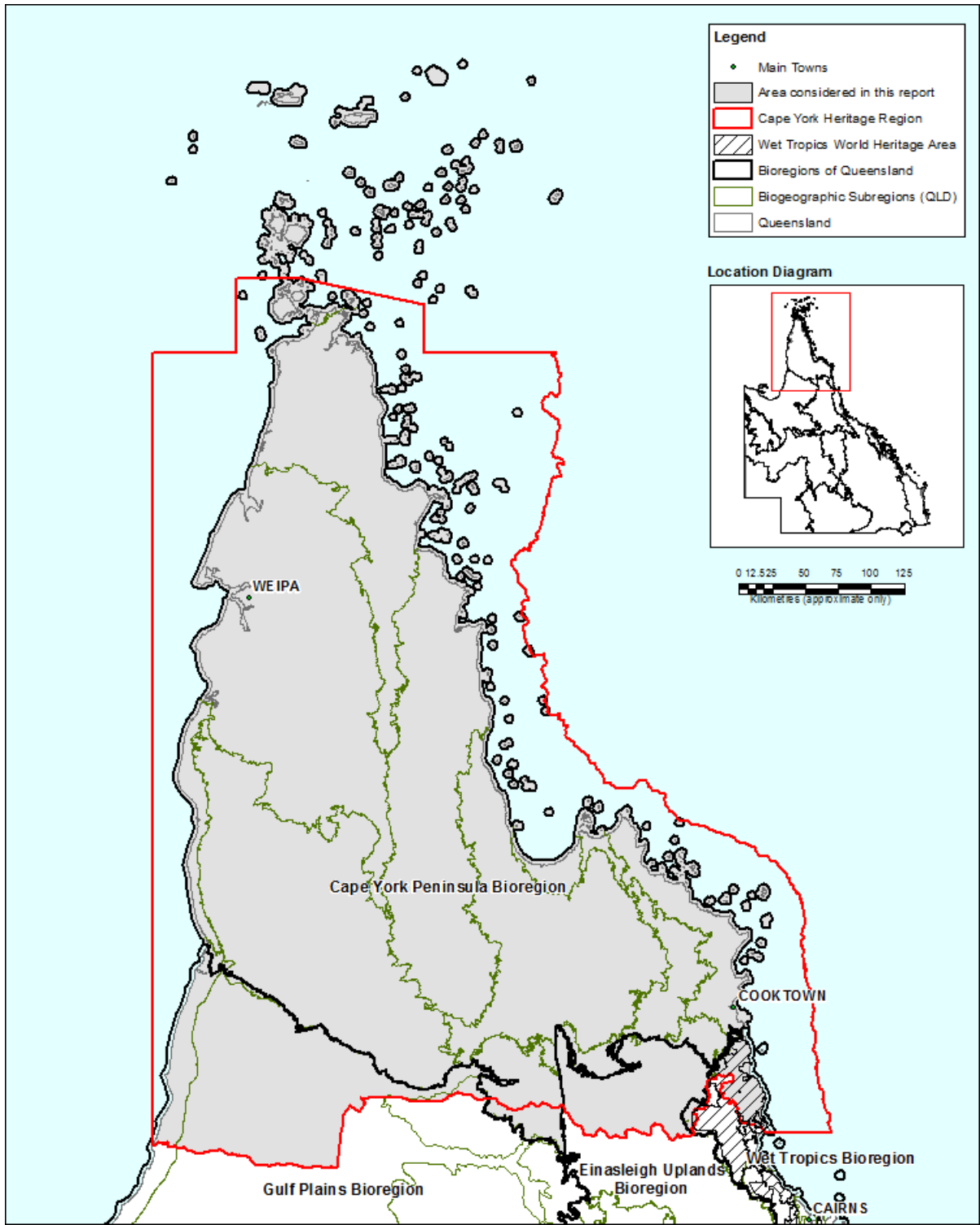


Figure 2. The Cape York study area and its subregions.

2.2 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:

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

The CYP study area expert panel comprised invited persons with knowledge of the biodiversity and/or special biodiversity values of the CYP study area and a sound understanding of ecological conservation and management principles. As far as possible, the combined expertise of participants covered the whole CYP study area 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 EPA (2002, Appendix 6). Additional experts were consulted after the panel workshop and all panel participants are listed in Table 1.

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

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. Expert panel participants and additional persons consulted.

Participants	Organisation	Attendance day
Bruce Wannan	EHP, RSD	1 and 2
Eda Addicott	SITIA, Herbarium	1 and 2
Mark Newton	SITIA, Herbarium	1 and 2
John Clarkson	NPRSR, QPWS	1 and 2
Keith McDonald	EHP, Threatened Species	1 and 2
Alastair Freeman	EHP, Threatened Species	1 and 2
Ashley Field	SITIA, Herbarium	1 and 2
Mike Trenergy	EHP, RSD	1 and 2
Lyn Wallace	EHP, CYP	1
Colin Dollery	NPRSR, QPWS	1 and 2
Daryn Storch	NPRSR, QPWS	1 and 2
Kerryn Oconor	EHP, EO	1
Buzz Symonds	EHP, CYP	1
Simon Thompson	EHP, Nature Refuges	1 and 2
Steven Howell	EHP, EO – Chair	1 and 2
Lindsey Jones	EHP, EO – co-chair	1 and 2
Robert Hughes	EHP, EO	1
Additional persons consulted		Via
Niall Connolly	EHP, RSD	email
John Winter	EHP, Threatened Species	email
Gethin Morgan	EHP, RSD	email
John Neldner	SITIA, Herbarium	email
Rod Fensham	SITIA, Herbarium	email
Paul Forster	SITIA, Herbarium	email
Col Limpus	EHP, Threatened Species	In person

Lindsey Jones (Principal Biodiversity Planning Officer, Biodiversity Assessment) from EHP provided technical support for the panel workshops with Steven Howell (Manager, Biodiversity Assessment) as the workshop facilitator.

2.3 Expert panel format

The landscape expert panel workshop 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 BAMB
- CYPLUS layers
- available wetlands mapping and 1:100 000 topographic maps
- information from databases such as HERBRECS, CORVEG, WILDNET and the Queensland Museum
- 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 B provides a full list of the resources made available to the panel at the workshop.

2.3.1 Species considerations (criteria A and H)

Fauna and flora species considered by the expert panel were EVNT species listed under the *Nature Conservation Act 1992* (NCA) or the Australian Government *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) and 'non-EVNT priority 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, the Queensland Historical Fauna Database and from project specific datasets 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 non-EVNT 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
- highly mobile taxa
- 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
- records dated earlier than 1975 – this may be relaxed for the study area.

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

2.3.1.1 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 CYP study area records, or when species were not known to occur in the CYP study area.

These decisions were flagged in the spatial database and in the workshop 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.

2.3.1.2 Core habitat for priority taxa (criterion H)

The panel reviewed a list of non-EVNT fauna and flora species, and their associated records, with potential to be endemic and/or have disjunct distributions within the CYP study area. 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 CYP study area.

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 or of management concern.
- Taxa of scientific interest as being relictual (ancient or primitive).
- Endemic taxa or locally significant populations (stronghold for taxon).
- Highly specialised taxa whose habitat requirements are complex and distributions are not well correlated with

any particular RE.

- Taxa important for maintaining genetic diversity (such as complex spatial patterns of genetic variation, geographic range limits, highly disjunct populations).
- Taxa critical for management or monitoring of biodiversity (functionally important or ecological indicators).
- Economic and culturally important taxa.

2.3.2 Special biodiversity values (criterion I)

The panel reviewed the criteria I decisions of the flora and fauna panels and nominated other areas of special biodiversity value for inclusion under criteria 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 CYP study area.
- 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 CYP study area (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.
- Criteria 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.

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 BAMB use prescribed thresholds for determining the relative importance of individual criteria and standard rules for assigning significance based on combinations of values present. However, BAMB version 2.1 provides limited guidance on how expert panels are to assess criteria. The CYP study area expert panel used a consensus approach in assigning overall significance.

2.3.2.1 Review of existing data sources

A 'first cut' for special biodiversity areas mapped under Criteria I were derived from baseline existing sources as described below.

The Cape York Peninsula Land Use Strategy (CYPLUS) was established as a joint initiative of the Queensland and Commonwealth Governments in 1992 to provide a vehicle for the establishment of regional land and land-related resource use objectives. A part of the process for stage 1 was a production of data and reports on natural resources and ecology. The themes and relevant datasets most pertinent to the present study included those centred on flora, fauna, geology, wetlands, and landscape overview. Spatial datasets for these themes were utilised as a baseline depicting special areas of significance for flora, fauna and landscape. The relevant datasets were presented to the expert panels for initial endorsement and for ascertaining tasks and personnel to develop decision rules for updating and refining.

Some areas of the present Cape York study overlap parts of the Gulf plains and Einasleigh Uplands bioregions. Previous work on BPAs for these bioregions identified flora, fauna and landscape decisions. These were utilised in the present study.

2.3.2.2 Special biodiversity areas (criterion I)

Members of the expert panel nominated areas for inclusion under criteria I based on an analysis of the above datasets and personal knowledge. Where there was consensus that an area was of State or Regional biodiversity significance the values were identified and the area mapped. 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.

2.3.3 Corridors (criterion J)

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

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

Corridors have been selected to reflect:

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

The methods used to identify bioregional terrestrial and riparian corridors, and gaps and critical weaknesses in terrestrial corridors, are outlined in Attachment 4 in EPA (2002). Corridors that form part of the statewide network are assigned State significance. Other corridors providing connectivity at a subregional scale are assigned Regional significance.

The expert panel workshop reviewed the proposed network of statewide conservation corridors affecting the CYP study area, provided advice on extending the network, and discussed whether there was a role for regional corridors in the CYP study area.

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 Nature Conservation (Wildlife) Regulation 2006 or the EPBC, or presence of non-EVNT priority species. The CYP study area expert panel considered some 667 species for inclusion in criteria A and H.

Table 2. summarises the categories of species. It is the general convention under the BAMB that species records are filtered to exclude records older than 1950, or less precise than 2000 metres. The expert panel for the CYP study area BPA considered those conventions given that the CYP study area is an almost intact landscape with large areas of homogeneous habitat types and is remote and difficult to access. In many areas, data records for the bioregion are comparatively limited. Given this context, the panel decided to maintain the existing BAMB filter rules. Exceptions were made for a small number of species for which there were very few records. These changes are reflected in comments in the relevant species tables below.

The recommendations were:

- That records earlier than 1950 be excluded, except in a few isolated cases where records prior to 1950 were deemed suitable for inclusion.
- That the precision rule be adhered to only include records up to 2000 metres precision. In a few cases records with precisions greater than 2000 meters were re-examined and a higher (<2000m) precision was recommended following assignment of new coordinates.

Table 2. Summary of flora taxa considered by the expert panel for criteria A and H.

	Endangered	Vulnerable	Near Threatened	Priority (non-EVNT) taxa	Total
No. of species considered	22	80	149	416	667
No. of species for which the panel made comments	4	5	8	416	433

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

The panel reviewed records of the listed EVNT species and provided comments on those species (Table 3). The panel nominated 7 EVNT species with potential for habitat modelling. A number of species were excluded either because there were no (or too few) reliable records of the species in the CYP study area.

Table 3. Comments and recommendations of expert panel relating to endangered, vulnerable and near-threatened flora species (criterion A).

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Mimosaceae	<i>Acacia armitii</i>		NT		
Mimosaceae	<i>Acacia fleckeri</i>		NT		
Mimosaceae	<i>Acacia guymeri</i>		V	V	
Mimosaceae	<i>Acacia ommatosperma</i>		NT		
Mimosaceae	<i>Acacia pennata</i> subsp. <i>kerrii</i>		NT		
Mimosaceae	<i>Acacia polyadenia</i>		NT		
Mimosaceae	<i>Acacia solenota</i>		V	V	
Orchidaceae	<i>Acianthus sublestus</i>		NT		
Myrtaceae	<i>Acmena mackinnoniana</i>	Rocky River satinash	NT		
Myrtaceae	<i>Acmenosperma pringlei</i>		NT		
Orchidaceae	<i>Acriopsis emarginata</i>		V		
Meliaceae	<i>Aglaiia argentea</i>	silver boodyarra	V		
Mimosaceae	<i>Albizia retusa</i>		NT		
Mimosaceae	<i>Albizia retusa</i> subsp. <i>retusa</i>		NT		
Sapindaceae	<i>Alectryon repandodentatus</i>		E		
Zingiberaceae	<i>Alpinia hylandii</i>		NT		
Zingiberaceae	<i>Amomum queenslandicum</i>		V		
Olacaceae	<i>Anacolosa papuana</i>		NT		

1 Queensland Nature Conservation Act (NCA) 1992 (E – endangered, V – vulnerable, NT – near threatened, LC – least concern)

2 Environment Protection and Biodiversity Conservation (EPBC) Act 1999 (CE – Critically Endangered, E – endangered, V – vulnerable, EX - Extinct)

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Vittariaceae	<i>Antrophyum plantagineum</i>		NT		
Orchidaceae	<i>Aphyllorchis queenslandica</i>		NT		
Poaceae	<i>Apluda mutica</i>		NT		
Mimosaceae	<i>Archidendron hirsutum</i>		NT		
Arecaceae	<i>Arenga australasica</i>		V	V	
Argophyllaceae	<i>Argophyllum verae</i>		NT		
Poaceae	<i>Arthragrostis clarksoniana</i>		NT		
Poaceae	<i>Arthraxon hispidus</i>		V	V	
Alismataceae	<i>Astonia australiensis</i>		E		
Sterculiaceae	<i>Brachychiton grandiflorus</i>		NT		
Sterculiaceae	<i>Brachychiton vitifolius</i>		C	V	
Brownlowiaceae	<i>Brownlowia argentata</i>		NT		
Winteraceae	<i>Bubbia queenslandiana</i> subsp. <i>queenslandiana</i>		NT		
Orchidaceae	<i>Bulbophyllum boonjee</i>		NT		
Orchidaceae	<i>Bulbophyllum gracillimum</i>	graceful orchid	V	V	
Orchidaceae	<i>Bulbophyllum grandimesense</i>		NT		
Orchidaceae	<i>Bulbophyllum longiflorum</i>		V	V	No valid records from EHP databases. Ashley has records – submitted but not yet processed by Herbarium
Orchidaceae	<i>Bulbophyllum masdevalliaceum</i>		E		No valid records from EHP databases at time of implementation.
Orchidaceae	<i>Cadetia collinsii</i>		NT		
Orchidaceae	<i>Cadetia variana</i>		NT		
Caesalpiniaceae	<i>Caesalpinia hymenocarpa</i>		NT		
Fabaceae	<i>Cajanus mareebensis</i>		E	E	
Arecaceae	<i>Calamus aruensis</i>		NT		
Arecaceae	<i>Calamus warburgii</i>		V	V	

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Fabaceae	<i>Callerya pilipes</i>	northern wisteria	NT		
Clusiaceae	<i>Calophyllum bicolor</i>		V	V	
Cyperaceae	<i>Carex rafflesiana</i>		NT		
Boraginaceae	<i>Carmona retusa</i>		V		
Loranthaceae	<i>Cecarrhia obtusifolia</i>		NT		
Poaceae	<i>Centotheca philippinensis</i>	creek grass	NT	V	
Sapotaceae	<i>Chrysophyllum roxburghii</i>	star apple	NT		
Vitaceae	<i>Cissus aristata</i>		V		
Phyllanthaceae	<i>Cleistanthus myrianthus</i>		NT		
Poaceae	<i>Coix gasteenii</i>		E		
Combretaceae	<i>Combretum trifoliatum</i>		V		
Orchidaceae	<i>Corybas cerasinus</i>		NT		
Myrtaceae	<i>Corymbia rhodops</i>	red-throated bloodwood	V	V	
Costaceae	<i>Costus potierae</i>		E		
Orchidaceae	<i>Crepidium fimbriatum</i>		NT		
Orchidaceae	<i>Crepidium lawleri</i>		E	E	
Hymenophyllaceae	<i>Crepidomanes aphlebioides</i>		E		Likely outside of area of interest – check 2005 Fensham record. Records do exist on Cape York Peninsula – Bruce Wannan 09/2012
Euphorbiaceae	<i>Croton brachypus</i>		NT		
Euphorbiaceae	<i>Croton caudatus</i>		E		
Euphorbiaceae	<i>Croton choristadenius</i>		V		
Euphorbiaceae	<i>Croton stockeri</i>		V		
Caesalpiniaceae	<i>Crudia abbreviata</i>		NT		
Caesalpiniaceae	<i>Crudia papuana</i>		NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Lauraceae	<i>Cryptocarya claudiana</i>		NT		
Lauraceae	<i>Cryptocarya glaucocarpa</i>		NT		
Grammitidaceae	<i>Ctenopteris blechnoides</i>		V	V	
Grammitidaceae	<i>Ctenopteris walleri</i>		V	V	
Cucurbitaceae	<i>Cucumis costatus</i>		NT		
Sapindaceae	<i>Cupaniopsis tomentella</i>	Boonah tuckeroo	V	V	
Cyatheaceae	<i>Cyathea baileyana</i>	wig tree fern	NT		
Cyatheaceae	<i>Cyathea exilis</i>		E	E	
Cyatheaceae	<i>Cyathea felina</i>		E		
Cycadaceae	<i>Cycas semota</i>		E		
Cycadaceae	<i>Cycas silvestris</i>		V	V	
Cycadaceae	<i>Cycas tuckeri</i>		V		
Rubiaceae	<i>Cyclophyllum costatum</i>		V	V	
Loranthaceae	<i>Dactylophora novae-guineae</i>		NT		
Poaceae	<i>Dallwatsonia felliana</i>		NT		
Combretaceae	<i>Dansiea grandiflora</i>		V		
Orchidaceae	<i>Dendrobium antennatum</i>	antelope orchid	E	E	
Orchidaceae	<i>Dendrobium bigibbum</i>		V	V	
Orchidaceae	<i>Dendrobium carronii</i>		V	V	
Orchidaceae	<i>Dendrobium johannis</i>	brown antelope orchid	V	V	
Orchidaceae	<i>Dendrobium malbrownii</i>		NT		
Orchidaceae	<i>Dendrobium nindii</i>	blue orchid	E	E	No valid records from EHP databases at time of implementation.
Orchidaceae	<i>Dendrobium x superbiens</i>		V	V	

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Santalaceae	<i>Dendromyza reinwardtiana</i>		NT		
Hemerocallidaceae	<i>Dianella incollata</i>		NT		
Poaceae	<i>Dichanthium setosum</i>		NT	V	
Orchidaceae	<i>Didymoplexis pallens</i>	crystal bells	NT		
Ebenaceae	<i>Diospyros areolifolia</i>		V		
Ebenaceae	<i>Diospyros</i> sp. (Bamaga B.P.Hyland 2517)		V		
Sapindaceae	<i>Diploglottis harpullioides</i>		NT		
Orchidaceae	<i>Dipodium pictum</i>	brittle climbing orchid	E	E	
Apocynaceae	<i>Dischidia littoralis</i>		V	V	
Picrodendraceae	<i>Dissiliaria tuckeri</i>		V		
Orchidaceae	<i>Dockrillia wassellii</i>		NT		
Bignoniaceae	<i>Dolichandrone spathacea</i>		NT		
Poaceae	<i>Ectrosia blakei</i>		V	V	
Cyperaceae	<i>Eleocharis retroflexa</i>		V	V	
Monimiaceae	<i>Endressia wardellii</i>		NT		
Poaceae	<i>Eremochloa ciliaris</i>		NT		
Poaceae	<i>Eremochloa muricata</i>		E	E	
Orchidaceae	<i>Eria irukandjiana</i>		NT		
Myrtaceae	<i>Eucalyptus curtisii</i>	Plunkett mallee	NT		Dubious - Expert panel recommendation to remove.
Orchidaceae	<i>Eulophia pelorica</i>		NT		
Orchidaceae	<i>Eulophia zollingeri</i>		NT		
Celastraceae	<i>Euonymus globularis</i>		NT		
Euphorbiaceae	<i>Euphorbia carissoides</i>		V		
Moraceae	<i>Fatoua villosa</i>		NT		
Moraceae	<i>Ficus melinocarpa</i> var. <i>hololampra</i>		NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Sterculiaceae	<i>Firmiana papuana</i>	lacewood	NT		
Pandanaceae	<i>Freycinetia marginata</i>		V		
Pandanaceae	<i>Freycinetia percostata</i>		V		
Rubiaceae	<i>Gardenia psidioides</i>		V	V	
Poaceae	<i>Garnotia stricta</i> var. <i>longiseta</i>		NT		
Orchidaceae	<i>Genoplesium alticola</i>		NT		
Poaceae	<i>Germainia capitata</i>		V	V	
Zingiberaceae	<i>Globba marantina</i>		V		
Phyllanthaceae	<i>Glochidion pungens</i>		NT		
Myrtaceae	<i>Gossia bamagensis</i>		NT		
Myrtaceae	<i>Gossia lucida</i>		NT		
Myrtaceae	<i>Gossia macilwraithensis</i>		NT		
Grammitidaceae	<i>Grammitis albosetosa</i>		NT		
Grammitidaceae	<i>Grammitis leonardii</i>		NT		Record earlier than 1950. EP recommendation to include.
Grammitidaceae	<i>Grammitis reinwardtii</i>		V	V	
Acanthaceae	<i>Graptophyllum excelsum</i>		NT		
Orchidaceae	<i>Grastidium tozerense</i>		V	V	
Orchidaceae	<i>Habenaria hymenophylla</i>	rainforest habenaria	NT		
Orchidaceae	<i>Habenaria macraithii</i>		E	E	
Orchidaceae	<i>Habenaria rumphii</i>		NT		
Annonaceae	<i>Haplostichanthus submontanus</i> subsp. <i>submontanus</i>		NT		
Fabaceae	<i>Hardenbergia</i> sp. (Mt Mulligan J.R.Clarkson 5775)		NT		
Sapindaceae	<i>Harpullia ramiflora</i>		NT		
Rubiaceae	<i>Hedyotis novoguineensis</i>		E		
Poaceae	<i>Heterachne baileyi</i>		NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Dilleniaceae	<i>Hibbertia cymosa</i>		V		
Rubiaceae	<i>Hodgkinsonia frutescens</i>		C	V	
Myrtaceae	<i>Homoranthus tropicus</i>		NT		
Apocynaceae	<i>Hoya anulata</i>		NT		
Apocynaceae	<i>Hoya macgillivrayi</i>	red hoyo	NT		
Apocynaceae	<i>Hoya revoluta</i>		NT		
Lycopodiaceae	<i>Huperzia carinata</i>	keeled tassel fern	E	E	
Lycopodiaceae	<i>Huperzia phlegmaria</i>	coarse tassel fern	NT		
Lycopodiaceae	<i>Huperzia phlegmarioides</i>	layered tassel fern	V	V	
Rubiaceae	<i>Hydnophytum ferrugineum</i>		V		
Arecaceae	<i>Hydriastele costata</i>		V	V	
Hymenophyllaceae	<i>Hymenophyllum eboracense</i>		V		
Menispermaceae	<i>Hypserpa polyandra</i> var. <i>polyandra</i>		V		
Menispermaceae	<i>Hypserpa smilacifolia</i>		NT		
Convolvulaceae	<i>Ipomoea imperati</i>		NT		
Thymelaeaceae	<i>Jedda multicaulis</i>		V	V	
Rubiaceae	<i>Lasianthus hirsutus</i>		NT		
Proteaceae	<i>Lasjia claudiensis</i>		V	E	
Rutaceae	<i>Leionema ellipticum</i>		V		
Acanthaceae	<i>Lepidagathis royenii</i>		NT		
Sapindaceae	<i>Lepiderema hirsuta</i>		NT		
Sapindaceae	<i>Lepisanthes senegalensis</i>		E		
Poaceae	<i>Lepturus geminatus</i>		NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Poaceae	<i>Lepturus xerophilus</i>		NT		
Lindsaeaceae	<i>Lindsaea walkerae</i>		NT		
Arecaceae	<i>Linospadix microcaryus</i>		NT		
Arecaceae	<i>Linospadix palmerianus</i>		NT		
Orchidaceae	<i>Liparis condylobulbon</i>		NT		
Lauraceae	<i>Litsea macrophylla</i>		NT		
Arecaceae	<i>Livistona concinna</i>		NT		
Lycopodiaceae	<i>Lycopodiella limosa</i>		NT		
Phyllanthaceae	<i>Margaritaria indica</i>		NT		
Apocynaceae	<i>Marsdenia hemiptera</i>	rusty vine	NT		
Apocynaceae	<i>Marsdenia paludicola</i>		V	V	
Rutaceae	<i>Medicosma glandulosa</i>		NT		
Annonaceae	<i>Meiogyne hirsuta</i>		NT		
Myrtaceae	<i>Melaleuca flavovirens</i>		NT		EP recommendation to exclude
Sapindaceae	<i>Mischocarpus albescens</i>		NT		
Cucurbitaceae	<i>Momordica cochinchinensis</i>		NT		
Haloragaceae	<i>Myriophyllum coronatum</i>		V	V	
Rubiaceae	<i>Myrmecodia beccarii</i>		V	V	
Poaceae	<i>Neololeba atra</i>		NT		
Bignoniaceae	<i>Neosepicaea viticoides</i>		NT		
Orchidaceae	<i>Nervilia crociformis</i>		NT		
Orchidaceae	<i>Oberonia carnosa</i>		NT		
Rubiaceae	<i>Oldenlandia polyclada</i>		NT		
Convolvulaceae	<i>Operculina brownii</i>		NT		
Orchidaceae	<i>Pachystoma pubescens</i>		NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Pandanaceae	<i>Pandanus gemmifer</i>		NT		
Pandanaceae	<i>Pandanus zea</i>		NT		
Cyperaceae	<i>Paramapania parvibractea</i>		NT		
Poaceae	<i>Paspalidium scabrifolium</i>		NT		
Poaceae	<i>Paspalum multinodum</i>		NT		
Rutaceae	<i>Philothea acrolopha</i>		V	V	
Fabaceae	<i>Phylacium bracteosum</i>		NT		
Apocynaceae	<i>Phyllanthera grayi</i>		V		
Sapotaceae	<i>Planchonella xylocarpa</i>		NT		
Lamiaceae	<i>Plectranthus spectabilis</i>		NT		
Polygalaceae	<i>Polygala pycnantha</i>		NT		
Escalloniaceae	<i>Polyosma rigidiuscula</i>		NT		
Orchidaceae	<i>Pomatocalpa marsupiale</i>		V	V	
Lamiaceae	<i>Prostanthera</i> sp. (Mt Tozer L.J.Brass 19478)		V		
Rubiaceae	<i>Psyrax reticulata</i>		V		
Rubiaceae	<i>Randia audasii</i>		NT		EP recommendation to exclude.
Araceae	<i>Remusatia vivipara</i>		NT		
Scrophulariaceae	<i>Rhamphicarpa australiensis</i>		NT		
Acanthaceae	<i>Rhaphidospora cavernarum</i>		V		
Orchidaceae	<i>Rhinerrhizopsis matutina</i>		V		
Orchidaceae	<i>Rhinerrhizopsis moorei</i>		V	V	
Orchidaceae	<i>Robiquetia wassellii</i>		NT		
Connaraceae	<i>Rourea brachyandra</i>		NT		
Icacinaceae	<i>Ryticaryum longifolium</i>		NT		
Simaroubaceae	<i>Samadera</i> sp. (Kennedy River J.R.Clarkson 5645)		V		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Myrtaceae	<i>Sannantha tozerensis</i>		V	V	
Orchidaceae	<i>Sarcochilus hirticalcar</i>	harlequin orchid	V	V	
Apocynaceae	<i>Sarcolobus vittatus</i>		V		
Sapindaceae	<i>Sarcopteryx acuminata</i>		NT		
Sapindaceae	<i>Sarcopteryx montana</i>		NT		
Araliaceae	<i>Schefflera bractescens</i>		NT		
Orchidaceae	<i>Schoenorchis sarcophylla</i>		NT		
Cyperaceae	<i>Schoenus scabripes</i>		NT		
Poaceae	<i>Scrotochloa tararaensis</i>		V		No valid records from EHP databases at time of implementation.
Poaceae	<i>Scrotochloa urceolata</i>		V		
Apocynaceae	<i>Secamone auriculata</i>		V		
Mimosaceae	<i>Senegalia albizioides</i>		NT		
Fabaceae	<i>Sesbania erubescens</i>		NT		
Solanaceae	<i>Solanum angustum</i>		E		
Solanaceae	<i>Solanum dunalianum</i>		V	V	
Orchidaceae	<i>Spathoglottis paulinae</i>		NT		
Orchidaceae	<i>Spathoglottis plicata</i>	New Guinea ground orchid	V	V	EP recommendation to include record.
Myrtaceae	<i>Sphaerantia chartacea</i>	Shipton's penda	NT		
Stackhousiaceae	<i>Stackhousia</i> sp. (McIvor River J.R.Clarkson 5201)		E		
Stemonaceae	<i>Stemona angusta</i>		V	V	
Rhamnaceae	<i>Stenanthemum argenteum</i>		V		
Proteaceae	<i>Stenocarpus cryptocarpus</i>	giant-leaved stenocarpus	NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Sterculiaceae	<i>Sterculia shillinglawii</i> subsp. <i>shillinglawii</i>		NT		
Gleicheniaceae	<i>Sticherus milnei</i>		NT		
Stylidiaceae	<i>Stylidium longissimum</i>		V		
Stylidiaceae	<i>Stylidium trichopodum</i>		NT		
Symplocaceae	<i>Symplocos ampulliformis</i>		NT		
Symplocaceae	<i>Symplocos oresbia</i>		NT		
Myrtaceae	<i>Syzygium aqueum</i>	water apple	NT		
Myrtaceae	<i>Syzygium buettnerianum</i>	New Guinea satinash	NT		
Myrtaceae	<i>Syzygium macilwraithianum</i>		NT		
Myrtaceae	<i>Syzygium malaccense</i>	Malay apple	NT		
Myrtaceae	<i>Syzygium velarum</i>		V	V	
Orchidaceae	<i>Taeniophyllum confertum</i>		NT		EP recommendation to include record.
Orchidaceae	<i>Taeniophyllum muelleri</i>		C	V	
Dryopteridaceae	<i>Tectaria siifolia</i>		NT		
Orchidaceae	<i>Thelasis carinata</i>		NT		
Poaceae	<i>Thelepogon australiensis</i>		V		
Scrophulariaceae	<i>Torenia polygonoides</i>		NT		
Orchidaceae	<i>Trichoglottis australiensis</i>		V	V	
Malpighiaceae	<i>Tristellateia australasiae</i>		NT		
Sapindaceae	<i>Tristiropsis acutangula</i>		V		
Apocynaceae	<i>Tylophora williamsii</i>	Williams' tylophora	C	V	
Orchidaceae	<i>Vanda hindsii</i>	Cape York vanda	V	V	
Rubiaceae	<i>Wendlandia basistaminea</i>		NT		

