

**Southern Brigalow Belt**  
**and**  
**New England Tableland**  
**Strategic Offset Investment Corridors**  
**Methodology Report**  
August 2015

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## Introduction

Strategic Offset Investment Corridors (SOICs) identify some of the best places in the landscape for environmental offsets. SOICs make offsets easier and cheaper to find, provide income opportunities for landholders willing to provide offsets on their land, and provide strategic conservation benefits for important environmental values.

These corridors are strategic planning tools that have no implications for land tenure or use. Landholder participation in providing an offset in a SOIC is completely voluntary. This document describes how the Corridors should be used, the methodology used in developing them, and the environmental values contained within the areas.

Offsets may be required under the Queensland Environmental Offsets Framework for certain development activities that have a significant residual impact on prescribed environmental matters. These development activities and environmental matters are prescribed in the Environmental Offsets Regulation 2014 and include Matters of State Environmental Significance and Matters of National Environmental Significance.

The Queensland Environmental Offsets Policy provides a decision-support tool for the assessment of offset proposals. Under the Policy, proponents are guided to preferentially seek offset opportunities in Strategic Offset Investment Corridors. These areas comprise conservation 'hubs' and 'corridors' which are under low development pressure and are not zoned for high impact development activities. The SOICs, therefore, are areas where land is most suitable and beneficial for offset activities, as they provide landscape-scale outcomes for impacted environmental matters. Within the SOICs, two priority classes have been identified.

### Conservation Hubs (Priority 1)

Conservation hubs are potential focus areas for offset provision. These hubs generally consist of land adjacent to existing protected areas or areas with high conservation value, and generally represent large tracts of remnant vegetation and areas with potential for improvements in ecological condition. Twenty Conservation hubs have been identified in the Southern Brigalow Belt and New England Tableland SOIC areas.

### Corridors (Priority 2)

The corridors identified through the SOIC planning process are primarily based on the Biodiversity Planning Assessment wildlife corridors (Criteria J), in the Biodiversity Planning Assessment documents for the Brigalow Belt and New England Tableland, available at [www.qld.gov.au](http://www.qld.gov.au) (search 'Biodiversity Planning Assessments'). These corridors have been identified either because they are existing vegetated corridors important for landscape contiguity (these can include regrowth), or cleared areas that could serve this purpose if revegetated. Some examples of corridors include contiguous remnant vegetation, vegetation along riparian habitats, or 'stepping stone' corridors which consist of patches of remnant vegetation through the landscape.

## Purpose

The SOICs identify areas within the Southern Brigalow Belt and New England Tableland bioregions that hold Matters of National and State Environmental Significance and other irreplaceable values that are connected in the landscape.

By maintaining and improving the biodiversity values within the SOIC, the broad outcomes will include improved long-term viability of ecosystems, species and the services they provide through:

- protection and/or enhancement of large tracts of remnant habitat with particularly significant environmental values; and
- protection and/or enhancement of connectivity, and hence reducing the effects of habitat isolation of species.

## Methods used to develop the SOIC

A range of existing information sources and tools were combined to assist planning for the development of the SOIC areas. In particular the key information included:

- areas of high conservation value as identified through the use of conservation planning software (Marxan and Cplan);
- information from Biodiversity Planning Assessments which spatially map the strategic values (including wildlife corridors) in the bioregions;
- regional ecosystem mapping;

- expert field knowledge (ecological expert workshops were conducted in Rockhampton and Toowoomba); and
- mapped projective foliage cover of greater than 6 percent (areas containing woody vegetation with projective foliage cover greater than 6 percent represents vegetation with the potential to become a functioning ecosystem if rehabilitated).

Ecologists in the Department of Environment and Heritage Protection carried out an analysis using these data sources to ensure that the SOIC areas provide the best opportunity to support ecological function and biological diversity of the bioregions.

Some of the key criteria that inform the process for identifying conservation hubs include:

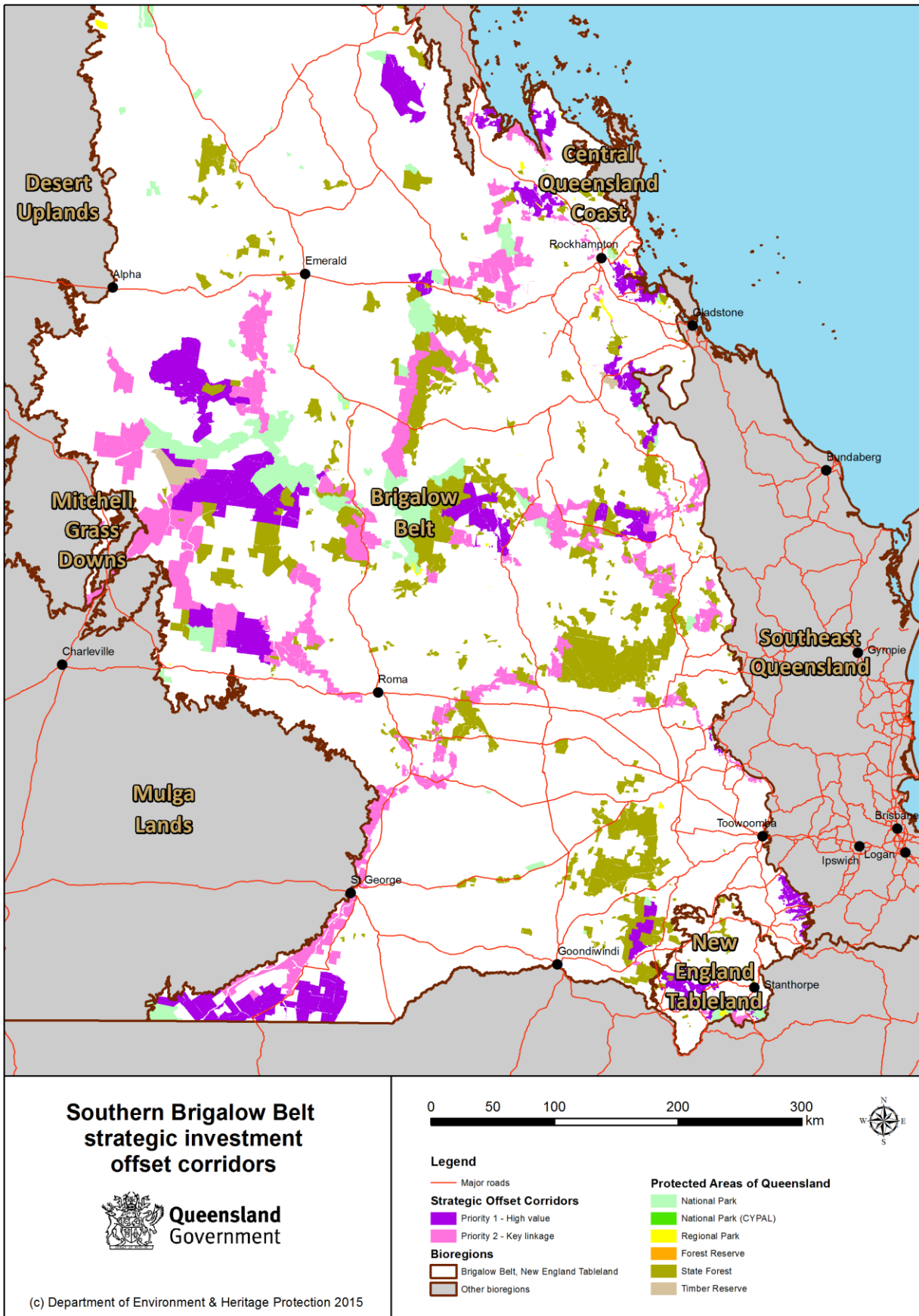
- the contribution to long-term climate change resilience of biodiversity;
- representation of freshwater or geological features and the range of terrestrial ecosystems;
- whether the area provides ecosystem services;
- whether the area is important for threatened species;
- land condition and level of threat; and
- the potential for rehabilitation, maintenance or enhancement of the environmental values.

The initial draft hubs and corridors were then subject to a sequence of spatial analysis processes including:

- exclusion of all land covered by granted mining production leases;
- exclusion of contiguous blocks less than 10 hectares in size;
- exclusion of blocks on which there is less than 10 hectares of remnant vegetation;
- attribution of the remaining blocks with existing mapped state interests, including various strategically significant agricultural land zonings, and forest product and quarrying extraction rights; and
- attribution with summaries of a range of matters of national and state environmental significance including regional ecosystems, wetland habitats and modelled habitat of threatened species.

All landholders within the SOIC were informed of the SOIC and provided with an opportunity to register their interest in providing offsets on their land. The contact details and lots on plan of all interested parties, regardless of whether their land is inside or outside the SOIC, is kept by the Department in a confidential database. Should a block of land held by a registered landholder be identified by a proponent, broker or delegated decision maker as a suitable site for a particular offset, the landholder will be asked if they wish their contact details to be passed to the entity with an interest in the potential offset site. The Department will continue to update the register of landholder interest in providing offsets on an ongoing basis.

Map 1 (below) shows the entire footprint of the hubs and corridors that were developed for the Southern Brigalow Belt and New England Tableland.



**Map 1: The complete footprint of the hubs and corridors developed within the southern Brigalow Belt and New England bioregions.**