Family	Scientific name	Common name	NCA ¹	EPBC ²	Comments and recommendations
Arecaceae	<i>Wodyetia bifurcata</i>	foxtail palm	V	V	
Myrtaceae	<i>Xanthostemon arenarius</i>		NT		
Myrtaceae	<i>Xanthostemon youngii</i>		C	V	

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. This significance may relate to taxa of management concern, taxa of scientific interest, endemic taxa or locally significant populations, taxa with highly specialised habitat requirements, genetically important taxa, environmental indicator taxa, or taxa that have economic or cultural importance. A draft list of species was considered by the panel and one species was excluded either because there were no (or too few) reliable records of the species in the CYP study area. Additional species were also identified and the final list of priority species recommended by the panel is shown in Table 4.

For inclusion in the BPA the records were first subject to filtering rules for age of record and precision as applied to records for criterion A (EPA 2002). Subsequently, for species of State significance, high precision records (precision \leq 500 metres) were buffered by twice the precision (as for criterion A) with a minimum of 300 metres and assigned Very High in criteria H. For species of Regional significance, high precision records (precision \leq 500 metres) were buffered by twice their precision (as for criterion A) with a minimum of 300 metres and assigned High in criteria H. For low precision State and low precision Regional significant species the point records were buffered by 1000 metres and assigned Medium in criterion H. These decision rules are summarised in Table 5.

Table 4. Comments and recommendations of expert panel relating to other priority flora taxa (criterion H).

Family	Scientific name	Common name	Rationale and comments	Significance
Mimosaceae	<i>Acacia brassii</i>		Endemic	State
Mimosaceae	<i>Acacia hemsleyi</i>		Northern limit	Regional
Mimosaceae	<i>Acacia legnota</i>		Disjunct population, nearest 250km south and 300km south-west	Regional
Mimosaceae	<i>Acacia midgleyi</i>		Endemic	State
Mimosaceae	<i>Acacia rothii</i>		Disjunct population, nearest 1000km west	State
Mimosaceae	<i>Acacia rubricaulis</i>		Endemic	State
Mimosaceae	<i>Acacia</i> sp. (Iron Range D.G.Fell DF2327)		Endemic	State
Mimosaceae	<i>Acacia</i> sp. (Mekunga Creek J.R.Clarkson 4373)		Endemic	State
Mimosaceae	<i>Acacia webbia</i>		Near endemic	State
Asteraceae	<i>Acomis bella</i>		Endemic, apart from 1 record in Gulf Plains	State
Rutaceae	<i>Acrornychia</i> sp. (Batavia Downs J.R.Clarkson+ 8511)		Endemic	State
Phyllanthaceae	<i>Actephila longipedicellata</i>		Endemic	State
Phyllanthaceae	<i>Actephila traceyi</i>		Endemic	State
Meliaceae	<i>Aglaiia cooperae</i>		Endemic	State
Meliaceae	<i>Aglaiia euryanthera</i>		Endemic	State
Meliaceae	<i>Aglaiia spectabilis</i>		Endemic	State
Cornaceae	<i>Alangium</i> sp. (Claudie River B.P.Hyland 2682RFK)		Endemic	State
Mimosaceae	<i>Albizia carrii</i>		Disjunct population, nearest 500km north-east in New Guinea and 900km west, rare species	State
Casuarinaceae	<i>Allocasuarina</i> sp. (Shaw Island G.N.Batianoff+ 3360)		Disjunct population, nearest 500km south	State
Apocynaceae	<i>Alstonia spectabilis</i>		Disjunct population, nearest 1200km west, subsp <i>spectabilis</i> only Australian records; also in New Guinea	State
Loranthaceae	<i>Amyema biniflora</i>		Disjunct population, nearest 500km south	State

Family	Scientific name	Common name	Rationale and comments	Significance
Loranthaceae	<i>Amyema friesiana</i>		Disjunct population, nearest 800km north in New Guinea, only Australian records in CYP	State
Loranthaceae	<i>Amyema seemeniana</i> subsp. <i>flexuosa</i>		Disjunct population, nearest 300km south and 600km north-east in New Guinea	Regional
Commelinaceae	<i>Aneilema</i> sp. (Tozer Gap L.J.Brass 19441)		Disjunct population, nearest 750km north in New Guinea, only Australian records in CYP	State
Phyllanthaceae	<i>Antidesma hylandii</i>		Endemic	State
Rubiaceae	<i>Antirhea ovatifolia</i>		Endemic, remove duplicate record of <i>Guettardella</i> o.	State
Fabaceae	<i>Aphyllodium latifolium</i>		Near endemic to southern CYP	State
Aponogetonaceae	<i>Aponogeton queenslandicus</i>		Most northerly record in Australia	Regional
Orchidaceae	<i>Apostasia wallichii</i>		Disjunct population, nearest 250km south and 800km north in New Guinea	Regional
Arecaceae	<i>Archontophoenix tuckeri</i>		Endemic	State
Poaceae	<i>Aristida cumingiana</i>		Disjunct population, nearest 1000km north-east in New Guinea, only Australian records in CYP, checked AVH	State
Aristolochiaceae	<i>Aristolochia chalmersii</i>		Endemic	State
Annonaceae	<i>Artabotrys carnosipetalus</i>		Endemic	State
Poaceae	<i>Arthraxon castratus</i>		Endemic, only Australian records	State
Orchidaceae	<i>Arthrochilus corinnae</i>		Endemic	State
Orchidaceae	<i>Arthrochilus sabulosus</i>		Disjunct population, nearest 500km south	State
Sapindaceae	<i>Arytera pseudofoveolata</i>		Endemic	State
Aspleniaceae	<i>Asplenium capitis-york</i>		Endemic	State
Myrtaceae	<i>Asteromyrtus angustifolia</i>		Endemic	State
Myrtaceae	<i>Asteromyrtus brassii</i>		Shared with New Guinea, only Australian records in CYP	State
Acanthaceae	<i>Asystasia australasica</i>		Endemic, 1 record in New Guinea	State
Fabaceae	<i>Austrostenisia mollitricha</i>		Endemic	State
Poaceae	<i>Austrostipa ramosissima</i>	bamboo grass	Disjunct population, nearest 500km south	State

Family	Scientific name	Common name	Rationale and comments	Significance
Restionaceae	<i>Baloskion tetraphyllum</i>		Disjunct population, nearest 800km south, 2 populations in CYP	State
Lauraceae	<i>Beilschmiedia peninsularis</i>		Endemic	State
Oxalidaceae	<i>Biophytum petersianum</i>		Endemic, note name change	State
Gesneriaceae	<i>Boea hygroskopica</i>		Disjunct population, nearest 400km south	Regional
Rutaceae	<i>Boronia alulata</i>		Endemic	State
Rutaceae	<i>Boronia squamipetala</i>		Endemic	State
Fabaceae	<i>Bossiaea arenicola</i>		Endemic	State
Zamiaceae	<i>Bowenia spectabilis</i>		Disjunct population, nearest 200km south	Regional
Sterculiaceae	<i>Brachychiton garrawayae</i>		Endemic	State
Sterculiaceae	<i>Brachychiton muellerianus</i>		Near endemic, also 1 record on Bellvue Station	State
Sterculiaceae	<i>Brachychiton</i> sp. (Altanmoui Range D.G.Fell+ DGF3202)		Endemic	State
Sterculiaceae	<i>Brachychiton velutinosus</i>		Endemic	State
Sterculiaceae	<i>Brachychiton x allochrous</i>		Endemic hybrid	State
Sterculiaceae	<i>Brachychiton x carneus</i>		Endemic hybrid	State
Phyllanthaceae	<i>Bridelia finalis</i>		Endemic	State
Orchidaceae	<i>Bromheadia pulchra</i>		Disjunct population, nearest 750km north in New Guinea only Australian records in CYP	State
Rhizophoraceae	<i>Bruguiera cylindrica</i>		Shared with New Guinea, only Australian records in CYP	State
Winteraceae	<i>Bubbia semecarpoides</i>		Disjunct population, nearest 400km south	Regional
Orchidaceae	<i>Bulbophyllum baileyi</i>		Disjunct population, nearest 350km south	Regional
Burmanniaceae	<i>Burmannia disticha</i>		Disjunct population, nearest 1200km south and 750km north in New Guinea	State
Orchidaceae	<i>Cadetia clausa</i>		Endemic	State
Orchidaceae	<i>Cadetia taylorii</i>		Disjunct population, nearest 400km south	Regional
Caesalpiniaceae	<i>Caesalpinia erythrocarpa</i>		Near endemic, also 1 record New Guinea	State

Family	Scientific name	Common name	Rationale and comments	Significance
Caesalpiaceae	<i>Caesalpinia</i> sp. (Bromley B.P.Hyland 9022)		Endemic	State
Johnsoniaceae	<i>Caesia parviflora</i>		Disjunct population, nearest 800km south	State
Johnsoniaceae	<i>Caesia parviflora</i> var. <i>parviflora</i>		Disjunct population, nearest 800km south	State
Portulacaceae	<i>Calandrinia</i> sp. (Olive River J.R.Clarkson+ 10012)		Disjunct population, nearest 800km south, 2 Australian records	State
Orchidaceae	<i>Calochilus</i> sp. (Weipa B.R.Jahnke 5)		Endemic	State
Asteraceae	<i>Calotis breviseta</i>		Disjunct population, nearest 800km west	State
Capparaceae	<i>Capparis</i> sp. (Bamaga V.Scarth-Johnson 1048A)		Endemic	State
Capparaceae	<i>Capparis</i> sp. (Coen L.S.Smith 11862)		Endemic	State
Apocynaceae	<i>Carissa laxiflora</i>		Shared with New Guinea, only Australian records in CYP	State
Apocynaceae	<i>Carissa scabra</i>		Endemic	State
Arecaceae	<i>Caryota albertii</i>		Endemic	State
Flacourtiaceae	<i>Casearia</i> sp. (Possum Scrub G.Sankowsky 1057)		Endemic	State
Caesalpiaceae	<i>Cassia</i> sp. (Kalpowar D.G.Fell+ DF2769)		Endemic	State
Ulmaceae	<i>Celtis hildebrandii</i>		Endemic	State
Ulmaceae	<i>Celtis</i> sp. (Cape Melville D.G.Fell+ DGF3025)		Disjunct population, nearest 600km south to west of Townsville (2 records)	Regional
Centrolepidaceae	<i>Centrolepis strigosa</i>		Disjunct population, nearest 1200km south	State
Centrolepidaceae	<i>Centrolepis strigosa</i>		Disjunct population, nearest 1200km south	State
Poaceae	<i>Chrysopogon rigidus</i>		Endemic	State
Menispermaceae	<i>Cissampelos pareira</i>		Disjunct population, nearest 300km north in New Guinea, only Australian records in CYP	State
Vitaceae	<i>Cissus pentaclada</i>		Endemic	State
Rutaceae	<i>Citrus garrawayi</i>		Endemic	State
Phyllanthaceae	<i>Cleistanthus hylandii</i>		Endemic	State
Phyllanthaceae	<i>Cleistanthus peninsularis</i>		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Poaceae	<i>Cleistochloa sclerachne</i>		Disjunct population, nearest 500km south	State
Lamiaceae	<i>Clerodendrum parvulum</i>		Endemic	State
Euphorbiaceae	<i>Codiaeum membranaceum</i>		Endemic	State
Commelinaceae	<i>Commelina</i> sp. (Lakefield NP P.I.Forster+ PIF12943)		Endemic	State
Commelinaceae	<i>Commelina</i> sp. (Laura River J.R.Clarkson 4723)		Endemic	State
Byttneriaceae	<i>Commersonia bartramia</i>	brown kurrajong	Disjunct population, nearest 350km south	Regional
Laxmanniaceae	<i>Cordyline fruticosa</i>		Disjunct population, nearest 500km north in New Guinea, only Australian records in CYP	State
Asteraceae	<i>Coronidium lanuginosum</i>		Disjunct population, nearest 300km south, most northerly record	Regional
Myrtaceae	<i>Corymbia disjuncta</i>		Disjunct population, nearest 500km north and 1000km west	State
Myrtaceae	<i>Corymbia nesophila</i>		Disjunct population, nearest 1000km west	State
Orchidaceae	<i>Crepidium marsupichilum</i>		Endemic	State
Fabaceae	<i>Crotalaria</i> sp. (Torres Strait J.R.Clarkson 2044)		Endemic	State
Euphorbiaceae	<i>Croton capitis-york</i>		Endemic	State
Euphorbiaceae	<i>Croton mutabilis</i>		Endemic	State
Euphorbiaceae	<i>Croton rarus</i>		Near endemic, also 2 records in Gulf Plains	State
Euphorbiaceae	<i>Croton simulans</i>		Endemic	State
Cyperaceae	<i>Croton waterhouseae</i>		Endemic	State
Lauraceae	<i>Cryptocarya bamagana</i>		Endemic	State
Lauraceae	<i>Cryptocarya brassii</i>		Endemic	State
Lauraceae	<i>Cryptocarya burckiana</i>		Endemic	State
Lauraceae	<i>Cryptocarya endiandrifolia</i>		Endemic	State
Sapindaceae	<i>Cupaniopsis fleckeri</i>		Endemic	State
Cycadaceae	<i>Cycas badensis</i>		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Cycadaceae	<i>Cycas media</i> subsp. <i>ensata</i>		Endemic	State
Cycadaceae	<i>Cycas xipholepis</i>		Endemic	State
Cycadaceae	<i>Cycas yorkiana</i>		Endemic	State
Rubiaceae	<i>Cyclophyllum brevipes</i>		Stronghold for taxon in CYP, also 1 record in Wet Tropics and Gulf Plains, 4 records in New Guinea	Regional
Rubiaceae	<i>Cyclophyllum maritimum</i>		Endemic	State
Poaceae	<i>Cymbopogon globosus</i>		Disjunct population, nearest 500km south, also shared with New Guinea	State
Apocynaceae	<i>Cynanchum ovalifolium</i>		Shared with New Guinea only Australian records in CYP	State
Caesalpiniaceae	<i>Cynometra</i> sp. (Paira Homestead Rd G.Sankowsky+ 1223)		Endemic	State
Cyperaceae	<i>Cyperus alaticaulis</i>		Endemic	State
Cyperaceae	<i>Cyperus eboracensis</i>		Endemic	State
Cyperaceae	<i>Cyperus</i> sp. (Mission Beach N.Byrnes MB14)		Disjunct population, nearest 800km south	State
Poaceae	<i>Cyrtococcum capitis-york</i>		Endemic	State
Combretaceae	<i>Dansiea</i> sp. (Altanmoui Range D.G.Fell+ DGF3198)		Endemic	State
Loranthaceae	<i>Decaisnina hollrungii</i>		Disjunct population, nearest 500km north in New Guinea, only Australian records in CYP	State
Malvaceae	<i>Decaschistia peninsularis</i>		Endemic, 1 unconfirmed record in Lawn Hill	State
Orchidaceae	<i>Dendrobium aphyllum</i>		Endemic	State
Orchidaceae	<i>Dendrobium bifalce</i>		Disjunct population, nearest 400km north in New Guinea, only Australian records in CYP	State
Orchidaceae	<i>Dendrobium jonesii</i>		Disjunct population, nearest 350km south	Regional
Urticaceae	<i>Dendrocnide corallodesme</i>		Disjunct population, nearest 1000km north in New Guinea, only Australian records in CYP	State
Celastraceae	<i>Denhamia</i> sp. (Jardine River B.P.Hyland 10250)		Endemic	State
Rubiaceae	<i>Dentella serpyllifolia</i>		Disjunct population, nearest 500km south-west, only 4 records in Queensland	State

Family	Scientific name	Common name	Rationale and comments	Significance
Annonaceae	<i>Desmos wardianus</i>		Disjunct population, nearest 1000km west	State
Hemerocallidaceae	<i>Dianella atraxis</i>		Disjunct population, nearest 300km south	Regional
Hemerocallidaceae	<i>Dianella pavopennacea</i>		Endemic, stronghold for taxon, also 2 records in Wet Tropics	State
Sapindaceae	<i>Dictyoneura obtusa</i>		Disjunct population, nearest 500km north-east in New Guinea, only Australian records in CYP	State
Poaceae	<i>Digitaria violascens</i>	bastard summergrass	Disjunct population, nearest 600km south	State
Poaceae	<i>Dimeria</i> sp. (Mosquito Point J.R.Clarkson+ 9994)		Disjunct population, nearest 600km south	State
Ebenaceae	<i>Diospyros fasciculosa</i>	grey ebony	Disjunct population, nearest 600km south	State
Ebenaceae	<i>Diospyros littorea</i>		Disjunct node	State
Ebenaceae	<i>Diospyros</i> sp. (Kuranda L.J.Webb+ 7265A)		Near endemic; also 2 specimens from Wet Tropics	Regional
Ebenaceae	<i>Diospyros</i> sp. (Mt White P.I.Forster PIF14415)		Endemic	State
Orchidaceae	<i>Diplocaulobium glabrum</i>		Disjunct population, nearest 200km north in New Guinea and 400km south	State
Sapindaceae	<i>Diploglottis macrantha</i>		Endemic	State
Orchidaceae	<i>Dipodium hamiltonianum</i>	yellow hyacinth orchid	Disjunct population, nearest 1300km south	State
Acanthaceae	<i>Dipteracanthus</i> sp. (Kalpowar D.G.Fell+ DGF2969B)		Endemic	State
Picrodendraceae	<i>Dissiliaria laxinervis</i>		Endemic	State
Picrodendraceae	<i>Dissiliaria surculosa</i>		Endemic	State
Sapindaceae	<i>Dodonaea polyandra</i>		Stronghold for taxon in CYP with > 90% of records, also in Wet Tropics and New Guinea	Regional
Putranjivaceae	<i>Drypetes vernicosa</i>		Endemic	State
Meliaceae	<i>Dysoxylum papuanum</i>		Disjunct population, nearest 350km south	Regional
Poaceae	<i>Ectrosia nervilemma</i>		Stronghold for taxon in CYP, also few specimens from Einasleigh Uplands, Brigalow Belt and Gulf Plains	Regional

Family	Scientific name	Common name	Rationale and comments	Significance
Poaceae	<i>Ectrosia ovata</i>		Endemic	State
Lauraceae	<i>Endiandra collinsii</i>		Endemic	State
Lauraceae	<i>Endiandra glauca</i>		Stronghold for taxon in CYP with > 90% of records, also in Wet Tropics and New Guinea	Regional
Poaceae	<i>Eragrostis capitula</i>		Endemic	State
Poaceae	<i>Eragrostis jacobsiana</i>		Endemic	State
Orchidaceae	<i>Eria fitzalanii</i>	red beech orchid	Near endemic, also 3 records in Wet Tropics	Regional
Poaceae	<i>Eriachne agrostidea</i>		Disjunct population, nearest 1000km west	State
Poaceae	<i>Eriachne glabrata</i>		Disjunct population, nearest 1300km south	State
Poaceae	<i>Eriachne insularis</i>		Disjunct population, nearest 800km south	State
Poaceae	<i>Eriachne pallescens</i> var. <i>gracilis</i>		Disjunct population, nearest 700km south	State
Eriocaulaceae	<i>Eriocaulon clarksonii</i>		Endemic	State
Eriocaulaceae	<i>Eriocaulon truncatum</i>		Disjunct population, nearest 500km north, 150km south and 400km west	Regional
Eriocaulaceae	<i>Eriocaulon willdenovianum</i>		Disjunct population, nearest 700km west	State
Rutaceae	<i>Eriostemon banksii</i>		Endemic	State
Fabaceae	<i>Erythrina insularis</i>		Endemic	State
Erythroxylaceae	<i>Erythroxylum</i> sp. (Mosquito Point J.R.Clarkson+ 9991)		Endemic	State
Zingiberaceae	<i>Etilingera australasica</i>		Disjunct population, nearest 300km	Regional
Myrtaceae	<i>Eucalyptus acroleuca</i>	Lakefield coolibah	Endemic	State
Myrtaceae	<i>Eucalyptus brassiana</i>	Cape York red gum	Stronghold for taxon in CYP with > 90% of records, also in Wet Tropics and New Guinea (2 records in Gulf Plains/Einasleigh Uplands)	Regional
Myrtaceae	<i>Eucalyptus pellita</i>	large-fruited red mahogany	Disjunct populations at Cape Melville, McIlwraith, Lockhart and New Guinea	State
Myrtaceae	<i>Eucalyptus phoenicea</i>	scarlet gum	Disjunct population, nearest 1000km west	State
Poaceae	<i>Eulalia mackinlayi</i>		Disjunct population, nearest 1000km west	State

Family	Scientific name	Common name	Rationale and comments	Significance
Euphorbiaceae	<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>		Northern-most record in Australia	Regional
Moraceae	<i>Ficus subnervosa</i>		Disjunct population, nearest 750km north-east in New Guinea, only Australian records in CYP	State
Cyperaceae	<i>Fimbristylis</i> sp. (Iron Range H.Flecker NQNC8728)		Disjunct population, nearest 350km south	Regional
Orchidaceae	<i>Flickingeria convexa</i>		Endemic	State
Rutaceae	<i>Flindersia brassii</i>	Claudie River scented maple	Endemic	State
Rutaceae	<i>Flindersia collina</i>	broad-leaved leopard tree	Reaches northern most extension at Cape Melville	Regional
Fabaceae	<i>Galactia</i> sp. (Andoom A.Morton 1149)		Endemic, 1 unconfirmed record near Barkley Downs	State
Clusiaceae	<i>Garcinia dulcis</i>		Disjunct population, nearest 600km north-east in New Guinea, only Australian records in CYP	State
Clusiaceae	<i>Garcinia</i> sp. (Claudie River L.J.Brass 19658)		Endemic	State
Rubiaceae	<i>Gardenia rupicola</i>		Endemic	State
Rubiaceae	<i>Gardenia scabrella</i>		Endemic	State
Rubiaceae	Gen.(AQ520454) sp. (Iron Range L.J.Brass 19119)		Endemic	State
Phyllanthaceae	<i>Glochidion</i> sp. (McIlwraith Range B.P.Hyland 7637)		Endemic, single record	State
Fabaceae	<i>Glycine</i> sp. (Bolt Head P.I.Forster PIF8948)		Endemic	State
Fabaceae	<i>Glycine syndetika</i>		Northern-most record in Australia	Regional
Fabaceae	<i>Gompholobium</i> sp. (Point Archer J.Wrigley+ NQ1301)		Endemic	State
Myrtaceae	<i>Gossia floribunda</i>		Endemic	State
Myrtaceae	<i>Gossia retusa</i>		Endemic	State
Rhamnaceae	<i>Gouania exilis</i>		Disjunct population, nearest 750km north east in New Guinea, only Australian records in CYP	State
Orchidaceae	<i>Grastidium luteocilium</i>		Endemic	State
Proteaceae	<i>Grevillea decora</i> subsp. <i>telfordii</i>		Endemic	State
Sapindaceae	<i>Guioa comesperma</i>		Disjunct NE 700km, only Australian records	State