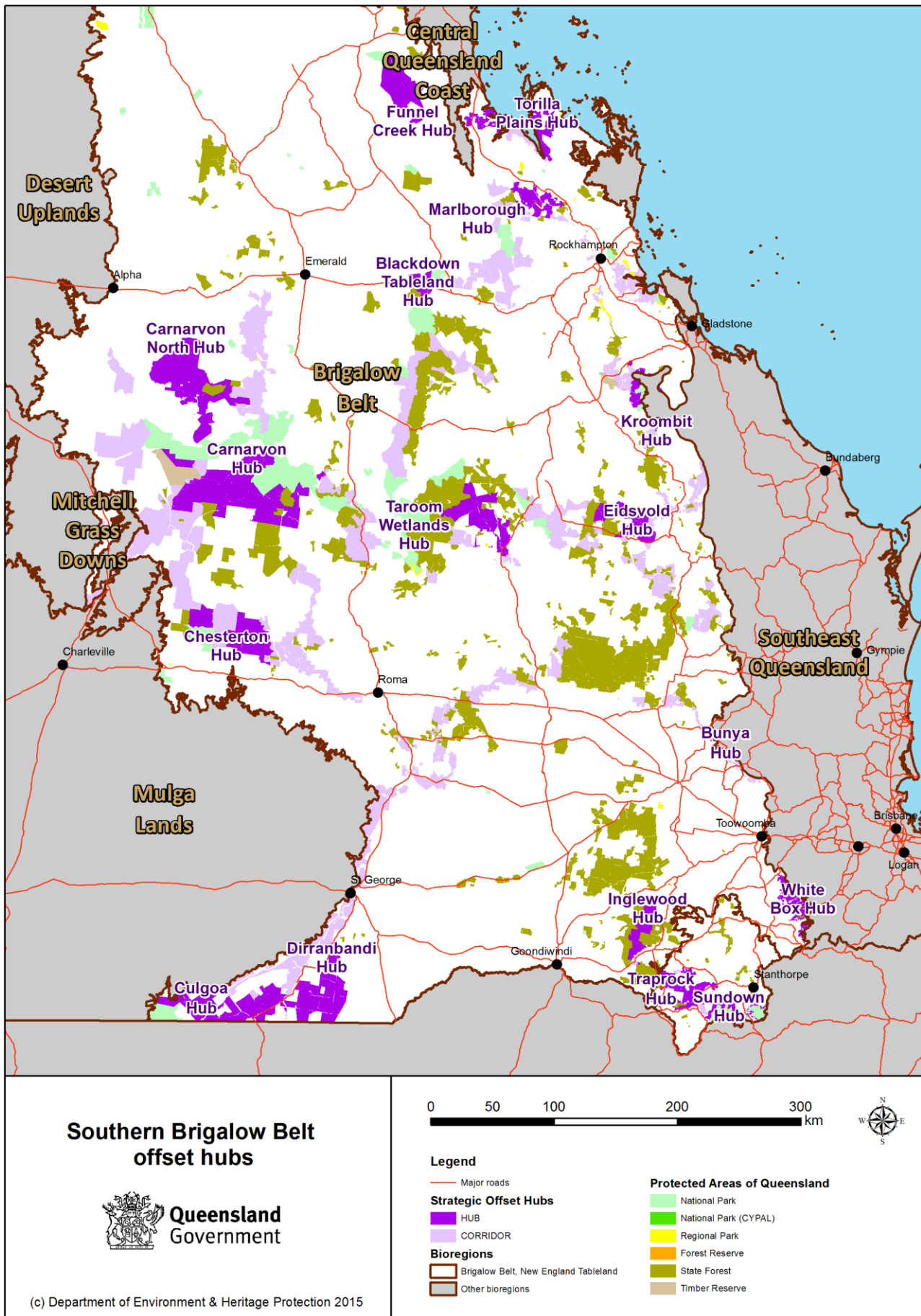
# Environmental Values within SOIC areas

## Summary of areas within the Brigalow Belt South and New England Tableland SOIC areas

	Brigalow Belt South*	New England Tableland
<b>Bioregion area</b>	28,422,395ha	799,378ha
<b>SOIC area</b>	3,540,184ha	89,516ha
<b>Areas in protected estate</b>	765,894ha	27,118ha
<b>SOIC priority one (hubs) area</b>	1,541,651ha	73,683ha
<b>SOIC priority two linkage areas</b>	1,998,532ha	15,831ha
<b>Number of regional ecosystems represented in SOIC area</b>	133	18

\* Brigalow Belt South include areas in the following subregions of the Brigalow Belt North bioregion - Isaac Comet Downs, Marlborough Plains, Basalt Downs and Nebo-Connor Range

Map Two provides the names of each of the areas identified in the southern Brigalow Belt and New England Bioregions, each of which is described on the following pages.



Map 2: The Southern Brigalow Belt strategic offset hubs, with names as referred to in the text.

## Blackdown Tableland Hub

- Covers 21,733ha in area, with representation of the following subregions: Woorabinda - 10,233ha, Isaac Comet Downs - 11,490ha. These subregions currently have 6.9% and 1.2% levels of protection.
- Within the Blackdown Tableland Hub, 2,249ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, natural grasslands and weeping myall woodland cover 1001ha.
- Provides representation of 15 regional ecosystems of which four have endangered Vegetation Management status and three have Of Concern Vegetation Management Status. Thirteen regional ecosystems have low representation in the protected area estate.
- Provides habitat for the endangered bridled nail tail wallaby, endangered plants - *Solanum adenophorum* and *Solanum elaeagnifolium*, and the vulnerable koala and squatter pigeon (southern).
- Nine creeks within the Fitzroy catchment are located within the Blackdown Hub.
- Blackdown Hub is strategically located adjacent and connecting Blackdown Tableland NP and Arthurs Bluff State Forest to Taunton NP and consolidating Wallaby Lane Nature Refuge.

## Bunya Hub

- Covers 9,205ha in area, with representation of the following subregions: Eastern Darling Downs - 4,970ha and South Burnett - 4,235ha, which currently have 0.21% and 4.25% level of protection respectively.
- Within the Bunya hub, 2,331ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, lowland rainforest, semi-evergreen vine thicket and white box woodland cover 2,801ha.
- Provides representation of 20 regional ecosystems of which four have endangered Vegetation Management status and six have of concern Vegetation Management status and twelve regional ecosystems have low representation in the protected area estate.
- Provides habitat for eight threatened fauna species, namely the vulnerable tusked frog, spotted-tailed quoll, collared delima, *Lampropholis colossus*, eastern long-eared bat, koala, black-breasted button-quail. Provides habitat for seven threatened flora species, namely the vulnerable *Bothriocloa bunyensis*, *Callitris baileyi*, *Clematis fawcettii*, *Corynocarpus rupestris subsp. arborescens*, *Cryptocarya floydii*, *Haloragis exalata subsp. velutina*, *Lepidium peregrinum* and *Thesium australe*.
- Bunya Hub is located in the upper catchment of the Balonne-Condamine, Brisbane and Burnett waterways.
- Bunya Hub augments Bunya Mountains National Park.

## Carnarvon Hub

- Covers 317,532ha, with representation of the following subregions: Carnarvon Ranges - 282,969ha, Arcadia 2,885ha, Buckland Basalts - 11,098ha and Southern Downs - 20,580ha. These subregions currently have 9.94%, 11.66%, 36.14% and 0.9% levels of protection.
- Within the Carnarvon hub, 5,597ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, natural grasslands, semi-evergreen vine thicket and weeping myall woodlands cover 14,369ha.
- Provides representation of 38 regional ecosystems, of which four have endangered Vegetation Management status and eight have of concern Vegetation Management status and twenty seven have low representation in the protected area estate.
- Provides habitat for seven threatened fauna species, namely the tusked frog (V), northern quoll (E), southern snapping turtle (CE), squatter pigeon (southern) (V), pale imperial hairstreak (V), powerful owl (V) and koala (SL). Provides habitat for 14 threatened flora species, namely *Acacia islana* (V), *Arthraxon hispidus* (V), *Dichanthium queenslandicum* (V), *Dichanthium setosum* (V), *Discaria pubescens* (NT), *Diuris parvipetala* (V), *Eucalyptus virens* (V), *Haloragis exalata subsp. velutina* (V), *Hibbertia monticola* (NT), *Homoranthus zeteticorum* (NT), *Livistona nitida* (NT), *Lomandra teres* (V), *Rutidosia glandulosa* (NT) and *Shonia carinata* (V).
- In the upper catchment of the Balonne-Condamine, Fitzroy and Warrego.

## Carnarvon North Hub

- Covers 212,465ha, with representation of the following subregions: Carnarvon Ranges - 618ha, South Drummond Basin - 56,031ha and Claude River Downs - 155, 816ha. These subregions currently have 9.94%, 0.92% and 3.77% levels of protection.

- Within the Carnarvon North hub, 3,990ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, coolibah-black box woodlands, natural grasslands, semi-evergreen vine thicket and weeping myall woodlands cover 29,851ha.
- Provides representation of 50 regional ecosystems of which eight have endangered Vegetation Management status and thirteen have of concern Vegetation Management status and thirty-eight have low representation and two have no representation on the protected area estate.
- Provides habitat for seven threatened fauna species, namely - yakka skink (V), koala (SL), Dunmall's snake (V), squatter pigeon (southern) (V), northern quoll (E), Australian painted snipe (V) and Painted honeyeater (V). Provides habitat for nine threatened flora species, namely *Eucalyptus virens* (V), *Arthraxon hispidus* (V), *Cadellia pentastylis* (V), *Acacia islana* (V), *Cyperus clarus* (V), *Dichanthium queenslandicum* (V), *Marsdenia brevifolia* (V), *Corymbia clandestina* (V) and *Solanum elachophyllum* (E).
- Carnarvon Hub is located in the upper catchments of both the Burdekin and Fitzroy.

## Chesterton Hub

- Covers 117,704ha, with representation of the following subregion - Southern Downs which currently has 0.9% level of protection.
- Within the Chesterton hub, 4,405ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow and weeping myall woodlands cover 12,076ha.
- Provides representation of 20 regional ecosystems of which one has endangered Vegetation Management status and four have of concern Vegetation Management status and fourteen have low representation on the protected area estate.
- Provides habitat for nine threatened fauna species - collared delma (V), Dunmall's snake (V), yakka skink (V), Major Mitchell cockatoo (V), eastern long-eared bat (V), squatter pigeon (V), koala (SL) woma (NT) and painted honeyeater (V). Protected habitat for eight threatened flora species - *Acacia islana* (V), *Eucalyptus virens* (V), *Cadellia pentastylis* (V), *Cyperus clarus* (V), *Arthraxon hispidus* (V), *Picris barbarorum* (V), *Acacia wardellii*(NT), and *Bertya calycina* (V).
- Chesterton hub is located in the upper catchments of the Balonne-Condamine and Warrego.

## Culgoa Hub

- Covers 289,001ha, with representation of the following subregions: Nebine Plains - 1,125ha, West Balonne Plains - 10,648ha, Warrambool-Moonie - 113,738ha, Culgoa-Bokhara - 156,503ha and Narrandool - 6,988ha. These subregions currently have 1.63%, 1.32%, 0%, 6.97% and 0% level of protection.
- Within the Culgoa hub, 25,804ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, coolibah-black box woodlands and weeping myall woodlands cover 60,700ha.
- Provides representation of 25 regional ecosystems, of which three have endangered Vegetation Management status and eight have of concern Vegetation Management status and 22 have low representation on the protected area estate.
- Provides habitat for five threatened fauna species and one threatened flora species, namely - Murray cod (V), koala (SL), painted honeyeater (V), Major Mitchell cockatoo (V), yakka skink (V) and *Picris barbarorum* (V).
- The Culgoa hub consolidates important riparian habitats associated with the Ballandool, Balonne, Bokhara rivers and tributaries.

## Dirranbandi Hub

- Covers 8,216ha, with representation in the Warrambool- Moonie subregion, which has no current protection.
- Within the Dirranbandi hub, 1,146ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of the coolibah-black box woodlands covers 185ha.
- Provides representation of eight regional ecosystems of which one has endangered Vegetation Management status and five of concern Vegetation Management status and all have low representation on protected area estate.
- Provides habitat for yakka skink (V), painted honeyeater (V), Major Mitchell Cockatoo (V), *Solanum stenopterum* (V) and *Cyperus clarus* (V).
- The Dirranbandi hub is located in the Balonne-Condamine catchment.