Family	Scientific name	Common name	Rationale and comments	Significance
Apocynaceae	<i>Gunnessia pepo</i>		Endemic monotypic genus	State
Orchidaceae	<i>Habenaria euryloba</i>		Endemic, 1 record no status	State
Proteaceae	<i>Hakea pedunculata</i>		Endemic	State
Annonaceae	<i>Haplostichanthus fruticosus</i>		Endemic	State
Rubiaceae	<i>Hedyotis philippensis</i>		Shared with New Guinea, only Australian records in CYP	State
Helicteraceae	<i>Helicteres angustifolia</i>		Near endemic, 2 records 150km-350km south, also in New Guinea	State
Helicteraceae	<i>Helicteres isora</i>		Disjunct population, nearest 500km west	State
Helicteraceae	<i>Helicteres</i> sp. (Heathlands R.W.Johnson 5134)		Endemic	State
Helicteraceae	<i>Helicteres</i> sp. (Normanby River J.R.Clarkson+ 7697)		Northern limit	Regional
Boraginaceae	<i>Heliotropium vagum</i>		Disjunct population, nearest 500km south	State
Acanthaceae	<i>Hemigraphis ciliata</i>		Disjunct population, nearest 300km south and 600km north in New Guinea	Regional
Dilleniaceae	<i>Hibbertia banksii</i>		Stronghold for taxon on CYP with > 90% records, also in Wet Tropics (4 records),	Regional
Dilleniaceae	<i>Hibbertia candicans</i>		Disjunct population, nearest 750km west	State
Dilleniaceae	<i>Hibbertia cistifolia</i>		Disjunct population, nearest 750km west	State
Dilleniaceae	<i>Hibbertia laurana</i>		Endemic	State
Malvaceae	<i>Hibiscus forsteri</i>		Disjunct population, nearest 500km south to Brigalow Belt [doubtfully conspecific]	State
Malvaceae	<i>Hibiscus macilwraithensis</i>		Endemic	State
Malvaceae	<i>Hibiscus propulsator</i>		Endemic	State
Malvaceae	<i>Hibiscus saponarius</i>		Endemic	State
Malvaceae	<i>Hibiscus tozerensis</i>		Endemic	State
Myristicaceae	<i>Horsfieldia australiana</i>		Disjunct population, nearest 750km west	State
Apocynaceae	<i>Hoya sussuela</i>		Disjunct population, nearest 750km north in New Guinea, only Australian records in CYP	State

Family	Scientific name	Common name	Rationale and comments	Significance
Flacourtiaceae	<i>Hydnocarpus</i> sp. (Possum Scrub G.Sankowsky+ 1349)		Endemic, one record, not threatened	State
Rubiaceae	<i>Hydnophytum moseleyanum</i>		Endemic	State
Araliaceae	<i>Hydrocotyle tumida</i>		Endemic, 1 record (16000) Dunbar	State
Cyperaceae	<i>Hypolytrum proliferum</i>		Disjunct population, nearest 3000km north west, only Australian records in CYP	State
Apocynaceae	<i>Ichnocarpus rhombifolius</i>		Disjunct population, nearest 750km north in New Guinea, only Australian records in CYP	State
Brownlowiaceae	<i>Indagator fordii</i>		Endemic monotypic genus one locality	State
Fabaceae	<i>Indigofera polyclada</i>		Endemic, 2 localities only despite searches, yet not threatened	State
Fabaceae	<i>Indigofera wannanii</i>		Endemic	State
Convolvulaceae	<i>Ipomoea diversifolia</i>		Disjunct population, nearest 500km west	State
Poaceae	<i>Ischaemum polystachyum</i>		Shared with New Guinea - only Australian records in CYP	State
Campanulaceae	<i>Isotoma fluviatilis</i>		Disjunct population, nearest 1000km south	State
Fabaceae	<i>Jacksonia quinkanensis</i>		Disjunct population, nearest 200km south, spelling	Regional
Fabaceae	<i>Jacksonia quinkanensis</i>		See above	State
Oleaceae	<i>Jasminum longipetalum</i>		Disjunct population, nearest 700km north-east in New Guinea, only Australian records in CYP	State
Zingiberaceae	<i>Kaempferia</i> sp. (Murray Island M.Lawrie 5)		Endemic to Mer Island, Torres Strait	State
Caesalpiniaceae	<i>Labichea buettneriana</i>		Near endemic 1 record in Wet Tropics	Regional
Polypodiaceae	<i>Lecanopteris sinuosa</i>		Shared with New Guinea - only Australian records in CYP	State
Sapindaceae	<i>Lepidopetalum fructoglabrum</i>		Disjunct population, nearest 300km north in New Guinea, only Australian records in CYP	State
Convolvulaceae	<i>Lepistemon urceolatus</i>		Disjunct population, nearest 750km north in New Guinea and 350km south	Regional
Myrtaceae	<i>Leptospermum madidum</i>		Disjunct population, nearest 1200km west	State
Myrtaceae	<i>Leptospermum purpurascens</i>		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Ericaceae	<i>Leucopogon lavarackii</i>		Endemic 2 populations north and south of Iron Range	State
Ericaceae	<i>Leucopogon yorkensis</i>		Near endemic, 1 population at Yarrabah 200km south in Wet Tropics	Regional
Arecaceae	<i>Licuala ramsayi</i> var. <i>tuckeri</i>		Endemic variety	State
Scrophulariaceae	<i>Lindernia pusilla</i>		Disjunct population, nearest 3000km north-east, Java, only Australian specimens in CYP	State
Scrophulariaceae	<i>Lindernia</i> sp. (Sudley A.Gunness 1886)		Endemic	State
Scrophulariaceae	<i>Lindernia</i> sp. (Violet Vale B.S.Wannan+ 1865)		Endemic	State
Orchidaceae	<i>Liparis collinsii</i>		Endemic	State
Laxmanniaceae	<i>Lomandra elongata</i>		Disjunct population, nearest 1300km south	State
Orchidaceae	<i>Luisia teretifolia</i>		Endemic	State
Rutaceae	<i>Lunasia amara</i>		Disjunct population, nearest 600km north-east in New Guinea, only Australian records in CYP	State
Lycopodiaceae	<i>Lycopodiella serpentina</i>	bog clubmoss	Disjunct population, nearest 350km south	State
Euphorbiaceae	<i>Macaranga polyadenia</i>		Disjunct population, nearest 350km south	Regional
Molluginaceae	<i>Macarthuria neocambrica</i>		Disjunct population, nearest 500km south	State
Sapotaceae	<i>Manilkara kauki</i>		Endemic	State
Caesalpiniaceae	<i>Maniltoa lenticellata</i>		Disjunct population, nearest 500km north in New Guinea, only Australian records in CYP	State
Apocynaceae	<i>Marsdenia</i> sp. (Silver Plains P.I.Forster PIF17005)		Endemic	State
Apocynaceae	<i>Marsdenia tricholepis</i>		Disjunct population, nearest 600km south and 300km north	State
Rutaceae	<i>Medicosma riparia</i>		Endemic	State
Annonaceae	<i>Meiogyne cylindrocarpa</i> subsp. <i>trichocarpa</i>		Near endemic, also 4 records in Wet Tropics	Regional
Myrtaceae	<i>Melaleuca arcana</i>		Endemic	State
Myrtaceae	<i>Melaleuca clarksonii</i>		Endemic to study area (shared with northern Gulf Plains)	State
Rutaceae	<i>Melicope fellii</i>		Endemic	State
Rutaceae	<i>Melicope peninsularis</i>		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Annonaceae	<i>Melodorum scabridulum</i>		Endemic	State
Annonaceae	<i>Melodorum unguiculatum</i>		Endemic	State
Polypodiaceae	<i>Microsorium scolopendria</i>		Disjunct population, nearest 500km north in New Guinea, only Australian records in CYP	State
Sapindaceae	<i>Mischarytera macrobotrys</i>		Endemic	State
Loganiaceae	<i>Mitrasacme clarksonii</i>		Endemic	State
Loganiaceae	<i>Mitrasacme maritima</i>		Endemic	State
Loganiaceae	<i>Mitrasacme neldneri</i>		Disjunct population, nearest 400km south, only 3 records in Queensland	Regional
Annonaceae	<i>Mitrephora diversifolia</i>		Disjunct population, nearest 600km north-east in New Guinea, only Australian records in CYP	State
Rubiaceae	<i>Morinda ammitia</i>		Endemic	State
Rubiaceae	<i>Morinda reticulata</i>		Near endemic , 1 record in Wet Tropics	Regional
Cucurbitaceae	<i>Muellerargia timorensis</i>		Near endemic, 1 record in Northern Territory and Kimberley	State
Musaceae	<i>Musa banksii</i>		Disjunct population, nearest 200km south	State
Rubiaceae	<i>Myrmecodia tuberosa</i>		Disjunct population, nearest 1600km north-east in New Guinea, only Australian records in CYP	State
Myrtaceae	<i>Neofabricia mjoebergii</i>		Endemic	State
Myrtaceae	<i>Neofabricia myrtifolia</i>		Endemic	State
Myrtaceae	<i>Neofabricia sericisepala</i>		Endemic	State
Rubiaceae	<i>Neonauclea glabra</i>		Disjunct population, nearest 250km south	Regional
Picrodendraceae	<i>Neoroepera banksii</i>		Endemic	State
Nepenthaceae	<i>Nepenthes mirabilis</i>	tropical pitcher plant	Disjunct population, nearest 500km south, Wet Tropics - small populations	State
Nepenthaceae	<i>Nepenthes rowanae</i>		Endemic	State
Nepenthaceae	<i>Nepenthes tenax</i>		Endemic	State
Urticaceae	<i>Nothocnide repanda</i>		Disjunct population, nearest 450km north in New Guinea, only Australian records in CYP	State

Family	Scientific name	Common name	Rationale and comments	Significance
Viscaceae	<i>Notothixos incanus</i>		Disjunct population, nearest 1000km south	State
Nymphaeaceae	<i>Nymphaea atrans</i>		Endemic	State
Menyanthaceae	<i>Nymphoides elliptica</i>		Endemic to study area (shared with northern Gulf Plains)	State
Menyanthaceae	<i>Nymphoides</i> sp. (Hann River J.R.Clarkson 3109)		Disjunct population, nearest 1000km west in Northern Territory	State
Menyanthaceae	<i>Nymphoides triangularis</i>		Endemic	State
Orchidaceae	<i>Oberonia complanata</i>		Disjunct population, nearest 400km south	Regional
Apocynaceae	<i>Ochrosia minima</i>		Endemic	State
Olacaceae	<i>Olax pendula</i>		Disjunct population, nearest 750km west	State
Euphorbiaceae	<i>Omphalea papuana</i>		Disjunct population, nearest 800km north in New Guinea, only Australian records in CYP	State
Fabaceae	<i>Ormocarpum orientale</i>		Disjunct population, nearest 600km north in New Guinea, only Australian records in CYP	State
Menyanthaceae	<i>Ornduffia</i> sp. (Laura C.Dalliston CC18)		Near endemic, one record at Tully	Regional
Pandanaceae	<i>Pandanus conicus</i>		Endemic	State
Pandanaceae	<i>Pandanus oblatus</i>		Endemic	State
Aristolochiaceae	<i>Pararistolochia linearifolia</i>		Endemic	State
Aristolochiaceae	<i>Pararistolochia peninsulensis</i>		Endemic	State
Apocynaceae	<i>Parsonsia blakeana</i>		Endemic	State
Apocynaceae	<i>Parsonsia ferruginea</i>		Endemic	State
Acanthaceae	<i>Peristrophe brassii</i>		Endemic	State
Lamiaceae	<i>Petraeovitex multiflora</i>		Disjunct north east 750km New Guinea, only Australian records in CYP	State
Phyllanthaceae	<i>Phyllanthus praelongipes</i>		Endemic	State
Phyllanthaceae	<i>Phyllanthus</i> sp. (Pentland R.J.Cumming 9742)		Disjunct population, nearest 500km south	State
Myrtaceae	<i>Pilidistigma papuanum</i>		Disjunct population, nearest 250km south	Regional
Caesalpiniaceae	<i>Piliostigma malabaricum</i>		Disjunct population, nearest 1000km west	State

Family	Scientific name	Common name	Rationale and comments	Significance
Thymelaeaceae	<i>Pimelea aquilonia</i>		Near endemic, 1 record 500km south in Wet Tropics	State
Euphorbiaceae	<i>Pimelodendron amboinicum</i>		Disjunct population, nearest 400km north in New Guinea, only Australian records in CYP	State
Nyctaginaceae	<i>Pisonia grandis</i>		BOT Priority	Regional
Lamiaceae	<i>Plectranthus apricus</i>		Endemic	State
Lamiaceae	<i>Plectranthus arenicola</i>		Endemic	State
Lamiaceae	<i>Plectranthus batianoffii</i>		Endemic to Lizard Island	State
Lamiaceae	<i>Plectranthus dumicola</i>		Endemic	State
Lamiaceae	<i>Plectranthus excelsus</i>		Endemic	State
Lamiaceae	<i>Plectranthus pulchellus</i>		Endemic	State
Convolvulaceae	<i>Polymeria</i> sp. (Aurukun J.R.Clarkson 4320)		Endemic	State
Portulacaceae	<i>Portulaca</i> sp. (Weipa Mission R.L.Specht+ W233)		Endemic	State
Lamiaceae	<i>Premna hylandiana</i>		Endemic	State
Rosaceae	<i>Prunus brachystachya</i>		Disjunct population, nearest 600km north in New Guinea, only Australian records in CYP	State
Rubiaceae	<i>Psychotria</i> sp. (Pajinka W.Cooper+ WWC1435)		Endemic	State
Rubiaceae	<i>Psydrax pallida</i>		Endemic, 1 unconfirmed record from Charters Towers	State
Fabaceae	<i>Pterocarpus indicus</i>		Disjunct population, nearest 700km south and 600km north-east in New Guinea	State
Menispermaceae	<i>Pycnarrhena ozantha</i>		Endemic, 1 record in New Guinea 700km north	State
Rubiaceae	<i>Randia</i> sp. (Gordon Creek B.P.Hyland 15252)		Endemic	State
Orchidaceae	<i>Rhipidorchis micrantha</i>		Disjunct population, nearest 400km south	Regional
Myrtaceae	<i>Rhodamnia arenaria</i>		Endemic	State
Myrtaceae	<i>Rhodamnia australis</i>		Disjunct population, nearest 1000km west in Northern Territory	State
Myrtaceae	<i>Rhodamnia fordii</i>		Endemic	State
Myrtaceae	<i>Rhodamnia hylandii</i>		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Myrtaceae	<i>Rhodamnia sessiliflora</i>		Disjunct population, nearest 500km south	State
Myrtaceae	<i>Rhodamnia sharpeana</i>		Endemic	State
Myrtaceae	<i>Rhodamnia spongiosa</i>		Disjunct population, nearest 300km south	Regional
Myrtaceae	<i>Rhodomyrtus trineura</i> subsp. <i>capensis</i>		Endemic subspecies	State
Euphorbiaceae	<i>Ricinocarpos verrucosus</i>		Disjunct population, nearest 300km south	Regional
Simaroubaceae	<i>Samadera</i> sp. (Tozer Range L.J.Brass 19393)		Endemic	State
Phyllanthaceae	<i>Sauropus podenzanae</i>		Endemic	State
Phyllanthaceae	<i>Sauropus sphenophyllus</i>		Near endemic, 1 record in southern New Guinea	State
Araceae	<i>Scindapsus altissimus</i>		Disjunct population, nearest 900km north-east in New Guinea, only Australian records in CYP	State
Apocynaceae	<i>Secamone lineata</i>		Endemic, 1 unconfirmed specimen from Kimberley	State
Selaginellaceae	<i>Selaginella longiciliata</i>		Endemic	State
Sapotaceae	<i>Sersalisia unmackiana</i>		Endemic	State
Smilacaceae	<i>Smilax kaniensis</i>		Endemic	State
Smilacaceae	<i>Smilax</i> sp. (Cardwell A.Thorsborne+ 61)		Disjunct population, nearest to 500km south	State
Solanaceae	<i>Solanum defensum</i>		Endemic	State
Solanaceae	<i>Solanum discolor</i>		Endemic	State
Solanaceae	<i>Solanum dysprosium</i>		Endemic	State
Solanaceae	<i>Solanum fervens</i>		Endemic	State
Lythraceae	<i>Sonneratia x gulngai</i>		Disjunct population, nearest 450km south	Regional
Rubiaceae	<i>Spermacoce buckleyi</i>		Endemic	State
Rubiaceae	<i>Spermacoce debilis</i>		Endemic	State
Rubiaceae	<i>Spermacoce jacobsonii</i>		Endemic	State
Rubiaceae	<i>Spermacoce papuana</i>		Near endemic, only aust recs	State
Rubiaceae	<i>Spermacoce</i> sp. (Andoom A.Morton AM1150)		Endemic	State
Rubiaceae	<i>Spermacoce</i> sp. (Coen R.K.Harwood 1478)		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Rubiaceae	<i>Spermacoce</i> sp. (Garraway Creek P.I.Forster PIF15461)		Endemic	State
Rubiaceae	<i>Spermacoce</i> sp. (Laura A.R.Bean 1807)		Endemic	State
Rubiaceae	<i>Spermacoce</i> sp. (Mareeba S.T.Blake 13418B)		Disjunct population, nearest 250km south	Regional
Rubiaceae	<i>Spermacoce</i> sp. (Musgrave J.Wrigley+ NQ1579)		Endemic	State
Rubiaceae	<i>Spermacoce</i> sp. (Pascoe River L.J.Brass 19530)		Endemic	State
Rubiaceae	<i>Spermacoce</i> sp. (Wenloch R.K.Harwood 1531)		Endemic	State
Rubiaceae	<i>Spermacoce</i> sp. (Yarraden R.K.Harwood 1470)		Endemic	State
Monimiaceae	<i>Stegathera hirsuta</i>		Disjunct population, nearest 500km north in New Guinea, only Australian records in CYP	State
Sterculiaceae	<i>Sterculia shillinglawii</i>		Disjunct population, nearest 700km north in New Guinea, only Australian records in CYP	State
Sterculiaceae	<i>Sterculia</i> sp. (Annan River L.J.Brass 20319)		Disjunct populations south to McIlwraith Range, Stanley Island and Cooktown	Regional
Stylidiaceae	<i>Stylidium clarksonii</i>		Endemic	State
Stylidiaceae	<i>Stylidium delicatum</i>		Endemic	State
Stylidiaceae	<i>Stylidium foveolatum</i>		Endemic	State
Stylidiaceae	<i>Stylidium ramosissimum</i>		Endemic	State
Stylidiaceae	<i>Stylidium</i> sp. (Aurukun C.Dalliston CC429)		Endemic	State
Myrtaceae	<i>Syzygium argyropedicum</i>		Endemic	State
Myrtaceae	<i>Syzygium bamagense</i>		Endemic	State
Myrtaceae	<i>Syzygium bungadinnia</i>		Endemic	State
Myrtaceae	<i>Syzygium pseudofastigiatum</i>	Claudie satinash	Endemic	State
Myrtaceae	<i>Syzygium puberulum</i>		Disjunct population, nearest 400km south, also in New Guinea	Regional
Myrtaceae	<i>Syzygium rubrimolle</i>		Endemic	State
Orchidaceae	<i>Taeniophyllum malianum</i>		Disjunct population, nearest 1 record in New Guinea 800km north	State

Family	Scientific name	Common name	Rationale and comments	Significance
Adiantaceae	<i>Taenitis blechnoides</i>		Disjunct population, nearest 1000km west	State
Fabaceae	<i>Tephrosia laxa</i>		Disjunct population, nearest 500km south-west	State
Fabaceae	<i>Tephrosia simplicifolia</i>		Disjunct population, nearest 750km south-west	State
Combretaceae	<i>Terminalia complanata</i>		Disjunct population, nearest 300km north in New Guinea, only Australian records in CYP	State
Combretaceae	<i>Terminalia</i> sp. (Howick River D.G.Fell+ DGF3249)		Endemic	State
Datisceae	<i>Tetrameles nudiflora</i>		Disjunct population, nearest 600km north-east in New Guinea, only Australian records in CYP	State
Vitaceae	<i>Tetrastigma piscarpum</i>		Disjunct population, nearest 600km north-east in New Guinea, only Australian records in CYP	State
Lamiaceae	<i>Teucrium ajugaceum</i>		Endemic	State
Cymodoceaceae	<i>Thalassodendron ciliatum</i>		Disjunct population, nearest 1000km south and 2000km west	State
Poaceae	<i>Thaumastochloa monilifera</i>		Near endemic, 1 record in Gulf Plains and Wet Tropics	Regional
Poaceae	<i>Thaumastochloa</i> sp. (Morehead River J.R.Clarkson+ 8086)		Endemic	State
Menispermaceae	<i>Tiliacora australiana</i>		Disjunct population, nearest 750km south-west	State
Menispermaceae	<i>Tinospora esiangkara</i>		Disjunct population, nearest 750km south-west	State
Sapindaceae	<i>Toechima daemelianum</i>		Disjunct population, nearest 400km south	Regional
Orchidaceae	<i>Trachoma stellatum</i>		Endemic	State
Araliaceae	<i>Trachymene</i> sp. (Laura A.R.Bean 1863)		Endemic	State
Araliaceae	<i>Trachymene</i> sp. (Sharp Point J.R.Clarkson 2101)		Endemic	State
Araliaceae	<i>Trachymene</i> sp. (Temple Bay J.R.Clarkson 2175)		Endemic	State
Araliaceae	<i>Trachymene tenuifolia</i>		Disjunct population, nearest 300km south	Regional
Rubiaceae	<i>Triflorensia australis</i>		Disjunct population, nearest 500km west	State
Sparrmanniaceae	<i>Triumfetta</i> sp. (Turtle Rock A.R.Bean 3807)		Endemic	State
Araceae	<i>Typhonium weipanum</i>		Endemic	State

Family	Scientific name	Common name	Rationale and comments	Significance
Rubiaceae	<i>Uncaria callophylla</i>		Endemic	State
Lentibulariaceae	<i>Utricularia albiflora</i>		Endemic, possible record in Northern Territory	State
Lentibulariaceae	<i>Utricularia limosa</i>		Disjunct population, nearest 350km south	Regional
Lentibulariaceae	<i>Utricularia quinquedentata</i>		Disjunct population, nearest 750km west	State
Lentibulariaceae	<i>Utricularia terrae-reginae</i>		Endemic	State
Annonaceae	<i>Uvaria rufa</i>		Endemic	State
Lamiaceae	<i>Vitex melicopea</i>		Disjunct population, nearest 700km south	State
Myrtaceae	<i>Welchiodendron longivalve</i>		Endemic monotypic genus shared with New Guinea, only Australian records in CYP	State
Monimiaceae	<i>Wilkiea hylandii</i>		Endemic	State
Monimiaceae	<i>Wilkiea rigidifolia</i>		Disjunct population, nearest 200km south, 90% records in CYP	State
Xanthorrhoeaceae	<i>Xanthorrhoea</i> sp. (Cape Bedford M.Gandini AQ601576)		Endemic	State
Myrtaceae	<i>Xanthostemon crenulatus</i>		Disjunct population, nearest 200km north, only Australian records in CYP	State
Myrtaceae	<i>Xanthostemon</i> sp. (Bolt Head J.R.Clarkson+ 8805)		Endemic, 2 populations	State
Myrtaceae	<i>Xanthostemon xerophilus</i>		Endemic	State
Meliaceae	<i>Xylocarpus rumphii</i>		Endemic	State
Annonaceae	<i>Xylophia monosperma</i>		Near endemic, 1 unconfirmed record 1200km west in Northern Territory	State
Flacourtiaceae	<i>Xylosma</i> sp. (Cape Melville D.G.Fell+ DGF2984)		Endemic	State
Flacourtiaceae	<i>Xylosma</i> sp. (Temple Bay P.I.Forster PIF8980)		Endemic	State
Rutaceae	<i>Zanthoxylum rhetsa</i>		Disjunct population, nearest 500km north in New Guinea (1 record), only Australian records in CYP	State
Rhamnaceae	<i>Ziziphus timoriensis</i>		Disjunct population, nearest 3000km west in Timor, only Australian records in CYP	State
Fabaceae	<i>Zornia ramosa</i>		Near endemic, one record just south	State

Family	Scientific name	Common name	Rationale and comments	Significance
Zosteraceae	<i>Zostera capricorni</i>	eelgrass	Disjunct population, nearest 700km south	State

Table 5 Priority flora taxa special area decisions

Decision Number	Description	Significance	Identified values	Criteria values
cyp_fl_16	High precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains core habitat for priority taxa with high precision records	Criteria H: Very High
cyp_fl_17	High precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains habitat for priority taxa with high precision records	Criteria H: High
cyp_fl_18	Low precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains core habitat for priority taxa with low precision records	Criteria H: Medium
cyp_fl_19	Low precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains habitat for priority taxa with low precision records	Criteria H: Medium
eiu_fl_24	High precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains Core Habitat for Priority taxa with high precision records.	Criteria H: Very High
eiu_fl_25	Low precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains Core Habitat for Priority taxa with low precision records.	Criteria H: Medium
eiu_fl_26	High precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains Core Habitat for Priority taxa with high precision records.	Criteria H: High
eiu_fl_27	Low precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains Core Habitat for Priority taxa with low precision records.	Criteria H: Medium

3.2 Fauna species considerations (criteria A and H)

Criteria A and H attribute significance to areas based on the presence of EVNT taxa scheduled under the Nature Conservation (Wildlife) Regulation 2006 or the EPBC, or presence of non-EVNT priority species. The CYP study area expert panel considered some 238 species for inclusion in criteria A and H. Table 6 summarises the categories of species. It is the general convention under the BAMM that species records are filtered to exclude records older than 1975, or less precise than 2000 metres. The fauna expert panel for the CYP study area BPA considered those conventions restrictive given that much of the CYP study area is remote and difficult to access, and records are comparatively limited and highly concentrated within the bioregion.

To make best use of the limited data available the panel recommended:

1. The year rule be fully relaxed.
2. The precision rule be adjusted to include records up to 3600 metres precision.

All records for high mobility fauna taxa were included subject to passing the above filtering rules.

Species records were interactively reviewed during the workshop using GIS. Participants were asked to accept, add, shift or exclude records based upon their expert knowledge. Individuals were also consulted following the workshop to clarify recommendations and to add records.