## Eidsvold Hub

- Covers 63,741ha, with representation of the following subregion - Banana-Auburn Ranges that currently has 0.5% level of protection.
- Within the Eidsvold hub, 8,562ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological community of brigalow covers 100ha.
- Provides representation of 28 regional ecosystems of which four have endangered Vegetation Management status and five have of concern Vegetation Management status and 23 have low representation and one has no representation on the protected area estate.
- Provides habitat for ten threatened fauna species, namely - yakka skink (V), squatter pigeon (V), Dunmall's snake (V), Grey snake (E), Painted honeyeater (V), eastern long-eared bat (V), Australian painted snipe (V), large-eared pied bat (V), red goshawk (E) and black-breasted button quail (V). Provides habitat for sixteen threatened flora species, namely - *Acacia islana* (V), *Macrozamia crassifolia* (V), *Eucalyptus taurina* (V), *Acacia wardellii* (V), *Cadellia pentastylis* (V), *Acacia tingoorensis* (V), *Grevillea hockingsii* (V), *Corymbia petalophylla* (V), *Polianthion minutiflorum* (V), *Micromyrtus carinata* (E), *Rutidosia lanata* (V), *Acacia handonis* (V), *Macrozamia platyrhachis* (E), *Cyperus clarus* (V), *Corynocarpus rupestris* (V) and *Denhamia parvifolia* (V).
- Eidsvold hub is located in the upper Burnett catchment.

## Funnel Creek Hub

- Covers 101,111ha, with representation of the following subregions: Isaac- Comet Downs - 96,548ha and Nebo-Connors Range - 4,563ha. These subregions currently have 1.2% and 0% levels of protection respectively.
- Within the Funnel Creek hub, 3,260ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, coolibah-black box woodlands, semi-evergreen vine thicket and weeping myall woodlands cover 10,389ha.
- Provides representation of 23 regional ecosystems of which six have endangered Vegetation Management status and six have of concern Vegetation Management status and all have low representation on the protected area estate.
- Provides habitat for eight threatened fauna species, namely the southern snapping turtle (E), fitzroy river turtle (V), eastern star finch (E), squatter pigeon (southern) (V), koala (SL), ornamental snake (V), Australian painted snipe (V) and Dunmall's snake (V). Provides habitat for eleven threatened flora species, namely *Arthraxon hispidus* (V), *Lissanthe brevistyla* (V), *Hakea trineura* (V), *Pultenaea setulosa* (V), *Capparis humistrata* (E), *Solanum elachophyllum* (E), *Neoroepora buxifolia* (V), *Capparis thozetiana* (V), *Pimelea leptospermoides* (NT), *Corymbia xanthope* (V) and *Dichanthium queenslandicum* (V).
- Funnel Creek Hub is located within the upper catchment of the Fitzroy rive including Funnel creek and the Connors river.

## Girraween Hub

- Covers 5,207ha, with representation of the following subregions: Stanthorpe Plateau - 5,207ha and Tenterfield Plateau - 458ha. These subregions currently have 11.69% and 0.06% levels of protection respectively.
- Within the Girraween hub, 301ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of New England Peppermint Grassy woodlands and White Box woodlands cover 375ha.
- Provides representation of ten regional ecosystems of which five have endangered Vegetation Management status and two have of concern Vegetation Management status and three have low and one has no representation on the protected area estate.
- Provides habitat for twelve threatened fauna species, namely tusked frog (V), silver perch (CE), spotted-tailed quoll (V), New England treefrog (V), Murray cod (V), Fleay's barred frog (E), brush-tailed rock-wallaby (V), koala (SL), southern emu-wren (V), border thick-tailed gecko (LC), common wombat (NT) and Bell's turtle (V). Provides habitat for 29 threatened flora species, namely - *Acacia pubifolia* (V), *Acacia ruppii* (V), *Allocasuarina rupicola* (NT), *Bertya glandulosa* (V), *Bertya recurvata* (V), *Boronia amabilis* (NT), *Boronia granitica* (E), *Caladenia atroclavia* (E), *Conospermum burgessiorum* (NT), *Dodonaea hirsuta* (V), *Eucalyptus codonocarpa* (NT), *Eucalyptus scoparia* (V), *Genoplesium sigmoideum* (NT), *Hakea macrorrhyncha* (V), *Hibbertia elata* (NT), *Homoranthus papillatus* (V), *Kardomia granitica* (E), *Kardomia silvestris* (E), *Leionema ambiens* (NT), *Macrozamia viridis* (E), *Melaleuca flavovirens* (NT), *Melaleuca williamsii* (V), *Melaleuca williamsii subsp. fletcheri* (V), *Mirbelia confertiflora* (NT), *Persoonia daphnoides* (NT), *Phebalium glandulosum subsp. eglandulosum* (V), *Phebalium whitei* (V), *Prostanthera petraea* (NT) and *Tylophora woollsi* (E).

- The Girraween hub is located in the Border rivers catchment.

## Inglewood Hub

- Covers 40,626ha with representation of the following subregion - Inglewood Sandstones and has 0.43% level of protection.
- Within the Inglewood hub, 463ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological community of weeping myall woodland covers 558ha.
- Provides representation of eleven regional ecosystems of which one has endangered Vegetation Management status and two have of concern Vegetation Management status and 10 have low and one has no representation on the protected area estate.
- Provides habitat for four threatened fauna species, namely - common death adder (NT), glossy black-cockatoo (E), eastern long-eared bat (V) and brush-tailed rock wallaby (V). Provides habitat for five threatened flora species, namely - *Aristida forsteri* (E), *Commersonia inglewoodensis* (E), *Eucalyptus curtisii* (NT), *Macrozamia machinii* (V) and *Prostanthera sp.* (Dunmore D.M.Gordon 8A) (V).
- The Inglewood hub is located in the Border Rivers catchment.

## Kroombit Hub

- Covers 36,975ha with representation of the following subregions: Burnett-Curtis Hills and Ranges - 526ha, Callide Creek Downs - 71ha, Marlborough Plains - 766ha and Mount Morgan Ranges - 35,612ha.
- Within the Kroombit hub, 3,175ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological community of semi-evergreen vine thicket covers 1ha.
- Provides representation of 25 regional ecosystems of which five have of concern Vegetation Management status and thirteen have low representation on the protected area estate.
- Provides habitat for eleven threatened fauna species, namely - glossy black cockatoo (E), collared delma (V), red goshawk (E), powerful owl(V), squatter pigeon (V), yakka skink (V), koala (SL), ghost bat(V), northern quoll (LC), Dunmalls snake (V), Australian painted snipe(V), grey snake (V), and black-breasted button quail (V). Provides habitat for fourteen threatened flora species, namely - *Acacia pedleyi* (V), *Bertya opposens* (LC), *Cossinia australiana* (E), *Cycas megacarpa* (E), *Decaspermum struckoiligum* (E), *Eucalyptus decolor* (NT), *Graptophyllum excelsum* (NT), *Hernandia bivalvis* (NT), *Macropteranthes leiocaulis* (NT), *Melaleuca groveana* (NT), *Polianthion minutiflorum* (V), *Samadera bidwillii* (V) and *Streblus pendulinus* (LC).
- Kroombit hub falls within the Calliope and Fitzroy catchments.

## Lower Fitzroy Floodplain Hub

- Covers 59,772ha, with representation of the Marlborough Plains subregion. This subregion currently has 1.35% level of protection.
- Within the Lower Fitzroy Floodplain hub, 675ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, coolibah-black box woodlands, semi-evergreen vine thickets and weeping myall woodlands cover 962ha.
- Provides representation of twenty three regional ecosystems of which two have endangered Vegetation Management Status and seven have of concern Vegetation Management Status and fourteen have low representation on the protected area estate.
- Provides habitat for twelve threatened fauna species, namely - glossy black-cockatoo (V), northern quoll (LC), ornamental snake (V), southern snapping turtle (CE), yellow chat (E), beach stone-curlew (V), Dunmall's snake (V), squatter pigeon (V), eastern long-eared bat (V), koala (SL), black-throated finch (E) and Fitzroy River turtle (V). Provides habitat for six threatened flora species, namely - *Cycas megacarpa* (E), *Cycas ophiolitica* (E), *Eucalyptus raveretiana* (LC), *Graptophyllum excelsum* (NT), *Macropteranthes leiocaulis* (NT) and *Marsdenia brevifolia* (V).
- Three Directory of Important Wetlands occur within the Lower Fitzroy Floodplain hub, namely - the Fitzroy River Delta (43,969ha), Great Barrier Reef Marine Park (14ha) and the Narrows (3,555ha).

## Marlborough Hub

- Covers 47,190ha, with representation of the Marlborough Plains subregion. This subregion currently has 1.35% level of protection.

- Within the Marlborough hub, 2,152ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow and coolibah- black box woodlands cover 363ha.
- Provides representation of seventeen regional ecosystems of which two have endangered Vegetation Management Status and five have of concern Vegetation Management Status and sixteen have low representation on the protected area estate.
- Provides habitat for four threatened fauna species, namely - southern snapping turtle (CE), squatter pigeon (V), koala (SL) and Fitzroy river turtle (V). Provides habitat for eighteen threatened flora species, namely - *Bursaria reevesii* (V), *Capparis humistrata* (E), *Capparis thozetiana* (V), *Cerbera dumicola* (NT), *Corymbia xanthope* (V), *Cycas ophiolitica* (E), *Hakea trineura* (V), *Lissanthe brevistyla* (V), *Macrozamia serpentina* (E), *Marsdenia brevifolia* (V), *Myrsine serpenticola* (E), *Neoroepera buxifolia* (V), *Olearia macdonnellensis* (E), *Pimelea leptospermoides* (NT), *Pultenaea setulosa* (V), *Samadera bidwillii* (V), *Stackhousia tryonii* (NT) and *Streblus pendulinus* (LC).
- The Marlborough hub is contains several permanent waterholes within the Fitzroy river.

## Styx Hub

- Covers 33,266ha with representation of the Marlborough Plains subregion which has 1.35% level of protection.
- Within the Styx hub, 516ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow and semi-evergreen vine thicket cover 290ha.
- Provides representation of nineteen regional ecosystems of which two have endangered Vegetation Management Status and five have of concern Vegetation Management Status and thirteen have low representation on the protected area estate.
- Provides habitat for eleven threatened fauna species, namely - ornamental snake (V), yellow chat (E), beach stone-curlew (V), ghost bat (V), koala (SL), squatter pigeon (V), Dunmall's snake (V), Coastal sheathtail bat (V), red goshawk (E), Australian painted snipe (V) and large-eared pied bat (V). Provides habitat for seven threatened flora species, namely - *Corymbia xanthope* (V), *Pultenaea setulosa* (V), *Hakea trineura* (V), *Pimelea leptospermoides* (NT), *Parsonia larcomensis* (V), *Macrozamia serpentina* (LC) and *Marsdenia brevifolia* (V).
- Styx Hub is located within the Styx river catchment.