Table 6. Summary of fauna taxa considered by the expert panel for criteria A and H.

	Endangered	Vulnerable	Near Threatened	Priority (non-EVNT) taxa	Total
No. of taxa considered	26	39	54	119	238
No. of taxa for which the panel made comments	18	23	30	119	190

3.2.1 Habitat for endangered, vulnerable and near threatened fauna species (criterion A)

The panel reviewed records of the listed EVNT species and provided comments on those species (Table 7). Depending on the final southern boundary of the study area, several taxa listed may be excluded since they occur within the Wet Tropics World Heritage Area.

Table 7. Comments and recommendations of expert panel relating to endangered, vulnerable and near threatened fauna species (criterion A).

Taxa marked with an asterisk (*) were recorded in areas within the CYP Biodiversity Planning Assessment area but outside the Cape York Peninsula Heritage Area.

Group	Scientific name	Common name	NCA ³	EPBC ⁴	Comments and recommendations
Reptilia	<i>Acanthophis antarcticus</i>	Common death adder	NT		Taxonomic status of <i>Acanthophis</i> on CYP confused. Queensland Museum records for the Cape.
Aves	<i>Accipiter novaehollandiae</i>	Grey goshawk	NT		Widespread sparse CYP
Aves	<i>Aerodramus terraereginae</i>	Australian swiftlet	NT		
Reptilia	<i>Anomalopus pluto</i>		NT		CYP endemic
Reptilia	<i>Antaioserpens warro</i>	Robust burrowing snake	NT		Widespread but patchy CYP
Mammalia	<i>Antechinus leo</i>	Cinnamon antechinus	NT		CYP endemic
Mammalia	<i>Bettongia tropica</i>	Northern bettong	E	E	Mt Windsor Tableland
Reptilia	<i>Calypotis thornstonensis*</i>		NT		Wet Tropics taxon
Reptilia	<i>Caretta caretta</i>	Loggerhead turtle	E	E	No nesting on CYP
Aves	<i>Casuarius casuarius</i> (nth pop.)	Southern cassowary (northern pop.)	V	E	
Aves	<i>Casuarius casuarius</i> (sth pop.)	Southern cassowary (southern pop.)	E	E	
Reptilia	<i>Chelonia mydas</i>	Green turtle	V	V	Major breeding concentration on islands outer edge of northern reef Raine-Moulter Cay No 7 and 8, minor breeding patchy along coastal mainland west and east coast
Aves	<i>Cisticola juncidis normani</i>	Zitting cisticola (Normanton subsp.)	NT		Queensland Museum record for Weipa area, may occur along south-west coast of CYP
Reptilia	<i>Coeranoscincus frontalis*</i>		NT		Wet Tropics taxon
Amphibia	<i>Cophixalus aenigma*</i>	Tapping nurseryfrog	NT		Wet Tropics taxon
Amphibia	<i>Cophixalus concinnus*</i>	Beautiful nurseryfrog	V		Wet Tropics taxon
Amphibia	<i>Cophixalus crepitans</i>	Northern nurseryfrog	V		Restricted to McIlwraith Range, CYP endemic
Amphibia	<i>Cophixalus exiguus*</i>	Dainty nurseryfrog	V		Wet Tropics taxon

³ Queensland Nature Conservation Act 1992 (E – endangered, V – vulnerable, NT – near threatened, LC – least concern)

⁴ Environment Protection and Biodiversity Conservation Act 1999 (CE – Critically Endangered, E – endangered, V – vulnerable, EX - Extinct)

Group	Scientific name	Common name	NCA ³	EPBC ⁴	Comments and recommendations
Amphibia	<i>Cophixalus peninsularis</i>	Cape York nurseryfrog	V		Restricted to Mcllwraith Range, CYP endemic
Amphibia	<i>Cophixalus saxatilis</i>	Black Mountain nuseryfrog	V		Restricted to Black Mountain, CYP endemic
Amphibia	<i>Cophixalus zweifeli</i>	Cape Melville boulderfrog	V		Restricted to Cape Melville, CYP endemic
Reptilia	<i>Crocodylus porosus</i>	Estuarine crocodile	V		
Reptilia	<i>Cryptoblepharus fuhni</i>	Fuhn's snake-eyed skink	NT		Cape Melville boulder habitat on NP, CYP endemic
Reptilia	<i>Cryptophis incredibilis</i>	Pink snake	NT		Restricted to Prince of Wales Island; under flotsam along upper strand-line adjacent to open eucalypt and paperbark woodlands on sandy soils, CYP endemic
Reptilia	<i>Ctenotus rawlinsoni</i>		NT		Restricted to Cape Bedford-Cape Flattery area, heathlands/low woodland on dunes, CYP endemic
Reptilia	<i>Ctenotus zebrilla*</i>		NT		
Aves	<i>Cyclopsitta diophthalma macleayana</i>	Macleay's fig-parrot	V		
Aves	<i>Cyclopsitta diophthalma marshalli</i>	Marshall's fig-parrot	NT		
Mammalia	<i>Dasyurus hallucatus</i>	Northern quoll		E	
Mammalia	<i>Dasyurus maculatus gracilis</i>	Spotted-tailed quoll (northern subsp.)	E	E	Mt Amos, Big Tableland and Mt Windsor Tableland.
Mammalia	<i>Dendrolagus bennettianus</i>	Bennett's tree-kangaroo	NT		Mt Amos and Mt Windsor Tableland
Reptilia	<i>Dermochelys coriacea</i>	Leatherback turtle	E	E	Very rare sightings, no nesting on CYP
Mammalia	<i>Dobsonia magna</i>	Bare-backed fruit-bat	NT		Limited distribution in Australia
Mammalia	<i>Dugong dugon</i>	Dugong	V		
Aves	<i>Eclectus roratus macgillivrayi</i>	Eclectus parrot	V		Subspecies endemic to CYP
Reptilia	<i>Egernia rugosa</i>	Yakka skink	V	V	Birthday Mountain, west of Mcllwraith Range and Endeavour Valley however core region Brigalow and Mulga regions
Reptilia	<i>Emoia atrocostata</i>		NT		Found amongst rocks and mangroves on coast. Occurs from tip of CYP through Torres Strait Islands, New Guinea and into South Pacific and Southeast Asia
Reptilia	<i>Emydura subglobosa subglobosa</i>	Jardine River turtle	NT		Not recorded in river since 1996; lower and middle reaches of Jardine River. Work in New Guinea shows it to be more abundant in freshwater swamps and seasonally inundated grasslands and wetlands (Georges 2005) so is likely to be more a species of the Jardine Swamps than the main channel of Jardine river on CYP

Group	Scientific name	Common name	NCA ³	EPBC ⁴	Comments and recommendations
Aves	<i>Ephippiorhynchus asiaticus</i>	Black-necked stork	NT		
Reptilia	<i>Eretmochelys imbricata</i>	Hawksbill turtle	V	V	Milman island major rookery, islands of Torres Strait western CYP north of Cotterell River
Aves	<i>Erythrotriorchis radiatus</i>	Red goshawk	E	V	
Aves	<i>Erythrura gouldiae</i>	Gouldian finch	E	E	
Aves	<i>Erythrura trichroa</i>	Blue-faced parrot-finch	NT		Disjunct population
Aves	<i>Esacus magnirostris</i>	Beach stone-curlew	V		Adult beach stone-curlews are a sedentary species, with pairs having established territories arranged in a linear fashion along the coastline of Cape York. Undeveloped coast of Cape York important to the continued survival of this species in eastern Australia as population has declined along developed coastline south of Daintree River
Reptilia	<i>Eulamprus tigrinus</i>		NT		Shipton's Flat
Reptilia	<i>Furina barnardi</i>	Yellow-naped snake	NT		
Reptilia	<i>Glaphyromorphus mjobergi</i> *		NT		Wet Tropics taxon
Pisces	<i>Glyphis glyphis</i>	Speartooth shark		CE	
Aves	<i>Haematopus fuliginosus</i>	Sooty oystercatcher	NT		
Aves	<i>Heteromunia pectoralis</i>	Pictorella mannikin	NT		
Mammalia	<i>Hipposideros cervinus</i>	Fawn leaf-nosed bat	V		
Mammalia	<i>Hipposideros diadema reginae</i>	Diadem leaf-nosed bat	NT		
Mammalia	<i>Hipposideros semoni</i>	Semon's leaf-nosed bat	E	E	
Insecta	<i>Hypochrysops apollo apollo</i>	Apollo jewel (Wet Tropics subsp.)	V		Coastal paperbark (<i>Melaleuca viridiflora</i>) swamps, <i>Lophostemon suaveolens</i> and mangroves with ant-plants (<i>Myrmecodia beccarii</i>) present
Mammalia	<i>Kerivoula/Phoniscus papuensis</i>	Golden-tipped bat	NT		
Reptilia	<i>Lampropholis robertsi</i> *		NT		Wet Tropics taxon
Reptilia	<i>Lepidochelys olivacea</i>	Olive ridley turtle	E	E	Low density nesting along western coast of CYP Holroyd River area to Bamaga The olive ridley population nesting in western Cape York Peninsula (WCYP) is a unique genetic stock separate from the olive ridley nesting population of the Northern Territory and those in Indonesia and elsewhere
Reptilia	<i>Lepidodactylus pumilus</i>		NT		

Group	Scientific name	Common name	NCA ³	EPBC ⁴	Comments and recommendations
Reptilia	<i>Lerista ingrami</i>	Ingram's lerista	V		Very restricted range near mouth of Mclvor River sandy heaths, CYP endemic
Aves	<i>Lewinia pectoralis</i>	Lewin's rail	NT		
Reptilia	<i>Liburnascincus scirtetis</i>		V		Restricted to Black Mountain, CYP endemic
Amphibia	<i>Litoria andiirrmalin</i>	Melville Range treefrog	V		Restricted to Cape Melville, CYP endemic
Amphibia	<i>Litoria longirostris</i>	Long snouted treefrog	NT		Restricted to Mcllwraith Range, CYP endemic
Amphibia	<i>Litoria lorica</i> *	Little waterfall frog	E	CE	Wet Tropics taxon
Amphibia	<i>Litoria nannotis</i> *	Waterfall frog	E	E	Wet Tropics taxon
Amphibia	<i>Litoria nyakalensis</i> *	Mountain mistfrog	E	CE	Wet Tropics taxon
Amphibia	<i>Litoria rheocola</i> *	Common mistfrog	E	E	Wet Tropics taxon
Amphibia	<i>Litoria serrata</i> *	Tapping green-eyed treefrog	NT		Wet Tropics taxon
Aves	<i>Lophoictinia isura</i>	Square-tailed kite	NT		
Reptilia	<i>Lygisaurus tanneri</i>	Endeavour River litter skink	NT		Starcke Station south to near Cooktown, in riverine forest, rainforest and monsoon forest (canopy gaps and ecotones), CYP endemic
Mammalia	<i>Macroderma gigas</i>	Ghost bat	V		
Pisces	<i>Melanotaenia eachamensis</i> *	Lake Eacham rainbowfish		E	Wet Tropics taxon
Aves	<i>Melithreptus gularis</i>	Black-chinned honeyeater (all subsp.)	NT		
Mammalia	<i>Melomys rubicola</i> *	Bramble Cay melomys	E	E	Restricted to Bramble Cay in Torres Strait
Reptilia	<i>Morelia viridis</i>	Green python (Australian population)	NT		Iron Range and Mcllwraith Range only in Australia but widespread in New Guinea where they are subject to hunting and collecting pressures.
Mammalia	<i>Murina florium</i>	Flute-nosed bat	V		
Insecta	<i>Nacaduba pactolus cela</i>	Bold blue-line	V		Torres Strait islands and tip of CYP
Reptilia	<i>Nactus galgajuga</i>		V		Restricted to Black Mountain, CYP endemic
Reptilia	<i>Natator depressus</i>	Flatback turtle	V	V	Crab and Deliverance island major nesting north-east Gulf of Carpentaria and west Torres Strait. Crab Island has the highest concentration of flatback nests in the world
Aves	<i>Neochmia phaeton evangelinae</i>	Crimson finch (white-bellied subsp.)	E	V	Disjunct populations on CYP. Good population at Lakefield along Normanby River)

Group	Scientific name	Common name	NCA ³	EPBC ⁴	Comments and recommendations
Aves	<i>Nettapus coromandelianus</i>	Cotton pygmy-goose	NT		
Aves	<i>Ninox rufa meesi</i>	Rufous owl (Cape York subsp.)	NT		
Aves	<i>Ninox rufa queenslandica</i>	Rufous owl (southern subsp.)	V		
Mammalia	<i>Notomys aquilo</i>	Northern hopping-mouse	V	V	Suitable habitat but no confirmed records
Aves	<i>Numenius madagascariensis</i>	Eastern curlew	NT		
Mammalia	<i>Nyctimene cephalotes</i> *	Torresian tube-nosed bat	NT		Torres Strait taxon
Amphibia	<i>Nyctimystes dayi</i> *	Australian lacelid	E	E	Wet Tropics taxon
Mammalia	<i>Orcaella heinsohni</i>	Australian snubfin dolphin	NT		
Reptilia	<i>Orraya occultus</i>	Leaf-tailed gecko	V		Very restricted range, boulder habitat above 500 metres in Mcllwraith Range, CYP endemic
Mammalia	<i>Petaurus australis</i> unnamed subsp. (NQ)	Yellow-bellied glider (northern subsp.)	V	V	Windsor Tableland
Mammalia	<i>Petrogale coenensis</i>	Cape York rock-wallaby	NT		Endemic - Several disjunct populations
Aves	<i>Phaethon rubricauda</i>	Red-tailed tropicbird	V		
Mammalia	<i>Phalanger mimicus</i>	Southern common cuscus	NT		
Pisces	<i>Pristis clavata</i>	Dwarf sawfish		V	Declining species found in larger western CYP watercourses
Pisces	<i>Pristis microdon</i>	Freshwater sawfish		V	Declining species found in larger western CYP watercourses
Pisces	<i>Pristis zijsron</i>	Green sawfish		V	Declining species found in larger western CYP watercourses
Aves	<i>Probosciger aterrimus</i>	Palm cockatoo	NT		
Aves	<i>Psephotus chrysopterygius</i>	Golden-shouldered parrot	E	E	
Mammalia	<i>Pseudochirops archeri</i>	Green ringtail possum	NT		Mt Windsor Tableland
Mammalia	<i>Pseudochirulus cinereus</i>	Daintree River ringtail possum	NT		Mt Windsor Tableland
Mammalia	<i>Pteropus conspicillatus</i>	Spectacled flying-fox		V	
Reptilia	<i>Ramphotyphlops broomi</i>		NT		
Mammalia	<i>Rhinolophus philippinensis/robertsi</i>	Large-eared horseshoe bat	E	E	Rhinolophus philippinensis taxonomy unresolved
Mammalia	<i>Rhinolophus philippinensis</i> /sp.-intermediate	Intermediate horseshoe bat	E	E	Rhinolophus philippinensis taxonomy unresolved
Aves	<i>Rostratula australis</i>	Australian painted snipe	V	V	

Group	Scientific name	Common name	NCA ³	EPBC ⁴	Comments and recommendations
Mammalia	<i>Saccolaimus mixtus</i>	Papuan sheathtail bat	NT		
Mammalia	<i>Saccolaimus saccolaimus</i>	Bare-rumped sheathtail bat	E	CE	
Mammalia	<i>Sminthopsis archeri</i>	Chestnut dunnart	NT		
Mammalia	<i>Sousa chinensis</i>	Indopacific humpback dolphin	NT		
Mammalia	<i>Spilocuscus maculatus</i>	Common spotted cuscus	NT		
Aves	<i>Sternula albifrons</i>	Little tern	E		
Aves	<i>Sternula nereis</i>	Fairy tern		V	
Aves	<i>Tadorna radjah</i>	Radjah shelduck	NT		
Mammalia	<i>Taphozous australis</i>	Coastal sheathtail bat	V		
Amphibia	<i>Taudactylus acutirostris</i> *	Sharp snouted dayfrog	E	EX	Wet Tropics taxon
Amphibia	<i>Taudactylus rheophilus</i> *	Northern tinkerfrog	E	E	Wet Tropics taxon
Aves	<i>Turnix olivii</i>	Buff-breasted button-quail	V	E	
Aves	<i>Tyto novaehollandiae kimberli</i>	Masked owl (northern subsp.)	V	V	
Reptilia	<i>Varanus prasinus</i> *	Emerald monitor	NT		Torres Strait taxon

3.2.2 Core habitat for priority fauna taxa (criterion H)

'Priority' species are non-EVNT species that are considered to be of particular conservation significance within the CYP study area. This significance may relate to taxa of management concern, taxa of scientific interest, endemic taxa or locally significant populations, taxa with highly specialised habitat requirements, genetically important taxa, environmental indicator taxa, or taxa that have economic or cultural importance. From a substantial list of species the panel considered 119 taxa should be listed as priority taxa (Table 8). The panel assigned significance (State or Regional) to each species.

For inclusion in the BPA the records were first subject to the same filtering rules for age of record and precision as applied to records for criterion A (EPA 2002). Subsequently, for species of State significance, high precision records (precision \leq 500 metres) were buffered by twice the precision (as for criterion A) with a minimum of 300 metres and assigned Very High in criterion H. For species of Regional significance, high precision records (precision \leq 500 metres) were buffered by twice their precision (as for criterion A) with a minimum of 300 metres and assigned High in criterion H. For low precision state species and low precision regional species the point records were buffered by 1000 metres and assigned Medium in criterion H. These decision rules are summarised in Table 9.

Table 8. Comments and recommendations of fauna panel relating to priority fauna taxa (criterion H).

Taxa marked with an asterisk (*) were recorded in areas within the CYP Biodiversity Planning Assessment area but outside the Cape York Peninsula Heritage Area.

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Aves	<i>Accipiter fasciatus dogura*</i>	Brown goshawk (Papuan)	Near Threatened—very small population in Australian territory in Torres Strait (Garnett et al. 2011)	Small population	Regional
Insecta	<i>Acrodipsas hirtipes</i>	Black ant-blue	Restricted to CYP	Endemic	State
Insecta	<i>Acrodipsas melania</i>	Grey ant-blue	Restricted to CYP	Endemic	State
Aves	<i>Ailuroedus melanotis joanae</i>	Spotted catbird	Disjunct subspecies confined to CYP, elsewhere in northern Australia and New Guinea	Disjunct	State
Pisces	<i>Anoxypristis cuspidata</i>	Narrow sawfish	Declining due to mortality associated with gill-netting	Declining population	Regional
Aves	<i>Aplornis cantoroides*</i>	Singing starling	Near Threatened—very small population in Australian territory in Torres Strait (Garnett et al. 2011)	Small population	Regional
Aves	<i>Arenaria interpres</i>	Ruddy turnstone	Near Threatened—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Arses lorealis</i>	Frilled-necked monarch	Restricted to CYP	Endemic	State
Aves	<i>Artamus cinereus</i>	Black-faced woodswallow	Regional decline in population	Declining population	Regional
Amphibia	<i>Austrochaperina gracilipes</i>	Shrill whistlefrog	Within Australia confined to CYP, also New Guinea	Disjunct	Regional
Pisces	<i>Brachirus selheimi</i>	Freshwater sole	Disjunct population, elsewhere in northern Australia	Disjunct	Regional
Aves	<i>Cacomantis castaneiventris</i>	Chestnut-breasted cuckoo	Migrant to New Guinea; Australian population restricted to CYP	Migrant	Regional
Aves	<i>Calidris canutus</i>	Red knot	Vulnerable—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Calidris ferruginea</i>	Curlew sandpiper	Vulnerable—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Calidris tenuirostris</i>	Great knot	Vulnerable—declining migratory wader (Garnett et al. 2011)	Declining population	State
Reptilia	<i>Carlia dogare</i>		Restricted to McIvor to Bathurst and Lizard Islands, heath/low woodlands	Endemic	State
Reptilia	<i>Carlia quinquecarinata*</i>		Disjunct population, elsewhere in New Guinea	Disjunct	Regional

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Reptilia	<i>Carlia rimula</i>		Between Pascoe and Coen, riparian vine thicket	Endemic	State
Reptilia	<i>Carlia sexdentata</i>		CYP and north-east Arnhem Land, Northern Territory	Disjunct	Regional
Aves	<i>Charadrius leschenaultii</i>	Greater sand plover	Vulnerable—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Charadrius mongolus</i>	Lesser sand plover	Endangered—declining migratory wader (Garnett et al. 2011)	Declining population	State
Crustacea	<i>Cherax cartalacoolah</i>		Restricted to Cape Flattery dune lakes/creeks	Endemic	State
Crustacea	<i>Cherax quadricarinatus</i>	Redclaw crayfish	Abundance declining in CYP due to fishing pressure	Declining population	Regional
Aves	<i>Cisticola juncidis</i>	Zitting cisticola	Disjunct population, elsewhere in northern Australia	Disjunct	Regional
Aves	<i>Climacteris picumnus</i>	Brown treecreeper	Regional decline in population	Declining population	Regional
Amphibia	<i>Cophixalus kulakula</i>	Kutini boulder-frog	Restricted to small area around Mt Tozer	Endemic	State
Amphibia	<i>Cophixalus pakayakulangun</i>	Golden-capped boulder-frog	Restricted to small area north of Pascoe River	Endemic	State
Aves	<i>Cracticus mentalis</i>	Black-backed butcherbird	Within Australia confined to CYP, also New Guinea	Disjunct	Regional
Reptilia	<i>Ctenotus inornatus</i>		Disjunct population on CYP, widespread elsewhere in northern Australia	Disjunct	Regional
Reptilia	<i>Ctenotus nullum</i>		Sandstone near Laura and Cooktown and granite on Black Mountain	Endemic	State
Reptilia	<i>Ctenotus quinkan</i>		Sandstone escarpments in Cooktown-Laura area	Endemic	State
Amphibia	<i>Cyclorana cryptotis</i>	Earless frog	Widely separated populations in northern Australia, recorded near Cape Melville	Disjunct	Regional
Reptilia	<i>Cyrtodactylus adorus</i>		Restricted to Wattle Hills, Pascoe River area	Endemic	State
Reptilia	<i>Cyrtodactylus hoskini</i>		Restricted to Tozers Gap Pascoe River, Iron Range	Endemic	State
Reptilia	<i>Cyrtodactylus pronarus</i>		Restricted to Upper Peach Creek, Mcllwraith Range, boulders in rainforest	Endemic	State
Mammalia	<i>Dactylopsila trivirgata</i>	Striped possum	Disjunct population, elsewhere in northern Australia and New Guinea	Disjunct	Regional
Pisces	<i>Denariusa australis</i>	Pennyfish	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Aves	<i>Dendrocygna guttata</i>	Spotted whistling-duck	Within Australia confined to CYP, also New Guinea	Disjunct	Regional
Aves	<i>Drymodes superciliaris</i>	Northern scrub-robin	Within Australia confined to CYP, also New Guinea	Disjunct	Regional
Mammalia	<i>Echymipera rufescens australis</i>	Long-nosed echymipera	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State
Aves	<i>Eclectus roratus polychloros*</i>	Eclectus parrot (Papuan)	Disjunct subspecies, elsewhere in New Guinea	Disjunct	Regional
Insecta	<i>Elodina claudia</i>	Cape pearl-white	Restricted to CYP	Endemic	State
Reptilia	<i>Emoia longicauda</i>		Mcllwraith Range north to tip, rainforest; also New Guinea /Solomons	Disjunct	Regional
Reptilia	<i>Eugongylus rufescens</i>		Tip of CYP, monsoon forest; also New Guinea	Disjunct	Regional
Reptilia	<i>Gehyra baliola*</i>		Disjunct population, elsewhere in New Guinea	Disjunct	Regional
Reptilia	<i>Furina tristis</i>	Brown-headed snake	Big Tableland north to tip; also New Guinea	Disjunct	Regional
Aves	<i>Geoffroyus geoffroyi maclennani</i>	Red-cheeked parrot	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State
Pisces	<i>Glossogobius concavifrons</i>	Concave flathead goby	Disjunct population in Australia confined to CYP; also New Guinea	Disjunct	Regional
Pisces	<i>Glossogobius</i> sp. 3 – dwarf	Dwarf goby	Disjunct population in Australia confined to CYP; also New Guinea	Disjunct	Regional
Aves	<i>Glycichaera fallax claudi</i>	Green-backed honeyeater	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State
Pisces	<i>Guyu wujalwujalensis</i>	Tropical nightfish	Restricted to Bloomfield River, CYP endemic	Endemic	State
Mollusca	Helicarionidae CY 6 = <i>Palmervillea elevata</i>	Red dome glass-snail	Ranked High by CYP NRM; vine thicket on limestone outcrop	Endemic	State
Pisces	<i>Hephaestus carbo</i>	Coal grunter	Disjunct population, elsewhere in northern Australia	Disjunct	Regional
Mollusca	Hydrocenidae CY 4 = <i>Georissa palmerensis</i>	Palmer River microturban	Ranked High by CYP NRM; vine thicket on limestone outcrop	Endemic	State
Reptilia	<i>Hydrophis donaldi</i>	Rough scaled sea snake	Shallow estuarine shale, mud and sea grass bottom mouth of Mission River and Hey Creek where they connect to Albatross Bay	Endemic	State

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Pisces	<i>Iriatherina wernerii</i>	Threadfin rainbowfish	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Mammalia	<i>Isodon obesulus peninsulae</i>	Southern brown bandicoot	Disjunct population; elsewhere in northern Australia	Disjunct	Regional
Insecta	<i>Jalmenus eichhorni</i>	Northern hairstreak	Restricted to CYP	Endemic	State
Pisces	<i>Kuhlia marginata</i>	Spotted flagtail	Restricted and specialised, possibly sensitive to habitat disturbance	Specialised	Regional
Pisces	<i>Kuhlia rupestris</i>	Jungle perch	Restricted and specialised, possibly sensitive to habitat disturbance	Specialised	Regional
Reptilia	<i>Liburnascincus coensis</i>		Restricted to ranges around Coen between Pascoe and Coen Rivers, on boulder slopes, rock faces and creek bed	Endemic	State
Aves	<i>Limnodromus semipalmatus</i>	Asian dowitcher	Near Threatened—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Limosa lapponica</i>	Bar-tailed godwit	Vulnerable—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Limosa limosa</i>	Black-tailed godwit	Near Threatened—declining migratory wader (Garnett et al. 2011)	Declining population	State
Amphibia	<i>Litoria eucnemis</i>	Growling green eyed treefrog	Within Australia confined to CYP, also New Guinea	Disjunct	Regional
Reptilia	<i>Lygisaurus parrhasius</i>		Restricted to Glennie Tableland sandstone escarpment in rock rubble, central CYP	Endemic	State
Reptilia	<i>Lygisaurus sesbrauna</i>		Tip Cape York to Silver Plains area including Flinders Island group, monsoon forest, moist areas in woodlands, heaths	Endemic	State
Crustacea	<i>Macrobrachium rosenbergii</i>	Giant river prawn	Abundance declining in CYP due to fishing pressure	Declining population	Regional
Pisces	<i>Melanotaenia maccullochi</i>	McCulloch's rainbowfish	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Pisces	<i>Melanotaenia nigrans</i>	Blackbanded rainbowfish	Disjunct population, elsewhere in northern Australia	Disjunct	Regional
Pisces	<i>Melanotaenia trifasciata</i>	Banded rainbowfish	Disjunct population, elsewhere in northern Australia; several distinct colour forms in CYP	Disjunct	Regional