## Sundown Hub

- Covers 13,623ha with representation of the following subregions - Nandewar Northern Complex - 12,485ha and Stanthorpe Plateau - 1,138ha and these subregions currently have 1.48% and 11.69% level of protection.
- Within the Sundown Hub, 1,490ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological community of white-box woodlands covers 8,377ha.
- Provides representation of seven regional ecosystems of three have of concern Vegetation Management status and one has low and one has no representation on the protected area estate.
- Provides habitat for eight threatened fauna species, namely - glossy black-cockatoo (V), spotted-tailed quoll (V), squatter pigeon (V), Murray cod (V), eastern long-eared bat (V), brush-tailed rock-wallaby (V), koala (SL) and border thick-tailed gecko (LC). Provides habitat for eight threatened flora species, namely - *Cadellia pentastylis* (V), *Diuris parvipetala* (V), *Homoranthus montanus* (V), *Kardomia granitica* (E), *Lepidium peregrinum* (LC), *Macrozamia occidua* (V), *Macrozamia viridis* (E) and *Melaleuca flavovirens* (NT).
- Sundown hub is located in the Borders river catchment.

## Taroom Wetlands Hub

- Covers 108,586ha with representation of the following subregions - Carnarvon Ranges - 73,494ha, Taroom Downs -17,625ha and Barakula - 17,466ha. These subregions have 9.94%, 0.09% and 0.17% levels of protection respectively.
- Within the Taroom Wetlands hub, 5,499ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, coolibah-black-box woodlands and weeping myall woodlands cover 6,422ha.
- Provides representation of twenty regional ecosystems of which two have endangered Vegetation Management status and five have of concern Vegetation Management status and fifteen have low representation on the protected area estate.
- Provides habitat for seven threatened fauna species, namely - Boggomoss snail (CE), tusked frog (V), large-eared pied bat (V), squatter pigeon (southern) (V), pale imperial hairstreak (V), koala (SL) and golden-tailed

gecko (NT). Provides habitat for six threatened flora species, namely - *Acacia argentina* (V), *Acacia sp.* (Ruined Castle Creek) (E), *Cadellia pentastylis* (V), *Cryptandra ciliata* (NT), *Livistona nitida* (NT) and *Rutidosia glandulosa* (NT).

- Taroom Wetlands hub has a Directory of Important Wetlands and some springs located within its area.

## Torilla Plains Hub

- Covers 38,956ha with representation of Marlborough Plains subregion which currently has 1.35% level of protection.
- Within the Torilla Plains hub, 483ha of high value regrowth has been identified as having a viable opportunity of regeneration and restoration of ecological function.
- The EPBC listed ecological community of semi-evergreen vine thicket covers 35ha.
- Provides representation of seventeen regional ecosystems of which five have of concern Vegetation Management Status and thirteen have low representation on the protected area estate.
- Provides habitat for eight threatened fauna species, namely - yellow chat(E), coastal sheath-tail bat (V), Australian painted snipe (V), Dunmall's snake (V), large-eared pied bat (V), squatter pigeon (V), ghost bat (V), and red goshawk (E). Provides habitat for ten threatened flora species, namely - *Corymbia xanthope* (V), *Macrozamia serpentina* (LC), *Hakea trineura* (V), *Marsdenia brevifolia* (V), *Pultenaea setulosa* (V), *Capparis humistrata* (E), *Neoroepera buxifolia*(V), *Parsonia larcomensis* (V), *Olearia macdonnellensis* (E), and *Lissanthe brevistyla* (V).
- Torilla Plains hub is located within the Shoalwater catchment.

## Traprock Hub

- Covers 55,591ha with representation of the following subregions - Inglewood Sandstones - 468ha and Nandewar Northern Complex - 55,123ha. These subregions currently have 0.43% and 1.48% level of protection.
- Within the Traprock hub, 8,334ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological community of white box woodland covers 24, 154ha.
- Provides representation of sixteen regional ecosystems of which ten have low and four have no representation on the protected area estate.
- Provides habitat for ten threatened fauna species, namely - common death adder (NT), spotted-tailed quoll (V), squatter pigeon (V), brush-tailed rock wallaby (V), koala (SL), border thick-tailed gecko (LC), yakka skink (V), collared delma (V), eastern long-eared bat (V), swift parrot (E) and large-eared pied bat (V). Provides habitat for twelve threatened flora species, namely - *Astrotricha roddii* (E), *Leucopogon sp.* (E), *Macrozamia cranei* (E), *Macrozamia machinii* (V), *Pterostylis setifera* (NT), *Thesium australe* (V), *Bertya opponens*(LC), *Lepidium pergrinum*, *Anthochaera phrygia*, *Eucalyptus virens* (V), *Arthraxon hispidus* (V) and *Paspalidium grandispiculatum* (V).
- Traprock hub is located in the Border rivers catchment.

## White Box Hub

- Covers 54,500ha with representation of the following subregions - Eastern Darling Downs - 44,479ha, Moreton Basin - 44ha and Scenic Rim - 9,977ha. These subregions currently have 0.21%, 2.51% and 29.43% level of protection.
- Within the White Box hub, 2,760ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, lowland rainforest, natural grasslands, semi-evergreen vine thicket and white box woodlands cover 28,860ha.
- Provides representation of twenty-seven regional ecosystems of which five have endangered Vegetation Management status and eleven have of concern Vegetation Management status and fifteen have low representation in the protected area estate.
- Provides habitat for twenty-one threatened fauna species, namely - common death adder (NT), tusked frog (V), rufous scrubbird (V), glossy black-cockatoo (V), large-eared pied bat (V), three-toed snake-tooth skink (LC), eastern bristlebird (E), spotted-tailed quoll (V), red and yellow mountainfrog (NT), cascade treefrog (V), Murray cod (V), Albert's lyrebird (NT), Fleay's barred frog (E), giant barred frog (E), powerful owl (V), brush-tailed rock wallaby (V), koala (V), long-nosed potoroo (V), New Holland mouse (V), Hastings river mouse (V) and black-breasted button-quail (V). Provides habitat for four threatened flora species, namely - *Leucopogon sp.* (Coolmunda D. Halford) (E), *Macrozamia cranei* (E), *Macrozamia machinii* (V) and *Pterostylis setifera* (NT).