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Aves	<i>Meliphaga lewinii amphochlora</i>	Lewin's honeyeater	Disjunct subspecies confined to CYP, elsewhere in eastern Australia	Disjunct	State
Mammalia	<i>Melomys capensis</i>	Cape York melomys	Restricted to CYP and southern Torres Strait Islands	Endemic	State
Mammalia	<i>Mesembriomys gouldii</i>	Black-footed tree-rat	Rare. Declining in northern Australia	Declining population	State
Aves	<i>Microeca griseocephala</i>	Yellow-legged flycatcher	Disjunct population; elsewhere in New Guinea	Disjunct	Regional
Aves	<i>Monarcha frater</i>	Black-winged monarch	Migrant to New Guinea; Australian population restricted to CYP	Migrant	Regional
Reptilia	<i>Morelia amethystina</i> *	Amethystine python (New Guinea sp.)	Disjunct population; elsewhere in New Guinea	Disjunct	Regional
Reptilia	<i>Nactus eboracensis</i>		Restricted to CYP and southern Torres Strait Islands	Endemic	State
Reptilia	<i>Nactus pelagicus</i> / New Guinea sp.*		Disjunct population; elsewhere in New Guinea	Disjunct	Regional
Aves	<i>Neochmia ruficauda clarescens</i>	Star finch	Near Threatened—disjunct subspecies largely confined to CYP (Garnett et al. 2011)	Disjunct	State
Pisces	<i>Neosilurus ater</i>	Black catfish	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Pisces	<i>Neosilurus brevidorsalis</i>	Shortfin catfish	Disjunct population in Australia confined to CYP; also New Guinea	Disjunct	Regional
Aves	<i>Ninox connivens assimilis</i> *	Barking owl (Papuan)	Near Threatened—very small population in Australian territory in Torres Strait (Garnett et al. 2011)	Small population	Regional
Aves	<i>Numenius phaeopus</i>	Whimbrel	Near Threatened—declining migratory wader (Garnett et al. 2011)	Declining population	State
Reptilia	<i>Oedura jowalbinna</i>	Quinkan velvet gecko	Very restricted range Laura Sandstones	Endemic	State
Pisces	<i>Ophistemon bengalense</i>	One-gilled eel	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Insecta	<i>Orsotriaena medus moira</i> *	Smooth-eyed bush-brown	Disjunct subspecies confined to Torres Strait	Disjunct	State
Pisces	<i>Oxyeleotris fimbriata</i>	Fimbriate gudgeon	Disjunct population in Australia confined to CYP; also New Guinea	Disjunct	Regional

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Pisces	<i>Oxyeleotris nullipora</i>	Poreless gudgeon	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Mammalia	<i>Perameles nasuta</i>	Long-nosed bandicoot	Disjunct population; elsewhere in eastern Australia	Disjunct	Regional
Mammalia	<i>Petrogale godmani</i>	Godman's rock-wallaby	Restricted to CYP. Several disjunct populations	Endemic	State
Mammalia	<i>Phascogale tapoatafa</i>	Brush-tailed phascogale	Disjunct population; elsewhere in Australia	Disjunct	Regional
Aves	<i>Phonygammus keraudrenii gouldii</i>	Trumpet manucode	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State
Pisces	<i>Pingalla lorentzi</i>	Lorentz grunter	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Mammalia	<i>Pipistrellus adamsi</i>	Forest pipistrelle	Disjunct population; elsewhere in northern Australia	Disjunct	Regional
Aves	<i>Pitta erythrogaster</i>	Red-bellied pitta	Migrant to New Guinea; Australian population restricted to CYP	Migrant	Regional
Aves	<i>Pluvialis squatarola</i>	Grey plover	Near Threatened—declining migratory wader (Garnett et al. 2011)	Declining population	State
Aves	<i>Podargus ocellatus marmoratus</i>	Marbled frogmouth	Disjunct subspecies confined to CYP; also eastern Australia	Disjunct	State
Mammalia	<i>Pogonomys sp./mollipilosus</i>	Tree mouse/prehensile - tailed rat	Disjunct population; elsewhere in northern Australia	Disjunct	Regional
Pisces	<i>Porochilus obbesi</i>	Obbe's catfish	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Pisces	<i>Porochilus rendahli</i>	Rendahl's catfish	Disjunct population, elsewhere in northern Australia	Disjunct	Regional
Pisces	<i>Pristis pectinata</i>	Wide sawfish	Declining due to mortality associated with gill-netting	Declining population	Regional
Reptilia	<i>Pseudechis papuanus*</i>	Papuan black snake	Disjunct population, elsewhere in New Guinea	Disjunct	Regional
Pisces	<i>Pseudomugil gertrudae</i>	Spotted blue eye	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Pisces	<i>Pseudomugil tenellus</i>	Delicate blue eye	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Reptilia	<i>Pseudothecadactylus australis</i>	Cape York tree gecko	Islands Torres Strait to southern Mcllwraith Range, woodlands monsoon forest mangroves shelters in hollows. Anecdotal evidence of decline	Endemic	State

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Mammalia	<i>Pteropus macrotis</i> *	Large-eared flying-fox	Disjunct population, elsewhere in New Guinea	Disjunct	Regional
Aves	<i>Ptilonorhynchus cerviniventris</i>	Fawn-breasted bowerbird	Disjunct population, also New Guinea; regional decline (Garnett et al. 2011)	Disjunct/ Decline	Regional
Aves	<i>Ptiloris magnificus</i>	Magnificent riflebird	Disjunct population in Australia confined to CYP; also New Guinea	Disjunct	Regional
Aves	<i>Rallina tricolor</i>	Red-necked crane	Disjunct population; elsewhere in northern Australia and New Guinea	Disjunct	Regional
Reptilia	<i>Ramphotyphlops chamodracaena</i>		Tropical woodlands Weipa to Inkerman station east to Lockhart River	Endemic	State
Reptilia	<i>Ramphotyphlops leucoproctus</i>		North-north-east part of CYP south to Mt Tozer and islands Torres Strait, also New Guinea	Disjunct	Regional
Reptilia	<i>Ramphotyphlops robertsi</i>		Eucalypt forest near Shiptons Flat	Endemic	State
Mammalia	<i>Rattus leucopus leucopus</i>	Cape York rat	Disjunct subspecies confined to CYP; also elsewhere in northern Australia and New Guinea	Disjunct	State
Pisces	<i>Scleropages jardinii</i>	Northern saratoga	Disjunct population; elsewhere in northern Australia and New Guinea; sparse and targeted for sport fishing	Disjunct	Regional
Aves	<i>Sericornis beccarii minmus</i> and <i>S. b. dubius</i>	Tropical scrubwren	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State
Pisces	<i>Sicyopterus lagocephalus</i>	Blue stream goby	Disjunct population—only found in Bloomfield River, elsewhere in Indo-Pacific	Disjunct	Regional
Reptilia	<i>Stegonotus parvus</i> *		Disjunct population, elsewhere in New Guinea	Disjunct	Regional
Aves	<i>Syma torotoro</i>	Yellow-billed kingfisher	Migrant to New Guinea; Australian population restricted to CYP	Migrant	Regional
Pisces	<i>Thryssa scratchleyi</i>	Freshwater thryssa	Very rare and localised	Very rare	Regional
Mammalia	<i>Thylogale stigmatica coxenii</i>	Red-legged pademelon	Disjunct subspecies confined to CYP; also elsewhere in eastern Australian and New Guinea. Several disjunct populations	Disjunct	State
Aves	<i>Tregellasia leucops albigularis</i>	White-faced robin	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State

Group	Scientific name	Common name	Rationale and comments	Criteria values	Significance
Aves	<i>Trichodere cockerelli</i>	White-streaked honeyeater	Restricted to CYP	Endemic	State
Aves	<i>Tringa brevipes</i>	Grey-tailed tattler	Near Threatened—declining migratory wader (Garnett et al. 2011)	Declining population	State
Insecta	<i>Trisyntopa scatophagea</i>	Golden-shouldered parrot moth	Ranked High by CYP NRM; dependent on nesting holes of another threatened species for breeding.	Endemic	State
Reptilia	<i>Varanus keithhornei</i>	Canopy goanna	Restricted to Iron and Mcllwraith ranges, rainforest	Endemic	State
Aves	<i>Xanthotis flaviventer filigera</i>	Tawny-breasted honeyeater	Disjunct subspecies confined to CYP; also New Guinea	Disjunct	State
Pisces	<i>Zenarchopterus novaeguineae</i>	Fly River garfish	Disjunct population in Australia confined to CYP; also New Guinea	Disjunct	Regional
Aves	<i>Zosterops citrinella</i>	Pale white-eye	Disjunct population; elsewhere in south-west Pacific	Disjunct	Regional

Table 9. Priority fauna taxa special area decisions.

Decision Number	Description	Significance	Identified values	Criteria values
cyp_fa_11	High precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains core habitat for priority taxa with high precision records	Criteria H: Very High
cyp_fa_12	High precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains habitat for priority taxa with high precision records	Criteria H: High
cyp_fa_13	Low precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains core habitat for priority taxa with low precision records	Criteria H: Medium
cyp_fa_14	Low precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains habitat for priority taxa with low precision records	Criteria H: Medium
eiu_fa_28	High precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains Core Habitat for Priority taxa with high precision records.	Criteria H: Very High
eiu_fa_29	Low precision records for priority taxa of State significance are contained within the remnant.	State	Remnant contains Core Habitat for Priority taxa with low precision records.	Criteria H: Medium

eiu_fa_30	High precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains Core Habitat for Priority taxa with high precision records.	Criteria H: High
eiu_fa_31	Low precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Remnant contains Core Habitat for Priority taxa with low precision records.	Criteria H: Medium

3.3 Special biodiversity values (criterion I)

The panel reviewed the criteria I decisions of the flora and fauna panels and recommended that certain decisions be combined into one landscape decision, and that certain already identified areas be consolidated. The consolidation of already identified areas was achieved by including enclosed or other closely associated areas so as to increase the diversity of values present, increase habitat connectivity, or improve the long-term viability of the area and its values. All panel comments and recommendations relating to areas of special biodiversity value are outlined in Tables 12,13 and 14

The ratings used for diversity of species of conservation significance (EVNT and priority species) are:

- very high (>25 per cent of CYP study area species)
- high (10–25 per cent of CYP study area species)
- medium (>10 per cent of CYP study area species)
- low (no data).

Only EVNT and priority species are specified for each decision.

3.4 Bioregional corridors (criterion J)

Expert panel members reviewed existing corridor networks identified in the CYP study area and made recommendations on new corridors. Corridors forming part of the statewide network were assigned State significance, while other corridors providing connectivity at a subregional scale were assigned Regional significance.

The panel acknowledged corridors are less meaningful in relatively intact landscapes such as the CYP study area than in fragmented landscapes; however, they also agreed it was important to identify corridors to align with statewide planning processes and to connect through to corridors identified in neighbouring bioregions. The corridors selected reflect:

- major watershed/catchment boundaries
- intact river systems
- major altitudinal/geological/climatic gradients
- linkages between bioregions.

3.4.1 Terrestrial corridors

Using the functions and principles described in section 2.3.2 of this report, the panel reviewed the existing network of bioregional corridors in the CYP study area, provided advice on extending the network, and discussed whether there was a role for regional corridors in the CYP study area. These discussions resulted in the modification of a number of east-west linkage corridors presented for discussion, the deletion of others and the addition of new corridors. The final corridor network is listed in Table 10 and displayed in Figure 3.

Table 10. Terrestrial bioregional corridors identified by the CYP study area expert panel.

Corridor no.	Corridor description	Significance (width)
01	Statewide Conservation Corridor – Gulf Coast	State (5 kilometres)
02	Statewide Conservation Corridor – Great Artesian Basin Rim	State (5 kilometres)
03	Great Divide	State (5 kilometres)
04	Mcllwraith to Gulf (not yet implemented)	State (5 kilometres)
05	Lakefield to Rutland Plains (not yet implemented)	State (5 kilometres)

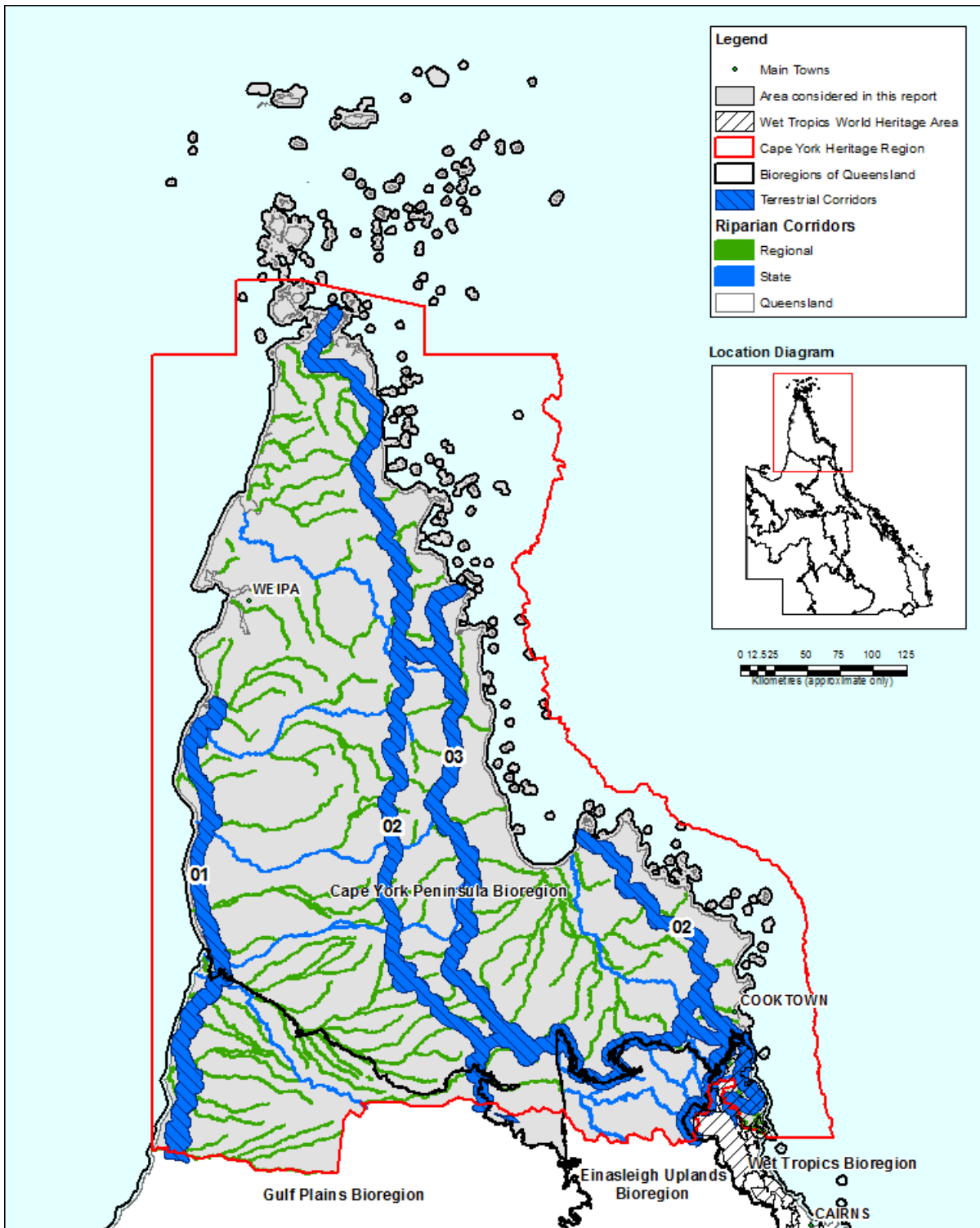


Figure 3. Cape York bioregional corridors.

3.4.2 Riparian corridors

The expert panel identified riparian corridors for the CYP study area. In implementing this decision from the expert panel, the corridors were limited to the larger watercourses in the CYP study area (Table 11).

Table 11. Larger watercourses in the CYP study area relevant for riparian corridor decision cyp_I_34.

Alice River	Healy Creek	Normanby River
Annan River	Hesket Creek	North Alice Creek
Annie River	Holroyd River	North Kennedy River
Archer River	Hoodoo Creek	North Kokialah Creek
Back Creek	Horse Creek	North Palmer River
Bally Creek	Jack River	Oaky Creek
Beattie Creek	Jackey Jackey Creek	Olive River
Bertie Creek	Jackson River	One Mile Creek
Big Bloodwood Creek	Jam Tin Creek	Packsaddle Creek
Big Coleman River	Jardine River	Palm Creek
Birthday Creek	Jeannie River	Palmer River
Bizant River	Jerry Dodds Creek	Paradise Creek
Blackgin Creek	Kendall River	Pascoe River
Bloomfield (Banner Yearie) River	Kendle River	Peach Creek
Bosworth Creek	Kennedy River	Piccaninny Creek
Bottle Creek	Kilpatrick Creek	Pine Creek
Bourne Creek	King River	Pine River
Brown Creek	Kinlock Creek	Pretender Creek
Cattle Creek	Kirbys Camp Creek	Prospect Creek
Clark Creek	Kirke River	Reddisons Creek
Cleanskin Creek	Kokialah Creek	Rocky Creek
Cockatoo Creek	Kooka Creek	Rocky King Creek
Coconut Creek	Kurracoo Creek	Running Creek
Coen River	Lagoon Creek	Saltwater Creek
Coleman River	Lagoon Creek	Sandalwood Creek
Cox Creek	Laura River	Sandy Creek

Crosbie Creek	Little Kennedy River	Schramm Creek
Crystal Creek	Little Laura River	Scrubby Creek
Daintree River	Lockhart River	Scrutton River
Deighton River	Love River	Seary Creek
Diamond Creek	Lukin River	Shepherd Creek
Doughboy River	Maddigans Creek	Shotover Creek
Ducie River	Magnificent Creek	Skardon River
Dulhunty River	Malaman Creek	South Mitchell River
East Normanby River	Marrett River	St George River
Eden Creek	Mchenry River	Staaten River
Edward River	Mcivor River	Station Creek
Eight Mile Creek	Mentana Creek	Stewart River
Eliot Creek	Merkunga Creek	Surprise Creek
Embley River	Mimosa Creek	Tea-Tree Creek
Endeavour River	Mission River	Ten Mile Creek
Ethel Creek	Mistake Creek	The Big Spring
Falloch Creek	Mitchell River	The Overflow
Far Creek	Moonlight Creek	Tompaten Creek
Fifteen Mile Creek	Morehead River	Topsy Creek
Geddes Creek	Mottle Creek	Ward River
Geikie Creek	Mountain View Creek	Watson River
Glennie Creek	Myall Creek	Wenlock River
Goose Creek	Namaleta Creek	West Archer River
Granite Normanby River	Nassau River	West Normanby River
Hann River	Nesbit River	Williamson Creek
Harmer Creek	Norman Creek	Yanko Creek

3.5 Climate change

The expert panel did not specifically discuss climate change at the panel, but a regional summary was undertaken of the Cape York region by EHP in 2009. Full details can be viewed at www.ehp.qld.gov.au/climatechange/pdf/regionsummary-capeyork.pdf

The overall summary of projections essentially consists of decreasing rainfall with increasing temperature and evaporation. Compounding this will be more extreme climate events with a projected sea-level rise. The temperature increase is likely to exceed, by a significant margin, the range of temperatures experienced over the past 50 years if further inaction on climate change persists.

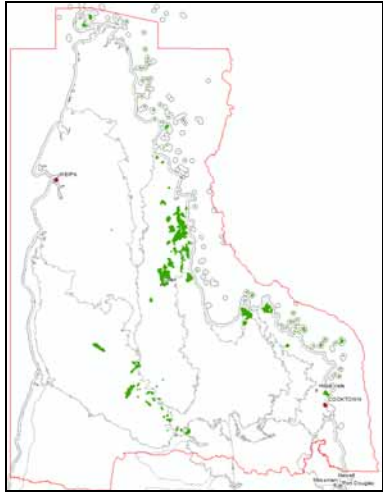
Given that a large proportion of the population in Cape York is in close proximity to the coast, the resultant consequences from extreme storm events such as cyclones will be increased. The negative effects on industry, infrastructure and roads will be compounded by increases of flash flooding and wind damage. These same communities and locations will also be subject to sea-level rise and an increase in inundation incidents. In addition to coastal erosion this may result in increased risks of short-term communicable disease transmission due to disruption of water supplies. Other factors affecting diseases such as malaria will be changes in temperature, humidity and rainfall. Storm surges, with the resultant erosion, will be a threat to existing infrastructure including airstrips which are vital to emergency services.

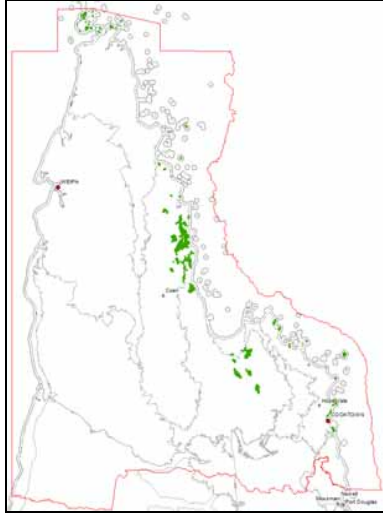
3.5.1 Special Area Decisions


In relation to the following flora, fauna and landscape special feature tables:

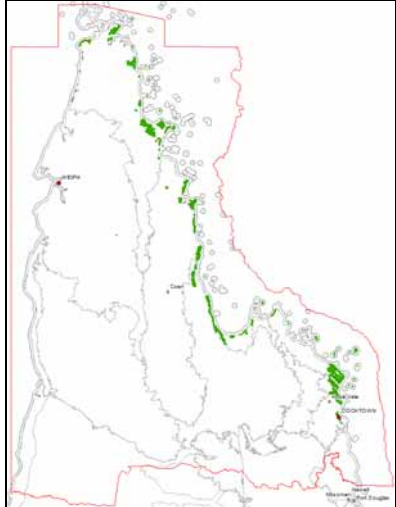
- A to J refers to sub criteria under criterion I: Special Biodiversity Values:
 - Ia—Centres of endemism—areas where concentrations of taxa are endemic to a bioregion or subregion are found.
 - Ib—Wildlife refugia (Morton et al. 1995), for example, islands, mound springs, caves, wetlands, gorges, mountain ranges and topographic isolates, ecological refuges, refuges from exotic animals, and refuges from clearing.
 - Ic—Areas with concentrations of disjunct populations.
 - Id—Areas with concentrations of taxa at the limits of their geographic ranges,
 - Ie—Areas with high species richness.
 - If—Areas with concentrations of relictual populations (ancient and primitive taxa).
 - Ig—Areas containing REs with distinct variation in species composition associated with geomorphology and other environmental variables.
 - Ih—An artificial waterbody or managed/manipulated wetland considered by the panel/s to be of ecological significance.
 - Ii—Areas with a high density of hollow-bearing trees that provide habitat for animals.
 - Ij—Breeding or roosting sites used by a significant number of individuals.
- Significance is the overall level of significance:
 - State is equivalent to Very High and the special feature is significant at the bioregional scale.
 - Regional is equivalent to High and the special feature is significant at the subregional scale.

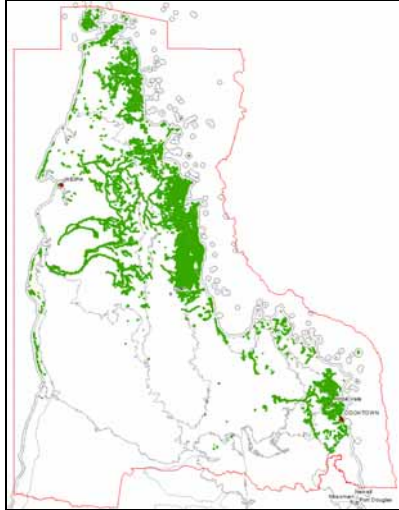
Table 12. Flora Special Area Decisions.

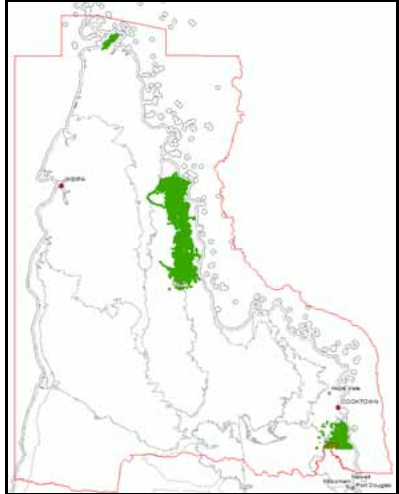
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_01	Bioregionally rare, naturally restricted REs 	All REs less than 1000ha: 3.1.7, 3.10.14, 3.10.20, 3.11.14, 3.12.1, 3.12.30, 3.12.32, 3.12.37, 3.12.5, 3.12.6, 3.12.7, 3.2.19, 3.2.28, 3.2.29, 3.2.30, 3.2.31, 3.2.32, 3.2.4, 3.3.15, 3.3.3, 3.3.45, 3.3.54, 3.3.57, 3.3.68, 3.3.69, 3.3.7, 3.3.70, 3.5.32, 3.7.2, 3.8.1, 3.8.4, 3.8.5.							V H				State

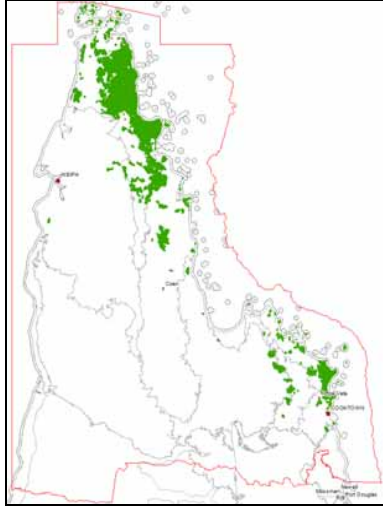
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_02	Grassland Res less than 10,000ha 	<p>REs including 3.3.57, 3.3.62, 3.5.30, 3.8.4, 3.9.8, 3.12.30, 3.12.31, 3.12.32, 3.12.29 and 3.11.19a.</p> <p>Under threat from thickening. Many less than 1000ha.</p> <p>Habitat for threatened bird species, general concern about the loss of grasslands on CYP (Crowley and Garnett 1998).</p>		H/ V H					V H				State

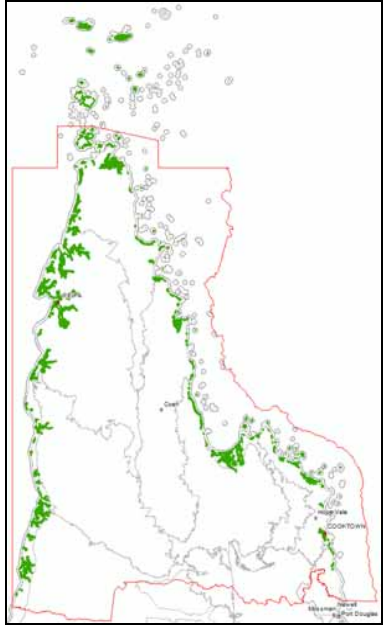
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_03	Tetradonta forests 	<p>In and around Weipa. Tallest and best example of type remaining. Unusual for savannah forests.</p> <p>These represent the maximum structural development of <i>Eucalyptus tetradonta</i> (trees 32–34 m tall) throughout its entire range in tropical Australia.</p>							V H		V H		State

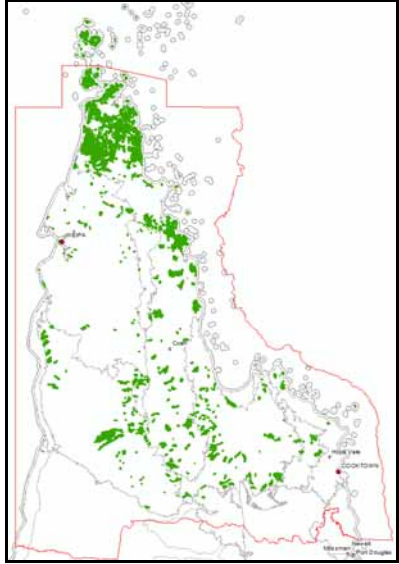
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_04	Littoral vine forest 	<p>The Littoral Rainforest and Coastal Vine Thickets of Eastern Australia is a critically endangered ecological community listed under the Australian Government's EPBC Act. The ecological community provides habitat for over 70 threatened plants and animals and it provides an important buffer to coastal erosion and wind damage. (www.environment.gov.au)</p> <p>Includes regional ecosystems 3.2.1a, 3.2.1b, 3.2.12, 3.2.13, 3.2.28, 3.2.29, 3.2.31, 3.2.11, 3.12.20, 3.2.2.</p>	V H	V H	V H	V H	V H	H			H	V H	State

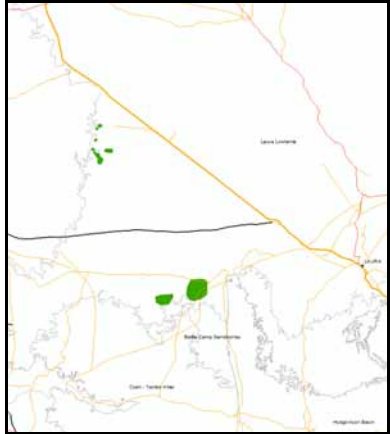
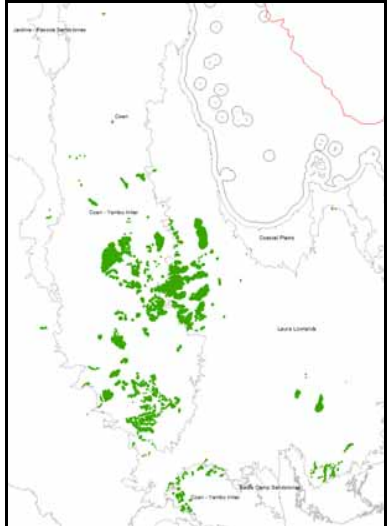
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_05	Significant rainforests 	Nationally Rare Vegetation Community (Abrahams et al. 1995).	H	V H			V H						State


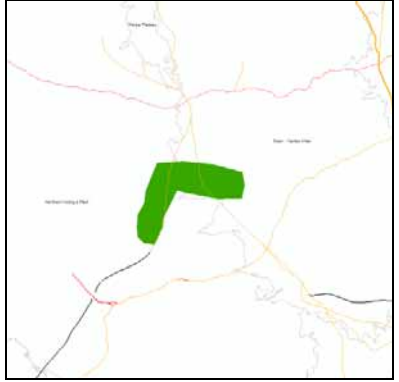
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_06	Orchid habitat 	Cape York Peninsula has a very high diversity of orchids (both species 168 and genera 62) rainforests and melaleuca woodlands may be regarded as key habitats (Abrahams et al. 1995).					H						Regional


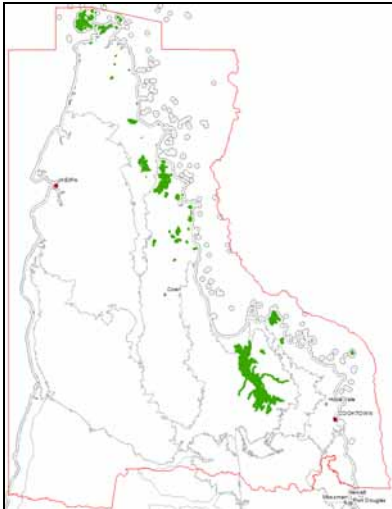
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_07	Heath 	Heath communities are nationally restricted and uncommon. CYP contains the largest areas of heathland in Australia, and these examples are largely undisturbed (Abrahams et al. 1995).	V H	V H	V H	V H	V H	V H	H			H	State

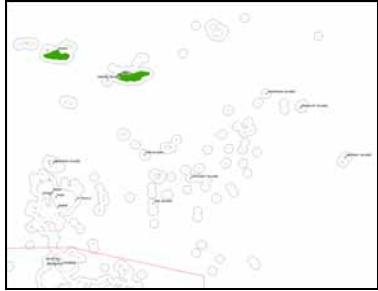
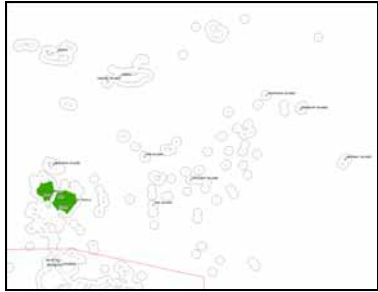
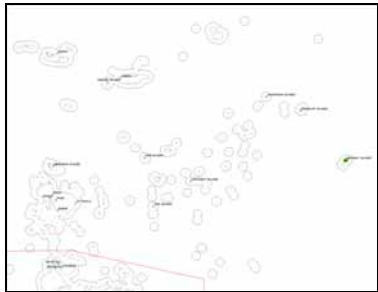
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_08	Mangroves 	<p>Nationally significant rare, uncommon and restricted vegetation communities. High species richness (>30 spp.) that play significant ecological role in supporting local and off-shore fisheries (Abrahams et al. 1995).</p> <p>Also implemented as ACA decisions: ar_r_ec_03; du_r_ec_03; em_r_ec_02; en_r_ec_03; ho_r_ec_02; ic_r_ec_01; ja_r_ec_03; je_r_ec_02; jj_r_ec_03; lo_r_ec_03; mw_r_ec_02; nb_r_ec_02; op_r_ec_04; sw_r_ec_02; wt_r_ec_02.</p>		V H			V H						State

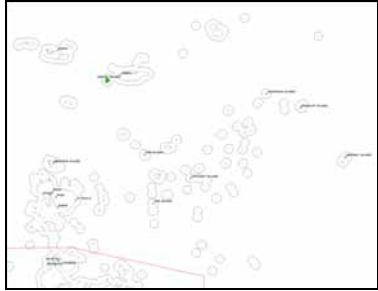

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_09	Endemic Broad Vegetation Groups 	Cape York Peninsula bioregion contains 3 BVGs (1:1 mill) which are endemic to the bioregion, namely: <ul style="list-style-type: none"> •2b Semi-deciduous mesophyll to notophyll vine forest usually on granitic ranges. (land zone 12) (CYP). •2c Semi-deciduous notophyll vine forest to Simple evergreen notophyll vine forest on Cape York Peninsula bioregion. (land zones 5, 7, 10, 12) (CYP). •28c Low open-forest dominated by <i>Asteromyrtus brassii</i>, <i>Neofabricia myrtifolia</i>, <i>Allocasuarina littoralis</i>, <i>Melaleuca viridiflora</i> on sandplains and plateaus; or <i>Acacia brassii</i> low open-forest or <i>Melaleuca viridiflora</i> low woodlands on ranges; or <i>Thryptomene oligandra</i> ± <i>Neofabricia mjoebergii</i> ± <i>Melaleuca viridiflora</i> woodlands on drainage depressions. (land zones 2, 5, 10, 11, 12) (CYP). 	V H		V H	V H	V H	V H	V H		V H	V H	State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_10	Jedda habitat 	Core habitat for <i>Jedda multicaulis</i> —endemic genus.	V H										State
cyp_fl_11	Musgrave flora habitat 	Core habitat for <i>Teucrium ajugaceum</i> —was endangered, now least concerned but endemic.	V H										State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_12	Coen Inlier flora area 	Coen Inlier information: based on endemic spp.: <i>Hibiscus saponarius</i> , <i>Indigofera wannanii</i> , <i>Tephrosia</i> sp. (BSW 5610); northern most distribution of <i>Acacia shirleyi</i> , <i>Eucalyptus similis</i> , <i>Grevillea striata</i> , <i>Stemona angusta</i> , <i>Vachellia clarksoniana</i> ; southmost distribution of <i>Erythroxylum</i> sp. (Cholmondely Ck), <i>Acomis bella</i> , <i>Anisomeles</i> sp. (Agnew), <i>Brachychiton garrawayae</i> .	V H	H	V H	H		H					State
cyp_fl_13	Crosbie tropical grassy woodland 	High quality grassland and grassy woodlands at Crosbie/Dixie. Possibly the best preserved example of grassy woodland vegetation type on CYP.		H									Regional

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_14	Sach Waterhole 	Sand-dune lake only known location in CYP that supports floating mats of vegetation dominated by <i>Lepironia auriculata</i> but also includes pitcher plants (<i>Nepenthes mirabilis</i>) and mangrove fern (<i>Acrostichum speciosum</i>) (Herbert et al. 1995). Also implemented as ACA decision jj_nr_fl_01.							V H				State
cyp_fl_15	Res dominated by endemic flora 	There are four species (priority/threatened) that can be mapped using Res as they are a dominant overstorey species. <i>Eucalyptus acroleuca</i> in RE 3.3.35 <i>Acacia brassii</i> in 3.12.23a <i>Wodyetia bifurcata</i> in 3.12.22, 3.12.6 <i>Welchiodendron</i> 3.10.2, 3.12.20, 3.12.27, 3.12.4a, 3.5.4x1. All are endemics and <i>Wodyetia</i> is threatened.	H										Regional

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_20	Saibai and Boigu Islands 	Based on Stanton Fell and Gooding, Wannan and Buoi- addition of fauna may enable landscape decision. Vertebrate fauna show close affinities to nearby New Guinea. Locations for only Australian records of several bird, reptile and mammal species more commonly found in New Guinea. High species richness given relatively large size (Lavery et al. in press). Encompasses ACA decision ic_nr_ec_03.			H	H			V H			H	State
cyp_fl_21	Mua (Moa) and Badu Islands 	Based on Stanton Fell and Gooding; Wannan and Buoi- addition of fauna may enable landscape decision. High species richness given relatively large size but assemblage dissimilar to that of more northern islands being more influenced by Australian components (Ingram 2008; Lavery et al. in press). Encompasses ACA decision ic_nr_ec_03.	H	V H	V H	V H	V H		V H				State
cyp_fl_22	Mer (Murray) Island 	Based on Stanton Fell and Gooding; Wannan and Buoi- addition of fauna may enable landscape decision. Presence of endemic skink <i>Carlia quinquecarinata</i> and highly disjunct population of a New Guinea snake <i>Stegonotus parvus</i> (Lavery et al. in press).			V H	H	V H		V H				State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fl_23	Dauan Island 	<p>Based on Stanton Fell and Gooding; Wannan and Buoi- addition of fauna may enable landscape decision.</p> <p>Vertebrate fauna show close affinities to nearby New Guinea. Locations for only Australian records of several bird, reptile and mammal species more commonly found in New Guinea (Lavery et al. in press).</p>	H	V H	H	V H	H		H				Regional
gup_fl_10	Evergreen notophyll flooded forest. Mitchell delta area 	<p>Areas delineated via air photo interpretation. Best example of this ecosystem within bioregion. A restricted and very diverse ecosystem. Highly active part of Mitchell delta.</p> <p><i>Good condition. Heliotropium indicum around some wetlands. Include both sides of river to these polygons. Riparian forest, notophyll flood forest. Not diverse, floristically restricted. Good fishing, popular with locals. Very few vines. Floods each year. Currently good condition. Heliotropium indicum weed around some lagoon wetlands. Generally Alice Mitchell frontage unusual. Green patch SE of south arm closed forest with eucalypt emergents. Some melaleuca thickets.</i></p> <p>Taken from <i>Draft Gulf Plains BPA Version 1.1.</i></p>			V H	V H	V H		V H				State

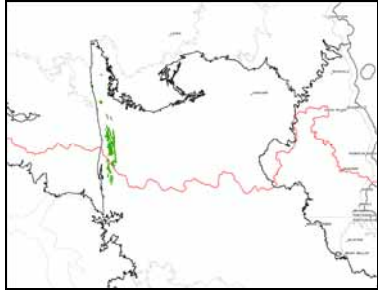
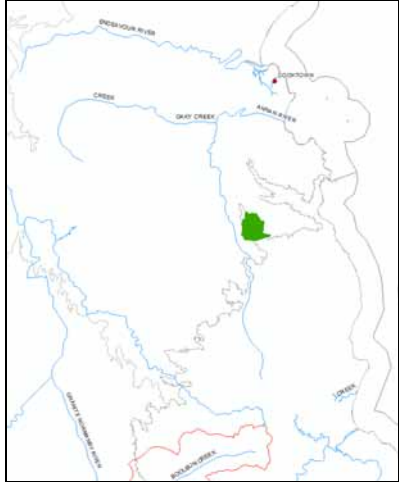
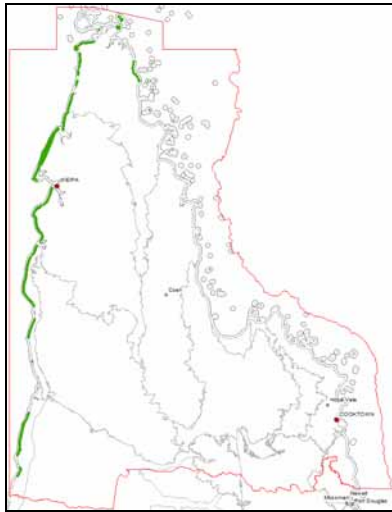
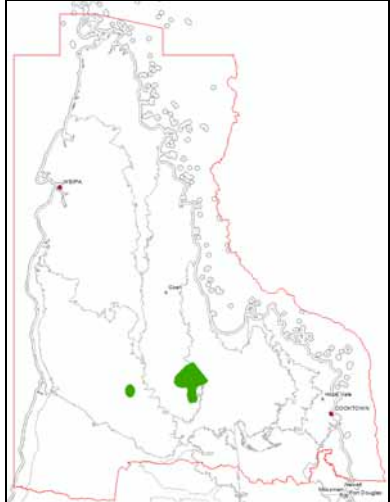
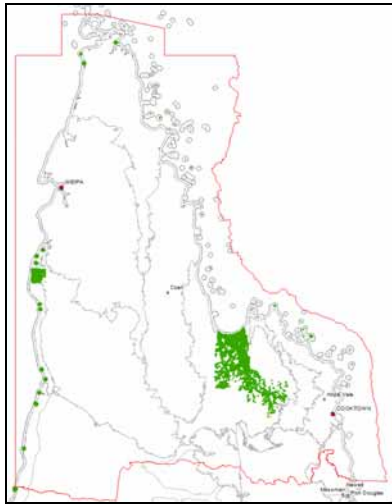
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_fl_10	Palmerville Limestones 	<p>This area includes limestone outcrops and associated woodlands on calcareous sediments in the Palmerville area, south to near Bellevue. The limestone outcrops are characterized by vine thickets, but there are significant species differences in the flora of different limestone outcrops. The flora includes species that are disjunct or relictual populations, or at the limit of their ranges, as well as EVNT species. While not as well developed as those at Chillagoe, the cave entrances have a particularly diverse range of specialized ecosystems including herblands, sedgelands, fernlands, mosslands and algalands.</p> <p>Although relatively poorly known, flora of conservation significance includes <i>Caesalpinia hymenocarpa</i> (NT).</p> <p>Taken from <i>Einiasleigh Uplands BPA Version 1.1</i>.</p>	V H	V H	V H	V H	V H	V H					State

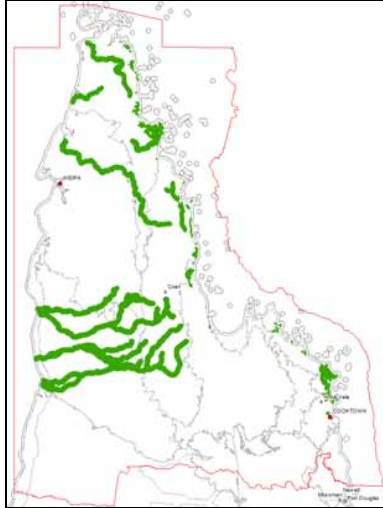
Table 12. Fauna Special Area Decisions.

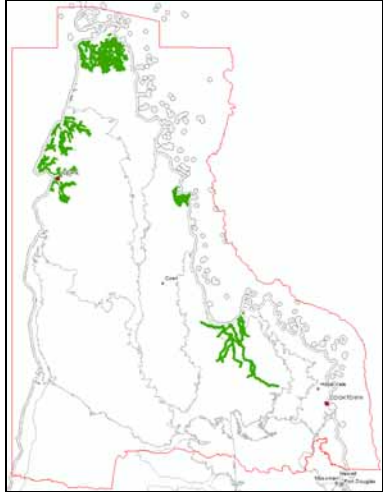
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fa_01	Black Mountain NP area 	Supports three very narrowly endemic and threatened species: a frog (<i>Cophixalus saxatilis</i> —V), a skink (<i>Liburnascincus scirtetis</i> - V) and a gecko (<i>Nactus galgajuga</i> —V). Also a known breeding location for Australian swiflet (<i>Aerodramus terraereginae</i> —NT). Adjacent mountains outside the NP have same values.	V H	H									State

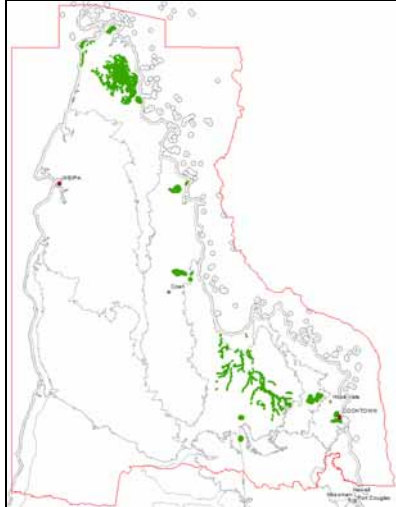
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fa_02	<p>Turtle nesting—West coast, including Crab Island and eastern offshore islands</p> 	<p>Significant locations for nesting by threatened sea turtle taxa, particularly flatback (<i>Natator depressus</i>), olive ridley turtle (<i>Lepidochelys olivacea</i>) and hawksbill turtles (<i>Eretmochelys imbricata</i>). Nesting by green turtles (<i>Chelonia mydas</i>) on islands off east coast.</p> <p>Crab Island contains the highest concentration of flat back nests in the world (Limpus et al. 1993).</p> <p>North of Weipa and east coast islands—State South of Weipa—Regional (lower density).</p> <p>Encompasses ACA decisions: ar_r_fa_02; cl_r_fa_01; du_r_fa_03; em_r_fa_04; ho_r_fa_01; ic_r_fa_02; ja_r_fa_01; 34; ja_r_fa_03; jj_r_fa_02; mw_r_fa_01; wt_r_fa_01.</p>										H / V H	North of Weipa – State South of Weipa – Regional
03	Crab Island	One of the most important flatback turtle rookeries in the world. Other values from CYPLUS. Significant seabird roosting site. Covered by cyp_fa_02.										V H	State

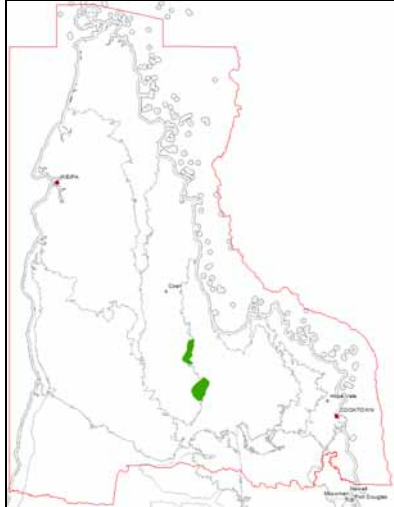
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fa_04	Golden Shouldered parrot habitat 	Major locations identifying significant habitat (breeding and feeding) for the threatened golden-shouldered parrot (<i>Psephotus chrysopterygius</i>). Covers a large proportion of the Morehead River Important Bird Area (Dutson et al. 2009). Values of the IBA include supporting high proportion of golden-shouldered parrot population and possibly a significant population of the buff-breasted button-quail (<i>Turnix olivii</i>). Also important populations of the black-throated finch (<i>Poephila cincta</i>) and bush stone-curlew (<i>Burhinus grallarius</i>).										V H	State

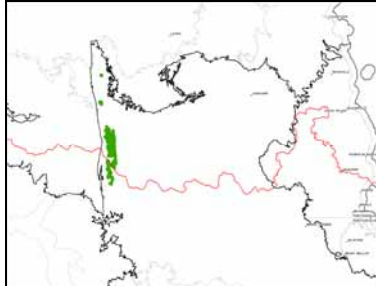
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance	
cyp_fa_05	Migratory wader, waterbird and seabird roost/feeding/breeding areas 	<p>Significant locations for migratory waders which are declining due to threats elsewhere in Asia. Significant wetlands/refugia for waterbirds identified. Data from Driscoll (1995, 1996, 2001) and Garnett (1989).</p> <p>Major seabird nesting sites on offshore islands identified (Abrahams et al. 1995). Includes major frigatebird roosting site at Weipa (more than 2000 birds and only known mainland roost location; Mustoe 2008).</p> <p>Also covers six offshore Important Bird Areas—Cape York to Cape Grenville Islands, Piper Islands, Islands North of Port Stewart, Wilson Reef, Stapleton Island and Raine Island, Moulter and MacLennan Cays. The IBA values include major breeding locations/refugia (>3% global population) of the pied imperial pigeon (<i>Ducula bicolor</i>) (Brothers and Bone 2012). Also significant breeding populations of the critically endangered herald petrel (<i>Pterodroma heraldica</i>), vulnerable green turtle (<i>Chelodina mydas</i>) and range of seabirds, e.g. roseate tern (<i>Sterna dougallii</i>), black noddy (<i>Anous minutus</i>) and brown booby (<i>Sula leucogaster</i>) (Abrahams et al. 1995; Dutson et al. 2009).</p> <p>Large areas such as Aurukun Wetlands, Lakefield NP High, everything else Very High.</p> <p>Also encompasses ACA decisions – ar_nr_fa_02; ar_nr_fa_03; cl_nr_fa_02; nb_nr_fa_02; mw_nr_fa_02; jj_nr_fa_02; ho_nr_fa_01.</p>		H									H / V H	Regional / State

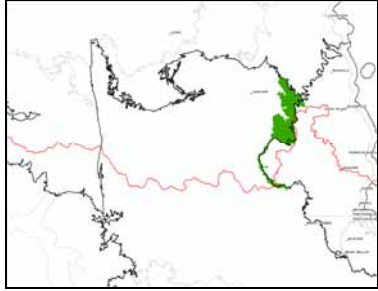
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance	
cyp_fa_06	Fish habitat 	<p>Significant fish habitat areas identified by Abrahams et al. (1995) and Herbert et al. (1995). Rivers containing rare and uncommon fish taxa and fish communities include:</p> <p>a) Jardine River—rich fish fauna and restricted threatened turtle <i>Emydura subglobosa subglobosa</i>.</p> <p>b) Wenlock River—richest known fish fauna of any river in Australia.</p> <p>c) Jackson-Dulhunty Rivers.</p> <p>d) Olive River—southernmost distribution of Jardinean fish fauna on east coast.</p> <p>e) Claudie and Lockhart rivers—diverse fish fauna.</p> <p>f) Holroyd, Edward and Coleman rivers—area of transition between fish fauna assemblages of CYP and Gulf of Carpentaria.</p> <p>g) Three Quarter Lake/Scrubby Creek—disjunct populations of certain fish taxa.</p> <p>h) Sand-dune lakes between Shadd Point and Cooktown—unique fauna assemblages that vary across the lakes, including disjunct/relictual populations of certain fish taxa.</p> <p>Also implemented as ACA decision—cl_r_fa_02; du_r_fa_04; ja_r_fa_04; lo_r_fa_03; op_r_fa_02.</p>			H	H	V H	H					H	<p>b: State</p> <p>a, c – h: Regional</p>

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fa_07	Estuarine Crocodile habitat 	<p>Major locations of successful breeding (Weipa-Wenlock, Jardine and Lockhart-Claudie) and important feeding area (Lakefield NP) of threatened estuarine crocodile (<i>Crocodylus porosus</i>). Data from various aerial and boat surveys (Krieger 1990; Read 1998, 2001).</p> <p>Implemented as part of ACA decisions— du_r_fa_01; em_r_fa_03; ic_r_fa_01; ja_r_fa_02; jj_r_fa_01; lo_r_fa_01; nb_r_fa_01; we_r_fa_01.</p>										V H	State
08	Invertebrate (insect) habitat	<p>This decision was originally based on the CYPLUS 'bug type' polygon, which on further investigation only reflects type localities for insect taxa not habitat. Information from Abrahams et al. (1995) on areas of invertebrate richness incorporated into other relevant landscape decisions.</p>	H		H		H						Regional

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fa_09	Invertebrate (butterfly) habitat 	Critical areas for butterflies. These include significant hill-topping locations (Mt White near Coen, Laura Basin sandstone outcrops and Isabella Falls), vine thicket/rainforest (Lockerbie Scrub, Iron Range and Mcllwraith Range), heathland (Heathlands), riparian vine thicket (Lakefield NP) and mangroves/melaleuca (Endeavour and Annan rivers) (Abrahams et al. 1995).										V H	State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_fa_10	Rock-wallaby habitat 	Northern polygon identifies habitat for threatened Cape York rock-wallaby <i>Petrogale coenensis</i> . Southern polygon identifies habitat areas unidentified rock-wallaby (possible hybrid between Cape York and Godman's <i>P. godmani</i> rock-wallabies).										H	Regional

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_fa_22	Limestone karsts 	<p>This covers limestone outcrops across the bioregion. The outcrops and the associated caves are an important refugia or breeding site for many species.</p> <p>The specialised habitats associated with the limestone outcrops and caves support endemic fauna, including obligate cave-dwellers such as relictual stygofauna and other troglomorphic species, as well as other invertebrate species.</p> <p>Numerous bat species roost and breed in the caves, including the eastern bent-wing bat (<i>Miniopterus schreibersii</i>), the little bent-wing bat (<i>Miniopterus australis</i>), the eastern cave bat (<i>Vespadelus trougtoni</i>), the common sheath-tail Bat (<i>Taphozous trougtoni</i>), the eastern horseshoe-bat (<i>Rhinolophus megaphyllus</i>), the eastern dusky leaf-nosed bat (<i>Hipposideros ater aruensis</i>) and the diadem leaf-nosed bat (<i>Hipposideros diadema</i>).</p> <p>Area includes 500m buffer from the limestone outcrop.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>	H	V H	V H	H	V H					V H	State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_fa_24	Eastern ecotone 	<p>The Eastern ecotone of the Einasleigh Uplands is a band of eucalypt forest separating the rainforest of the Wet Tropics from the dry tropical woodlands that characterize the bioregion. These better developed forests support a number of species that are endemic to the ecotone, or are isolated populations of species more widely distributed in the wet sclerophyll forest of south-east Queensland. These species include the northern bettong (<i>Bettongia tropica</i>), eastern yellow robin (<i>Eopsaltria australis</i>), yellow thornbill (<i>Acanthiza nana</i>), greater glider (<i>Petauroides volans</i>), squirrel glider (<i>Petaurus norfolcensis</i>), crested shrike-tit (<i>Falcunculus frontatus</i>) and the yellow-faced honeyeater (<i>Lichenostomus chrysops</i>). Disjunct tree species that have the major part of their North Queensland distribution in the ecotone include <i>Eucalyptus resinifera</i>, <i>E. pellita</i>, <i>E. grandis</i>, <i>E. moluccana</i>, <i>E. reducta</i>, <i>E. cloeziana</i>, <i>E. citriodora</i> and <i>Angophora floribunda</i>.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>	H	V H	V H	V H	V H				V H	V H	State

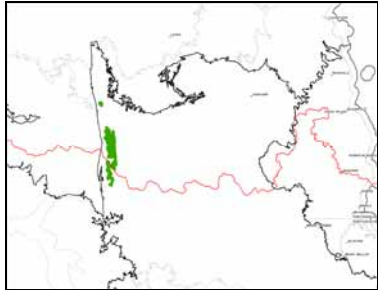
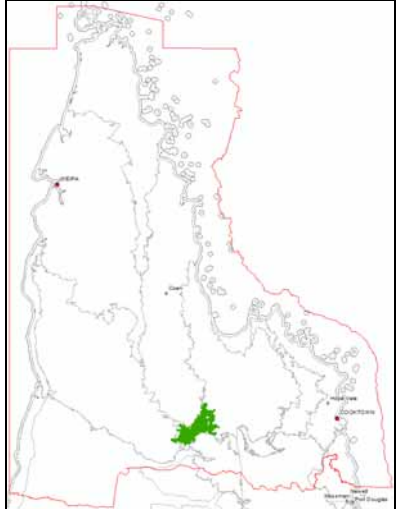
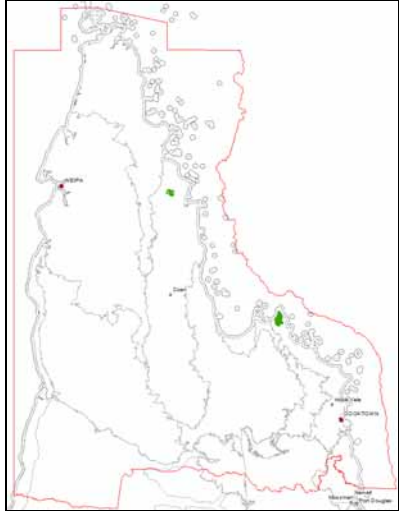
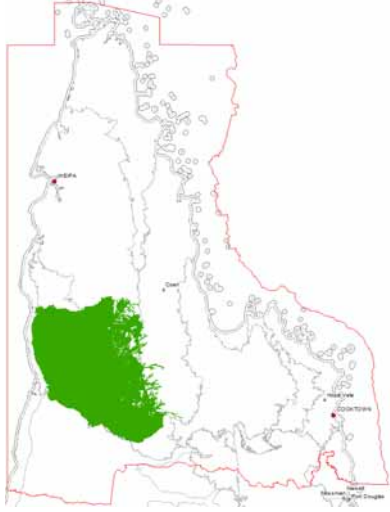
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_fa_26	<p>Areas of State significance for invertebrates</p> 	<p>Chillagoe limestone: This area and its 500m buffer was incorporated into landscape decision eiu_l_13 and removed from here.</p> <p>Forty Mile Scrub: Endemic spp. in Families Scarabaeidae, Histeridae and Staphylinidae. Also well-known type-locality for many invertebrate taxa, including many endemics. 500m buffer added to include adjacent woodland species to increase habitat diversity and accommodate species using the ecotone with the adjacent woodlands. Forty Mile Scrub was retained in this decision due to different ratings and significance to Fauna Decision 18 and eiu_l_11.</p> <p>Undara Lava Tubes: Endemics in Hemiptera, Blattoideae and others.</p> <p>Palmerville Limestone—Endemic cave fauna; distinct outcrop flora, poorly known but likely to have insects of conservation significance.</p> <p>Taken from <i>Einiasleigh Uplands BPA Version 1.1</i>.</p>	V H	V H	H		V H	H					State

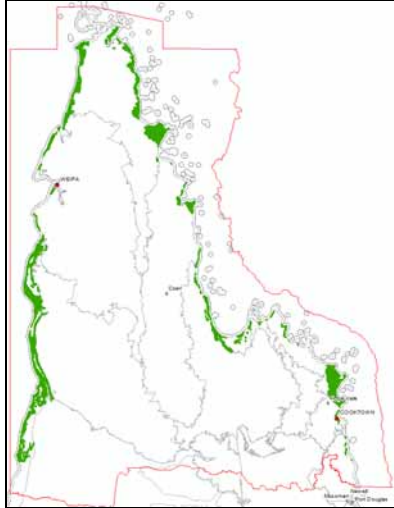
Table 13. Landscape Special Area Decisions.

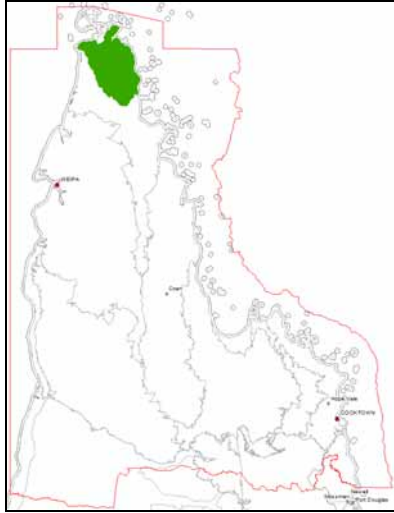

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_01	Kimba Plateau—'The Desert' 	<p>Headwaters of 5 rivers little disturbed and isolated area of stringybark forest on deep earths, with no surface water.</p> <p>From Abrahams et al. (1995):</p> <p>The Kimba Plateau Area has natural conservation significance because:</p> <ul style="list-style-type: none"> • The nationally-vulnerable plant <i>Jedda multicaulis</i> is only known from the eastern edge of this plateau and is the only member of its genus; it has unusual crytogeal germination unlike any other flowering plant in Australia. • It is the highest and southern most remnant of the Aurukun land surface. • About 30% of the area has very high wilderness quality. • About 80% of the plateau supports tall <i>Eucalyptus tetradonta</i> woodland which is basically restricted to the Plateau and is a rare vegetation class on the Peninsula. <p>Mapped to RE to 3.5.1.</p>	V			V							State
02	Sandstone scarps	<p>Sandstone scarps surrounding the above decision—picked up by Wilmott report. Also the dry vineforest. Habitat for <i>Cajanus mareebensis</i>.</p> <p>Not implemented due to time constraints. Follow up for the next BPA version.</p>	H			H							Regional

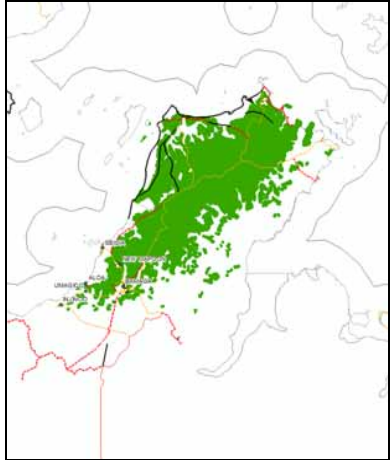
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_I_03	Orchid habitat—boulder piles 	<p>Tozers Gap Boulderfields and Cape Melville Boulderfields: Boulderfields and the edges of the boulderfields within these areas have high orchid, fern and epiphyte, arthropod, mollusc, reptile and amphibian species richness (Ie), endemism (Ia), disjunct populations and geographic outliers (Ic), EVNT composition and relictual populations (If). The boulderfields lack soils, graminoid plants and a tree fuel-load and therefore may provide refugia from fire (Ib). The boulderfields are also structurally complex providing a mixture of hot, dry, exposed and cool, moist, shaded micro-climates within close proximity and therefore may provide refugia for animals and plants from climatic disturbances (Ib).</p> <p>The endemic ring-tailed gecko (<i>Cyrtodactylus hoskini</i>) and Kutini boulder-frog (<i>Cophixalus kulakula</i>) are confined to large granite boulders at Tozers Gap on the western edge of Iron Range (Hoskin and Aland 2011; Shea et. al. 2011).</p> <p>For additional Cape Melville values see cyp_I_26.</p>	V H	V H	V H	H	H	H					State



BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
04	Forest pockets near Mcllwraith Range	<p>Melaleuca forests on white quartz sand, habitat for orchids and tassel-ferns, butterflies. Nutrient poor.</p> <p>Mcllwraith Range forest-pockets: We have not been able to map the forest-pockets accurately as they do not appear, or are difficult to identify, on our aerial imagery. They could be mapped by putting a 1km buffer around GPS points taken from ground-truthing undertaken in 2005. However only a small proportion of the forest-pockets were ground-truthed and it is likely that they are scattered across the Mcllwraith plateau on suitable geology. Even though the species composition is different, the biodiversity values of these forest-pockets are similar to the surrounding rainforest matrix e.g. high species richness, hollow bearing trees and EVNT composition. In lieu of a forest-pocket specific assessment we recommend that the Mcllwraith Range rainforest are described to include forest-pockets of old-growth wet-sclerophyll with a high density of epiphytes, ant-plants and the specialised invertebrate communities they support.</p> <p>Not implemented due to time constraints. Follow up for the next BPA version.</p>		H	H	H	V H						State
05	Boulder jumbles in other places	<p>Narrowly endemic reptiles and frogs. <i>Cyrtodactylus adorus</i> and <i>Cophixalus pakayakulangun</i> found only on rocky granite outcrops on or near the lower reaches of the Pascoe River (Hoskin and Aland 2011; Shea et. al. 2011).</p> <p>Not implemented due to time constraints. Follow up for the next BPA version.</p>	H										Regional


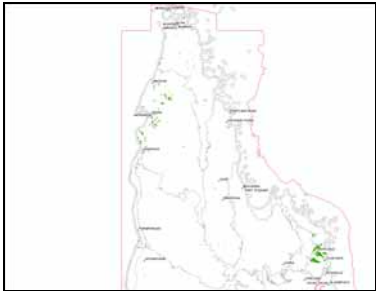
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_06	Holroyd plains 	<p>From Alice River north. Northern end of the Holroyd Plain. Intricate dendritic patterns, sinkholes and palustrine wetlands, best example of dissected tertiary surface in CYP, possibly Queensland. RE complex of 3.5.9a/3.3.32/3.3.50a/3.3.33 unique to this area. RE 3.3.32 restricted to this area. Tertiary surface acts as a 'sponge' which provides moisture into the dry season.</p> <p>Encompasses wetlands implemented as ACA decision— cl_nr_ec_03; ho_nr_ec_01; mw_nr_ec_04.</p>							H				Regional

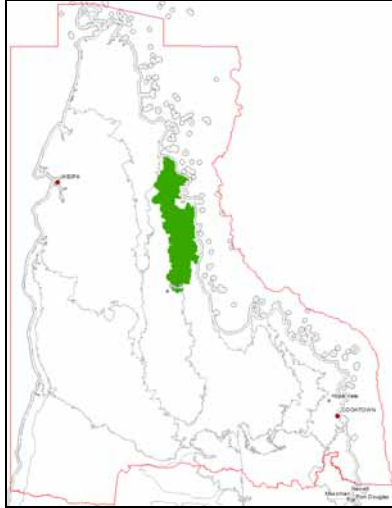
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_i_07	Dunefields—east and west coast 	<p>Dunefield rise—prograding dune systems, associated vine scrubs and trapped wetlands. Bird rookeries. Threatened species present. Holocene on west coast, quaternary on east coast.</p> <p>This decision, combined with cyp_fa_02, cyp_fa_05 and gup_i_03, encompasses all of the Gulf Plains Important Bird Area within CYP (Dutson et al. 2009). The IBA values include a significant breeding population of the sarus crane (<i>Grus anitgone</i>) and the coast is used by > 1% of the global population of a large number of wader species, e.g. black-tailed godwit (<i>Limosa limosa</i>), great knot (<i>Calidris tenuirostris</i>) and eastern curlew (<i>Numenius madagascariensis</i>).</p> <p>Implemented in ACA as—ar_nr_ec_03; cl_nr_ec_02; du_nr_ec_05; em_nr_ec_02; en_nr_ec_01; ho_nr_ec_03; ic_nr_ec_01; ic_nr_ec_02; ja_nr_ec_04; je_nr_ec_02; jj_nr_ec_04; lo_nr_ec_02; mw_nr_ec_03; op_nr_ec_05; sw_nr_ec_02; we_nr_ec_05; wt_nr_ec_01.</p>		V H	V H		V H						State


BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_08	Jardine Upland sandstone system 	Highly coupled terrestrial/wetland system. Sandstone 'sponge' that releases water throughout the year to feed the wetlands. Jardine River turtle (<i>Emydura subglobosa subglobosa</i>) habitat—found in the main channel of the Jardine River, and is likely to occur throughout the Jardine Swamp area except those parts that are saline. Incorporates wetlands implemented as ACA decision—ja_nr_ec_01.	V H	V H					V H				State
cyp_l_09	Springs associated with the GAB 	The community of species dependent on natural discharge of groundwater from the Great Artesian Basins is an endangered ecological community listed under the Australian Government's EPBC Act. The community is comprised of native species which depend on the natural discharge of groundwater from the Great Artesian Basin (GAB) for their existence. The community is characterised by combinations of native species that may occur more widely than the GAB, as well as endemic species (restricted to one or more GAB spring). (www.environment.gov.au) Also encompasses ACA decisions—du_nr_ec_01; du_r_ec_03; ho_nr_ec_02; ja_nr_ec_02; ja_nr_ec_03; jj_nr_ec_03; op_nr_ec_03; we_nr_ec_01.	V H	V H	V H		V H						State



BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_I_10	Lockerbie scrub 	<p>Threatened vegetation types, high endemism and high species diversity. Being in the Irian province the area exhibits strong links with New Guinea. Threatened palm cockatoos (<i>Probosciger aterrimus</i>) are present. RE complex—fingers of ‘least concern’ through ‘of concern’ vegetation; most northern rainforest in mainland Australia. High diversity of rainforest and sclerophyll vegetation types. Numerous flora and fauna species of national significance (Fell et al. 2009).</p> <p>Area covers most of Lockerbie Scrub Important Bird Area (Dutson et al. 2009). The values of the IBA include significant migratory bottleneck for spangled drongo (<i>Dicrurus bracteatus</i>) and rainbow bee-eater (<i>Merops ornatus</i>) and significant populations for two restricted range species.</p>	V H	V H	V H		V H						State
11	Pennefather river, south of the Jardine	<p>Early maritime exploration— numerous landfalls. Rainforest corridors on drainage lines, very diverse. Pristine, untouched. Intact, no weeds. Ancient orange-footed scrubfowl (<i>Megapodius reinwardt</i>) mounds in eucalypt forest show where rainforest used to be (just to the east).</p> <p>Not implemented due to time constraints. Follow up for the next BPA version.</p>	H					H					Regional
12	Shelbourne to Olive River	<p>High species richness, lots of EVNTs. More values from reports. Rainforest and heathlands. Springs.</p> <p>Not implemented due to time constraints. Follow up for the next BPA version.</p> <p>Encompasses parts of ACA decision— jj_nr_ec_01; op_nr_ec_01.</p>					H		H				Regional

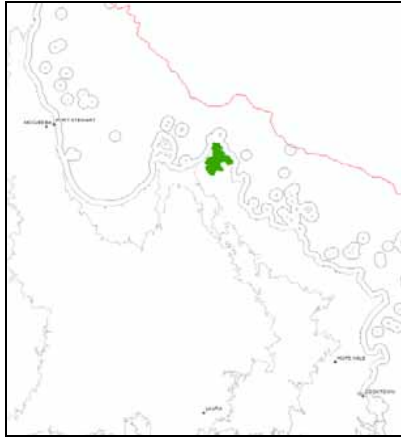
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_13	Bramwell 	<i>Eucalyptus tetradonta</i> woodland, swamp and vine-thickets. EVNTs present. Also an ACA decision. Remnant tertiary surface, deep red earths. Encompasses wetlands implemented as ACA decision— du_nr_ec_02; op_nr_ec_04; we_nr_ec_02.								H			Regional
cyp_l_14	Embley Range 	<i>Eucalyptus tetradonta</i> woodland, 2 big swamps on top. Pick up wetlands as ACA decision. Also implemented as ACA decision—we_nr_ec_03.								H			Regional

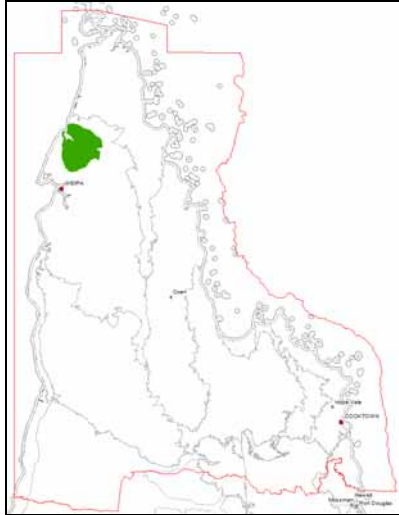
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_15	Sinkholes with microphyll vine forest dominated by melaleucas 	Rare and restricted habitat, mostly confined to this locality A dense low tree/tall shrub layer (5–8m tall) is dominant and forms a fairly continuous, dense canopy. This layer is composed of a variety of semi-deciduous species with no species showing clear dominance. <i>Melaleuca clarksonii</i> (hard-barked teatree) and <i>M. saligna</i> (a paperbark) are frequent emergent trees (12-15m tall). A sparse low shrub layer (1–2m tall) is present. The ground layer is very sparse. Occurs in sinkholes. (BVG1M: 7b). Endemic <i>Melaleuca clarksonii</i> , rich frog fauna. Also implemented as ACA decision—du_nr_ec_03.	H	V H	V H		H						State
cyp_l_16	Spring-based refugia 	Refugia for rainforest. Lots of unmapped springs. Some are in RE mapping. Some are in wetlands mapping. Implemented in numerous ACA decisions— ar_r_ec_01; du_nr_ec_01; du_nr_ec_04; du_r_ec_02; em_r_ec_01; en_r_ec_02; ho_nr_ec_03; ho_r_ec_01; ja_nr_ec_02; ja_nr_ec_03; ja_r_ec_01; je_r_ec_01; jj_nr_ec_03; jj_r_ec_02; mw_r_ec_01; nb_r_ec_01; op_nr_ec_03; op_r_ec_02; we_nr_ec_01; we_r_ec_02; wt_r_ec_01;		V H									State

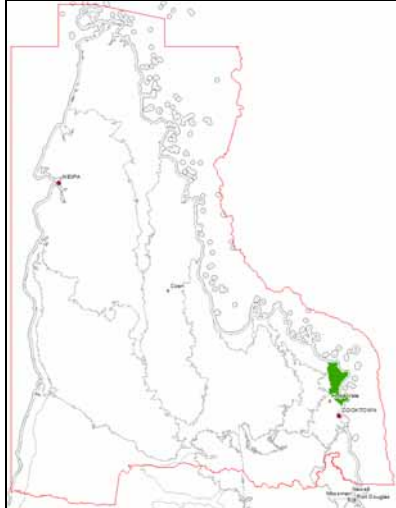
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_17	Eastern Ranges 	<p>Includes Iron Range, Mcllwraith, Mount Carter and McCrossan Range. There are a number of endemic amphibian and reptile species confined to the rainforests of the Mcllwraith/Iron Range area. They include:</p> <ul style="list-style-type: none"> • The leaf-tailed gecko, <i>Orraya occultus</i>, is only known only from granite boulders along Peach Creek, at the southern end of the Mcllwraith Range. • The ring tailed gecko <i>Cyrtodactylus pronarus</i> known only from small area of the Mcllwraith Range living amongst large granite boulders in well-developed rainforest (Shea et. al., 2011). • The tree goanna (<i>Varanus keithornei</i>) is a monitor lizard confined to rainforest in the Mcllwraith-Iron Range area. • The hylid frog <i>Litoria longirostris</i> is only found along streams in upland rainforest above 400m on the Mcllwraith Range. • The micro hylids <i>Cophixalus peninsularis</i> and <i>C. crepitans</i> are only found in rainforest/vine thicket on the Mcllwraith Range. <p>Area also encompasses the Iron and Mcllwraith Range Important Bird Area (Dutson et al. 2009). Values for the IBA include being one of few localities for endangered buff-breasted button-quail (<i>Turnix olivii</i>) and supporting an isolated population of the vulnerable southern cassowary (<i>Casuaris casuaris johnsonii</i>). Several range-restricted bird species are also present including the endemic white-streaked honeyeater (<i>Trichodere cockerelli</i>).</p> <p>The eastern ranges are also recognised as being areas of high invertebrate richness (Abrahams et al. 1995).</p> <p>Also implemented as ACA decision—lo_r_ec_01; sw_r_ec_01</p>	V H	V H	V H	V H	V H	V H	V H				State

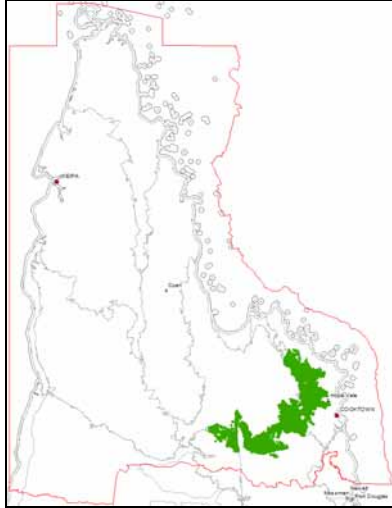
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
18	Iron Range and Lockhart	Woodland and heath, addressed in cyp_l_17.											
19	McIlwraith	Rainforest, addressed in cyp_l_17.											
20	McIlwraith	Tall Woodland and woodland which connects north, addressed in cyp_l_17.											
21	Mount Carter and McCrossan Range	Rainforest, Cape's only tall casuarina forest, addressed in cyp_l_17.											
cyp_l_22	Lava Hill 	<p>Lava Hill is significant because it represents an isolated and rare patch of volcanic activity on Cape York Peninsula. The basalt is approximately 2–5 million years old and the most northern mainland example in Queensland. The plateau topped hill rises 100m above the surrounding plains and neighbouring Balclutha Creek.</p> <p>The boulder covered slopes are dominated by deciduous vine thicket.</p> <p>The plateau contains Mount Molloy box (<i>Eucalyptus leptophleba</i>), Clarkson's bloodwood (<i>Corymbia clarksoniana</i>) and Moreton Bay ash (<i>Corymbia tessellaris</i>) with a thick vine thicket understorey with a similar suite of species as the rocky slopes on a deep red soil. This box and bloodwood community has a biodiversity status of endangered. Vulnerable Cooktown orchid (<i>Dendrobium bigibbum</i>) present. The discovery of palm cockatoos (<i>Probosciger aterrimus</i>) within this vegetation type within the nature refuge extended its southern range from previously known sightings at Massy Creek.</p> <p>Contains a perched seasonal wetland on the plateau containing paperbarks (<i>Melaleuca sp.</i>) with numerous vulnerable brown antelope orchids (<i>Dendrobium johannis</i>).</p>							H			Regional	

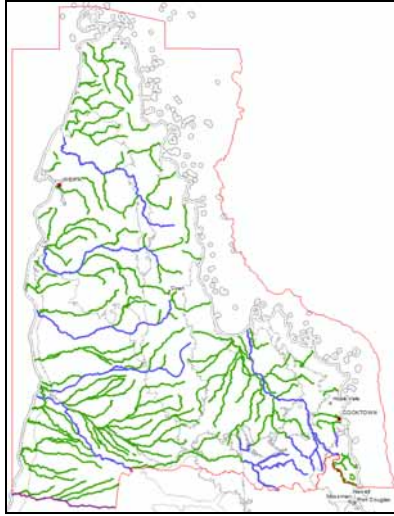
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_23	Port Stewart to Jane Table Hill 	<p>Good <i>Eucalyptus tetradonta</i> on plateaus, open woodlands of melaleuca. Rich diversity of vegetation, rare vegetation, vine thickets, mangroves, dunes.</p> <p>Sedge and grassland vegetation important star finch (<i>Neochmia ruficauda clarescens</i>) habitat, especially in Lakefield NP.</p> <p>The area also covers the Lilyvale Important Bird Area (Dutson et al. 2009). This IBA supports an exceptionally high density of the vulnerable red goshawk (<i>Erythrotriorchis radiatus</i>).</p>							H				Regional
cyp_l_24	Altanmoui Range 	<p>On the Altanmoui Range the granite is overlaid by sandstone (Battlecamp formation) deposited about 120 million years ago when the region was below the sea. Sediments formed by weathering of the ranges have accumulated around their bases and, between Altanmoui and Cape Melville vegetated inland dunes are found.</p> <p>The sandstone escarpments of the Altanmoui Range are one of the dominant features of Cape Melville National Park.</p> <p>Altanmoui Range is characterised by large hoop pines <i>Araucaria cunninghamii</i>, which emerge spectacularly from the vine forests (www.npsr.qld.gov.au).</p>							V H				State

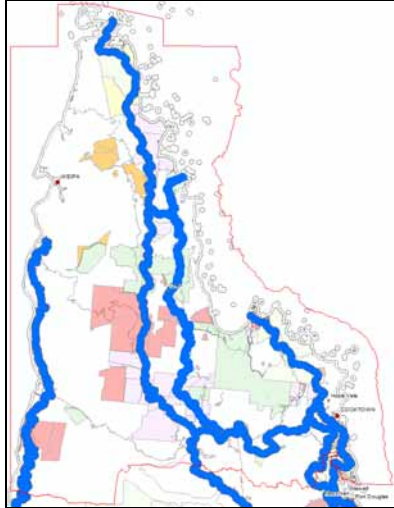
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
25	Bathurst Heads	Not implemented due to time constraints. Follow up for the next BPA version.											?
cyp_l_26	Cape Melville 	<p>At Cape Melville, granite has weathered into distinctive boulders forming an unusual mountain range. Cape Melville is notable for its high diversity of plants and animals. Plant communities are vast and include eucalypt woodlands, vine thickets, heathlands, grasslands, and mangrove and paperbark forests. Freshwater lagoons are lined by paperbark forests while vine thickets are found between the ranges. The southern section features riparian rainforests, extensive mangrove estuaries and banksia and grasstree swamps.</p> <p>Due to its remote and isolated location, Cape Melville also has several endemic species. The best-known endemic plant is the foxtail palm <i>Wodyetia bifurcata</i>. Also endemic to the area are two frogs (<i>Litoria andiirrmalin</i> and <i>Cophixalus zweifeli</i>) and one skink (<i>Cryptoblepharus fuhni</i>).</p>							V H			State	

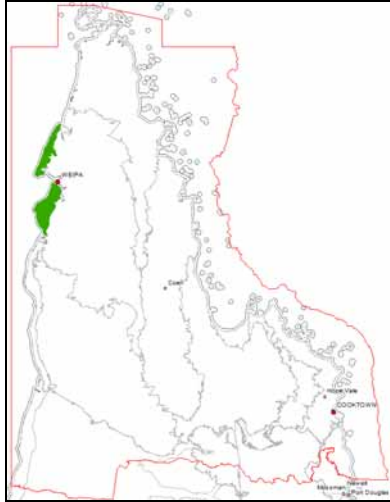

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_27	Port Musgrave 	<p>From Abrahams et al. (1995):</p> <p>An excellent example of a shallow estuary which demonstrates well the sedimentary processes leading to delta development.</p> <p>About 75% of the area is of very high wilderness quality.</p> <p>Supports one of the largest breeding populations, known in Queensland, of the vulnerable estuarine crocodile (<i>Crocodylus porosus</i>).</p> <p>It is a regionally rich and diverse area for freshwater swamps and tidal flats.</p> <p>It is considered likely to support a high diversity of vertebrate species.</p> <p>The stands of the nationally rare Nypa Palm within the area are amongst the best representations of their type in Australia.</p> <p>Other regionally representative vegetation in the area includes <i>Eleocharis</i> sedgeland and tussock grassland of marine plains.</p> <p>Encompasses ACA decision—du_r_ec_01, we_r_ec_01.</p>					H		H			V H	State
28	Coen Inlier	<p>Protozoic metasediments.</p> <p>Addressed in cyp_fl_12.</p>							H				Regional

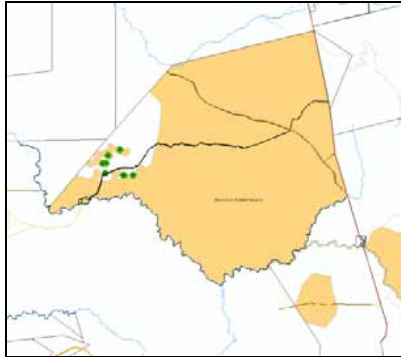
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_29	Cape Bedford/Cape Flattery 	Sand country, basalt, sandstone country. From Abrahams et al. (1995): <ul style="list-style-type: none"> • gegenwalle (Counter-wall) dunes • large elongate parabolic dunes • representative of dune landforms and dune vegetation found in North Queensland • high wilderness quality • largest diversity of dune landforms of any of the dune systems in Northern Australia • some of the best examples of evergreen mesophyll/notophyll vine forest on the Peninsula, as well as some other rare vine thicket communities • only known habitat of two rare skink species (<i>Ctenotus rawlinsoni</i> and <i>Lerista ingrami</i>) • habitat of several threatened plant species and regionally uncommon vegetation types • the dune lakes contain a unique faunal assemblage • the evergreen notophyll vine forests of the area support several plant species that have widely disjunct populations • large roosting populations of the endangered little tern (<i>Sterna albifrons</i>). Encompasses ACA decision—je_nr_ec_01.	V H	V H	V H				V H			H	State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_30	Laura Sandstones 	Important for butterflies, endemic skink <i>Ctenotus quinkan</i> and the gecko <i>Oedura jowalbinna</i> known from only one site in amongst heavily dissected sandstone escarpments south west of Laura (Abrahams et al. 1995; Hoskin and Higgie 2008).	V H	V H	V H	V H	V H	V H	V H				State
31	Limestones at Palmerville	Covered by EIU BPA decisions.											
32	TS Islands 1	Covered by flora decisions cyp_fl_20 – cyp_fl_23.											
33	TS Islands 2	Covered by flora decisions cyp_fl_20 – cyp_fl_23.											

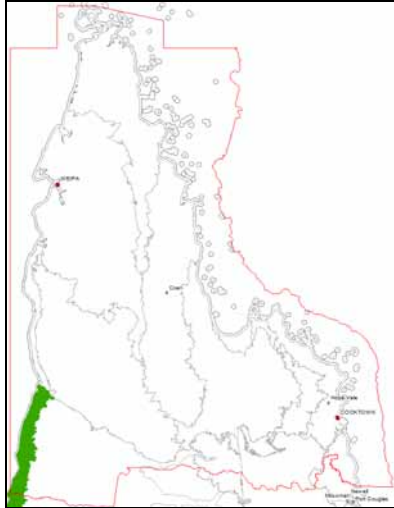
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_34	Riparian corridors 	All major rivers should be used as riparian corridors. Most important Wenlock, Archer, Mitchell, and Normanby. They connect peninsula from east to west and have well developed gallery rainforests.											Regional / State

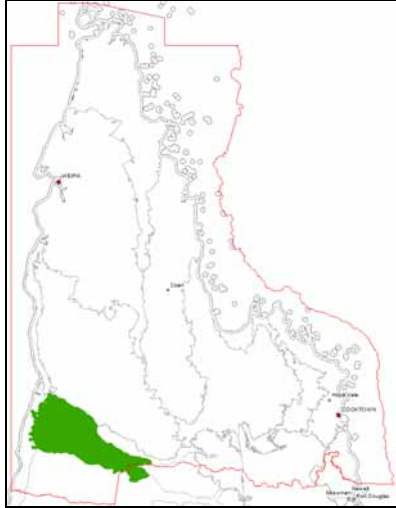
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_35	Terrestrial corridors 	<p><u>Statewide Conservation Corridor—Gulf Coast</u></p> <p>The vast intertidal areas and associated coastal plain of the Gulf of Carpentaria, with its mangroves, mudflats and numerous brackish and freshwater wetlands, are of great importance for shorebirds, waders and other waterfowl. The coastal plain extends around its southern and south-eastern shores between the Northern Territory border and Aurukun.</p> <p><u>Statewide Conservation Corridor—Great Artesian Basin Rim</u></p> <p>This corridor predominantly follows sandstones of the Great Artesian Basin from the New South Wales border in the south to the tip of Cape York Peninsula, approximating the Great Dividing Range for most of its length. It is an almost continuous series of sandstone ranges and sandy plateaus, with associated scarps, springs and sheltered gorges, and adjacent lowlands. The vegetation is largely eucalypt woodlands on sandy or rocky soils.</p> <p><u>Great Divide</u></p> <p>This corridor follows the Great Dividing Range where it splits from the Great Artesian Basin Rim corridor through to the Eastern Ranges. This corridor represents the high altitude range in Cape York Peninsula.</p> <p>National park estate and nature refuges have been trying to form a corridor from east to west—add 2 more east-west corridors (unable to implement at this time).</p>											State

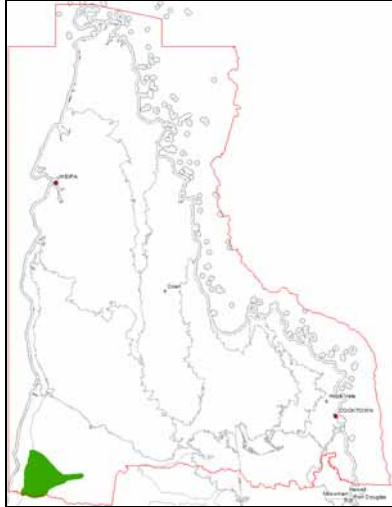
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
cyp_l_36	Mapoon/Aurukun Coast 	<p>Mapoon has unique ecosystem complexity of beach, dunes, vine thickets, spectacular swamps (drainage runs parallel to coast), melaleuca forests and hardwood forests. This habitat complexity is in a small area and is home to huge number of birdlife. The entire system needs to be recognised as a single entity. State significance.</p> <p>Similar complex at Aurukun, but Regional significance.</p> <p>Also implemented as ACA decision—em_nr_ec_04, em_nr_ec_03.</p>		H					H/ V H				Regional / State
cyp_l_37	Crosbie Mud Springs 	<p>No other springs like them on CYP. Intermittent flow and polygon covers an aggregation of springs.</p> <p>Also implemented as ACA decision—mw_nr_ec_05.</p>							V H				State

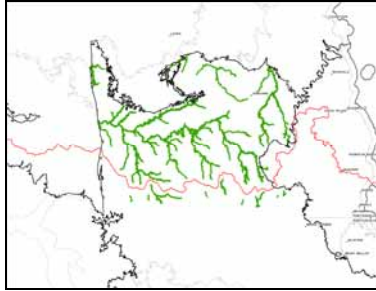
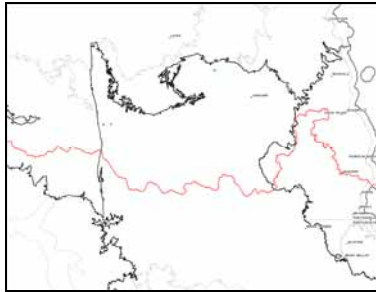
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
38	CYP Springs	Addressed in cyp_l_16.											
cyp_l_39	Steve Irwin Wildlife Reserve Perched Bauxite Springs 	Rare and unique type of spring supporting significant level of biodiversity including threatened flora and fauna. Only know occurrence of <i>Callophyllum bicolor</i> rainforest type. Important ecological function as dry season refuge and water source for wildlife, including high diversity of fish and amphibians (Lyon and Franklin 2009). Also implemented as ACA decision—we_r_ec_04.		V H			H						State
40	Amber site	Only in situ site of amber on CYP. Beach-washed specimens occur on beaches between Captain Billy Landing and Chili Beach. These contain a diverse, well-preserved fossil arthropod fauna of post-Jurassic–pre-late Miocene age that are of world class (Hand et al. 2010).						V H					State

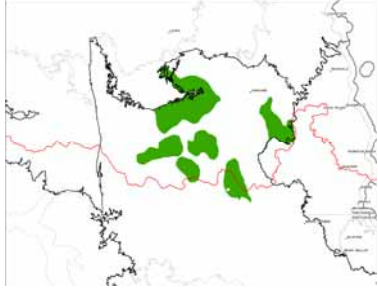
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
41	Across the CYP bioregion.	The Commonwealth Department of Sustainability, Environment, Water, Population and Communities is currently rerunning the Australian Natural Heritage Assessment Tool (ANHAT) for the Cape. It is expected that this will provide information on species richness and weighted endemism for plant and animal groups for each of the Cape York Peninsula 1:100,000 map sheets. These values will be reviewed within the context and scale of the CYP biodiversity assessments and considered for inclusion as a separate special feature and/or as supplementary information to existing special features. More information on the ANHAT tool is at http://www.environment.gov.au/heritage/anhath/index.html .											?

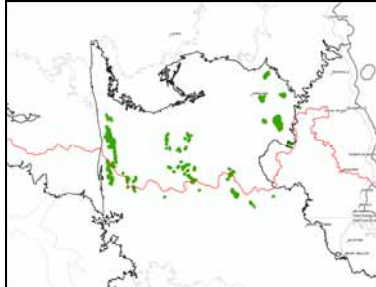
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
42	<p>Mitchell-Gilbert coastal plains</p> 	<p>gup_l_03.</p> <p>Marine plains and associated wetlands are significant features. Blue salmon, king salmon, barramundi, fodder fish, cat fish, grunter (javelin fish), mullet, black jewfish. Also applies to other flood plains around gulf. Dunes include key resource areas for fruit eating birds. Bird species in swales of these systems. Heavily dissected by water. Roosting and nesting for waders and waterbirds (incorporates part of the Gulf Plains Important Bird Area (see also cyp_fa_02 and cyp_l_07, Dutson et al. 2009). Turtles breeding. Some of this area of international significance.</p> <p>All coastal country from Mitchell through to Flinders one big system during wet. Nutrients that drive the system derived from inundated floodplain. Fish importance includes inundated floodplains as big nutrient/productivity pulse. All estuaries and coastal wetlands are nursery areas and values for coastal decision, fresh/salt interface the extent of this value. Nursery values on plains include blue salmon and king, barramundi, mullet catfish, grunter (salt), black jewfish.</p> <p>Also implemented as part of ACA decision—mw_nr_ec_01.</p> <p>Taken from <i>Draft Gulf Plains BPA Version 1.1</i>.</p> <p>Not implemented due to time constraints. Follow up for the next BPA version.</p>		V H		V H	V H		V H			V H	State

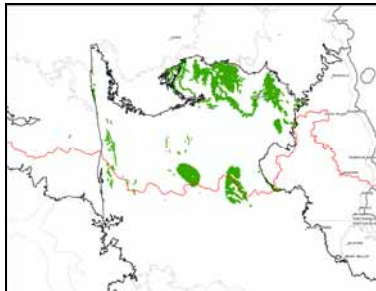
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
43	Mitchell Delta 	gup_l_05 High amount of wetlands, dynamic wetlands, highly active system, important breeding sites for aquatic species. High floral species diversity. High nutrient status. Values from DOIW. Contains wetter Cape York species that reach the limit of their extent. High species diversity is due to high soil diversity. Mitchell River acts as a conduit for migratory species transitioned across the Cape. Delta gallery rainforest and contains the best example of this ecosystem. Current younger delta system of particular interest being most active. Taken from <i>Draft Gulf Plains BPA Version 1.1</i> . Also implemented as part of ACA decision—mw_nr_ec_01. Not implemented due to time constraints. Follow up for the next BPA version.		V H		H	V H		V H			V H	State

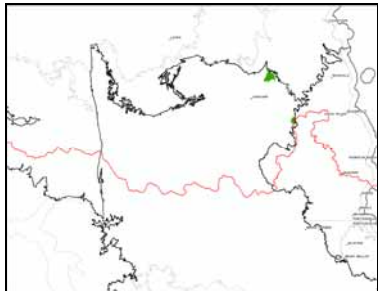
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
44	Inkerman-Surprise Creek 	gup_I_34 Extensive system of old sandy levees interspersed with box and melaleuca flats, grasslands, incised watercourses and seasonal swamps. Includes greatest concentration of closed wetlands and sandy levees on the old high level fan of the Mitchell River. Taken from <i>Draft Gulf Plains BPA Version 1.1</i> . Not implemented due to time constraints. Follow up for the next BPA version.		V H	H	H	V H		H		V H		State

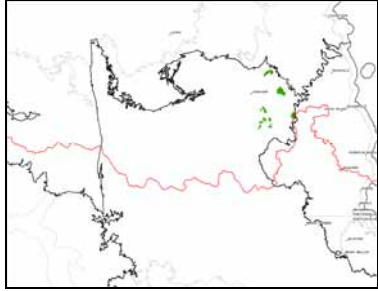
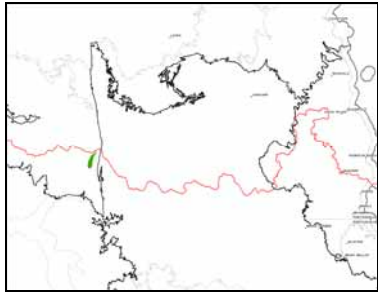
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_03	<p>Riparian ecosystems and associated areas.</p> 	<p>Most of the Einasleigh Uplands is dominated by open vegetation on shallow or skeletal soils. Riparian REs associated with the larger river systems function as important refuges for many species of flora and fauna because of the relatively high nutrient levels associated with most of these areas, their better moisture balance and their generally well developed vegetation. These mesic ribbons of habitat provide an important seasonal refuge and resources for a variety of species, in particular arboreal mammals, woodland birds, hollow-roosting species and amphibians. Many raptor species preferentially nest in tall riparian trees.</p> <p>Riparian areas are also biogeographically significant habitat as they allow inland incursions of many east coast species into drier areas on the edge of their geographic range.</p> <p>Riparian areas were given a 200m buffer with the same significance rating to ensure that adjacent habitat used opportunistically by species using the riparian areas was also included.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>		V H			V H		V H		H	V H	State
eiu_06	<p>Wetlands</p> 	<p>Wetlands have a range of biodiversity values, both in their own right, and for the role they play in maintaining water quality, protecting downstream aquatic ecosystems, and as part of the wetland ecosystem continuum where they are periodically connected with other aquatic ecosystems. Wetlands act as refugia for many species, and play a vital role in the life cycle of others.</p> <p>Wetlands were given a 200m buffer with the same significance rating to ensure that all areas adjacent to them, and the areas most likely to have higher values, were also included.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>		H			H				H	H	Regional

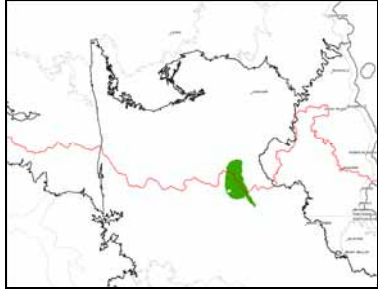
BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_1_10	Landscapes of least disturbance 	<p>Parts of the Einasleigh Uplands, due to ruggedness, remoteness or the absence of permanent surface water, have had little impact from grazing by domestic stock or the associated infrastructure. These are areas where the landscapes have been little disturbed and the biodiversity values within them have the greatest chance of being maintained in the long term. The major threatening process to these areas is the intensification of grazing through development of infrastructure such as watering points and fencing. The current condition of the ground layer and soil is considered to be very good and they provide a refuge for sensitive plant and animal species from the impacts of grazing.</p> <p>These are predominantly areas of very low land capability, with skeletal, infertile and droughty soils, steep slopes and much rock outcrop. Any increase in land use intensity in these areas is likely to result in rapid land degradation and consequent loss of biodiversity values.</p> <p>The extent of these areas in the Einasleigh Uplands, compared with other parts of the state, makes them of State Significance for the protection of intact ecosystems.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>	H	V H	H	H	V H		H				State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_l_11	Vine Thickets 	<p>The bioregion has a wide variety of dry vine thickets across a number of different substrates. Vine thickets have been largely cleared from the Brigalow Belt, and the Einasleigh Uplands is of State significance in the protection of these ecosystems and their values. Vine thickets are refugia for a large number of plants and animals, many of which are disjunct populations, or at the limits of their geographic ranges. Although species combinations vary with substrate, threatened and other priority species are present in many occurrences and endemism of invertebrate species is common.</p> <p>Mapped vine thickets were buffered by 500m to allow for species that shelter in the vine thicket but use resources in the surrounding woodlands.</p> <p>Some occurrences are at risk from weed invasions (particularly lantana <i>Lantana camara</i>), pig damage and adverse fire regimes.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>	V H	V H	V H	H	V H	H					State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_15	<p>Ecosystems with a Biodiversity status of Endangered or Of Concern and a current extent of less than 10,000ha</p> 	<p>Einasleigh Upland regional ecosystems with a remaining extent that is less than 10,000ha have a naturally restricted distribution, and their threatened status is a reflection of this. They are susceptible to what would normally be viewed as local threats or impacts, and are therefore most vulnerable of all ecosystems to rapid and potentially total loss of natural values. In most cases their restricted distribution relates to geomorphic and/or micro-climatic settings that are also restricted and these areas therefore have particular ecological and scientific values. These values relate to the unique combination of ecological characteristics, and to the unusual habitat conditions they provide for particular species or genotypes. Where the status has been upgraded to Endangered due to the impact of threatening processes, their susceptibility to further loss of values is extreme.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>		H					V H				State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_16	<p>Ecosystems with a Biodiversity status of Endangered or Of Concern and a current extent of greater than 10,000ha., and in good condition</p> 	<p>Einasleigh Upland regional ecosystems with a remaining extent that is greater than 10,000ha, and a threatened status due to the impacts of grazing over more than 70% of their range, now have reduced biodiversity values due to the associated changes in species composition and/or soil condition. Any remaining areas in relatively good condition are susceptible to what would normally be viewed as local threats or impacts, and are therefore vulnerable to rapid loss of natural values. The values of these remaining good condition occurrences relate to their floristic and structural integrity, the retention of fauna susceptible to grazing impacts, and the continuation of ecological processes characteristic of the ecosystem.</p> <p>Where the status has been upgraded to Endangered due to the extent and degree of impact from grazing their susceptibility to further loss of values is extreme.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>		V H			V H		H				State

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_I_19	Mclean Basalt Outliers 	<p>Woodlands on basalt in the north of the bioregion have been largely cleared, or have been fragmented and are susceptible to weed invasion. Woodlands on the McLean basalts (Lakeland Downs area) in particular have been largely cleared for cropping, and most of the uncropped areas are now heavily invaded by grader grass (<i>Themeda quadrivalvis</i>). The areas remaining in best condition are isolated from the main occurrences, and have particular value as representative occurrences of the complex of ecosystems occurring on these northern basalt REs. The values of these remaining good condition occurrences relate to their floristic and structural integrity, the retention of fauna susceptible to grazing impacts, and the continuation of ecological processes characteristic of the ecosystem.</p> <p>Taken from <i>Einiasleigh Uplands BPA Version 1.1</i>.</p>		V H		H	V H		H				State
eiu_I_20	Mount Mulgrave outlier 	<p>Small and isolated range formed by acid igneous outcrop, and associated footslopes. It is a biogeographic outlier surrounded by sedimentary rocks, characterised by mainly skeletal soils of very low fertility on steep slopes. Although poorly known it is likely to support occurrences of species that are outliers or range extensions of their distributions, and unusual variations of otherwise widespread Res.</p> <p>Taken from <i>Einiasleigh Uplands BPA Version 1.1</i>.</p>		V H	V H	H	H		V H				Regional

BPA ID	Location	Values	A	B	C	D	E	F	G	H	I	J	Significance
eiu_l_28	Desailly Range and Mount Elephant 	<p>This area includes two biogeographic isolates composed of high hills and tablelands on biotite granites linked by a low range. Most of the area is over 800m ASL, rising up to 400m above the surrounding low hills. While the area is characterized by granite torfields and extensive areas of sheet rock, it also includes areas of sedimentary rocks, and old sand plain areas on the northern plateau.</p> <p>The area is poorly known at present but includes Wet Tropics outlier ecosystems. The area is likely to include species at the limits of their ranges and disjunct populations.</p> <p>Taken from <i>Einasleigh Uplands BPA Version 1.1</i>.</p>	H	H	H		H						Regional

3.6 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 Cape York NRM Group.

3.7 Data access and conditions

The public will be able to access the information contained in the BPA on the Queensland Government Information Service website at www.dds.information.qld.gov.au/dds. 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 expert panel process should be revisited on a regular basis. An appropriate review timeframe would be approximately every two years to coincide with a new release of Queensland Herbarium RE mapping.

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Appendix 1 Acronyms and abbreviations

BAMM	Biodiversity Assessment and Mapping Methodology
BPA	Biodiversity Planning Assessment
BVG	Broad Vegetation Group
CAMBA	Agreement between the Australian Government and the government of the People's Republic of China for the Protection of Migratory Birds and their Environment
CORVEG	The site survey database maintained by the Queensland Herbarium
CYP	Cape York Peninsula
CYPLUS	Cape York Peninsula Land Use Strategy (a joint initiative of the Queensland and Commonwealth Governments)
DCDB	Digital Cadastral Database—a spatial database of Queensland property boundaries.
DERM	Department of Environment and Resource Management (former Queensland Government department)
DOIW	Directory of Important Wetlands
EHP	Department of Environment and Heritage Protection
EVNT	Endangered, vulnerable or near threatened under the <i>Queensland Nature Conservation Act (1992)</i> and <i>Commonwealth Environment Protection and Biodiversity Conservation Act (1999)</i> .
EPA	Environmental Protection Agency (former Queensland Government department)
EPBC	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
GAB	Great Artesian Basin
GCDI	Ground Cover Disturbance Index
GIS	Geographic information system
HERBRECS	Specimen based register of plants held by Queensland Herbarium
JAMBA	Agreement between the Australian Government and the Japanese Government for the protection of migratory birds in danger of extinction and their environment
MGD	The Mitchell Grass Downs bioregion—a bioregion within the Interim Biogeographic Regionalisation for Australia (IBRA) framework
NCA	<i>Nature Conservation Act 1992</i>
NPRSR	Department of National Parks, Recreation, Sport and Racing
QPWS	Queensland Parks and Wildlife Service (within Department of National Parks, Recreation, Sport and Racing)
RE	Regional ecosystem
REDD	Regional Ecosystems Description Database
RSD	Regional Service Delivery
SDRN	State Digital Road Network
SLATS	Statewide Landcover and Trees Study
WARLUS	Western Arid Region Land Use Study
WILDNET	Department of Science, Information Technology, Innovation and the Arts (DSITIA)'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 CYP 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
- draft remnant (RE07) RE mapping
- certified updates to remnant mapping.

Species:

- all fauna species records were obtained from Queensland Historical Fauna database. 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
- draft results from GUP bioregion BPA v1.1.
- results from EIU bioregion BPA v1.1.

Protected areas:

- protected area estates (NPRSR)
- nature refuges
- coordinated conservation areas.

Imagery:

- 2009 Landsat mosaic of the CYP bioregion
- SPOT imagery (10 metres).

Documents available electronically:

- Biodiversity Assessment and Mapping Methodology version 2.1 July 2002 (EPA 2002).

Hard copy maps:

- Landsat 7 mosaic of CYP bioregion
- CYP bioregions and subregions (Queensland).