- White Box hub is the Border rivers catchment.

## Linkage Areas

- Cover 2,187,920ha with representation of the following 34 subregions - Dulacca Downs - 17,928ha, Nebo-Connor Ranges - 11,657ha, Callide Creek Downs - 71ha, Southern Downs - 641,976ha, Mount Morgan Ranges - 89,362ha, Eastern Darling Downs - 32,839ha, Carnarvon Ranges - 168,307ha, Culgoa - Bokhara - 72,499ha, Claude River Downs - 149,298ha, South Burnett - 1,876ha, Nandewar Northern Complex - 5,716ha, Warrambool - Moonie (53,772ha), Banana- Auburn Ranges - 125,929ha, Arcadia - 84,298ha, Marlborough Plains - 109,389ha, Burnett-Curtis Hills and Ranges - 3,168ha, Boomer Range - 61,752ha, South Drummond Basin - 26,847ha, Weribone High - 89,485ha, Taroom Downs - 16,634ha, Upper Belyando Floodout - 44ha, Buckland Basalts - 9,399ha, Woorabinda - 102,402ha, Tenterfield Plateau - 2,836ha, Isaac-Comet Downs - 88,218ha, Inglewood Sandstones - 1,200ha, Narrandool - 341ha, Northern Eastern Plains - 38,268ha, Basalt Downs - 20,444ha, Dawson River Downs - 35,447ha, West Balonne Plains - 47,283ha, Southern Wooded Downs - 10,158ha, Barakula - 62,222ha and Stanthorpe Plateau - 6,854ha. Six of these subregions have no representation on the protected area estate, namely - Dulacca Downs, Nebo-Connors Ranges, Warrambool-Moonie, Weribone High, Narrandool and North Eastern Plains.
- Within the linkage areas, 149,724ha of high value regrowth has been identified as having a viable opportunity for regeneration and restoration of ecological function.
- The EPBC listed ecological communities of brigalow, coolibah-black box woodlands, low rainforest, natural grasslands, semi-evergreen vine thickets, weeping myall woodlands and white box grassy woodlands cover 157,474ha.
- Provides representation of 153 regional ecosystems of which 29 have endangered Vegetation Management Status and 52 have of concern Vegetation Management Status, and 122 have low and 25 have no representation on the protected area estate.

Provides habitat for 36 threatened fauna species, namely - Common death adder (NT), boggomoss snail (E), Bunya mountains sunskink (NT), tusked frog (V), woma (NT), silver perch (CE), glossy black-cockatoo (V), northern quoll (E), spotted-tailed quoll (V), collared delma (V), ornamental snake (V), yakka skink (V), southern snapping turtle (LC), yellow chat (E), red goshawk (E), beach stone-curlew (V), Dunmall's snake (V), squatter pigeon (southern), (V), grey snake (E), Mary River cod (E), Murray cod (V), Australian lungfish (V), star finch (E), eastern long-eared bat (V), bridled naitail wallaby (E), pale imperial hairstreak (V), plains wanderer (V), brush-tailed rock-wallaby (V), koala (SL), black-throated finch (E), Fitzroy River turtle (V), golden-tailed gecko (NT), black-breasted button-quail (V), border thick-tailed gecko (LC) and common wombat (NT). Provides habitat for 126 threatened flora species, namely - *Acacia argentina* (V), *Acacia barakulensis* (V), *Acacia calantha* (NT), *Acacia curranii* (V), *Acacia deuteroneura* (V), *Acacia eremophiloides* (V), *Acacia grandifolia* (LC), *Acacia handonis* (V), *Acacia hockingsii* (V), *Acacia islana* (V), *Acacia pedleyi* (V), *Acacia porcata* (E), *Acacia pubifolia* (V), *Acacia storyi* (NT), *Apatophyllum teretifolium* (NT), *Aphyllorchis anomala* (NT), *Arthraxon hispidus* (V), *Bertya glandulosa* (V), *Bertya granitica* (E), *Bertya opponens* (LC), *Bertya pedicellata* (NT), *Boronia amabilis* (NT), *Boronia grimshawii* (V), *Bothriochloa bunyensis* (V), *Bursaria reevesii* (V), *Cadellia pentastylis* (V), *Caladenia atroclavia* (E), *Callitris baileyi* (NT), *Calytrix gumulmundensis* (V), *Calytrix islensis* (V), *Capparis humistrata* (E), *Capparis thozetiana* (V), *Cerbera dumicola* (NT), *Commersonia beeronensis* (V), *Corymbia petalophylla* (V), *Corymbia scabrida* (NT), *Corymbia xanthope* (V), *Cossinia australiana* (E), *Cryptandra ciliata* (NT), *Cryptocarya floydii* (NT), *Cycas megacarpa* (E), *Cycas ophiolitica* (E), *Cymbonotus maidenii* (E), *Cyperus clarus* (V), *Dansiea elliptica* (NT), *Daviesia discolor* (V), *Daviesia quoquoversus* (V), *Decaspermum struckoiligum* (E), *Denhamia parvifolia* (V), *Dichanthium queenslandicum* (V), *Dodonaea hirsuta* (V), *Eremochloa muricata* (E), *Eriocaulon carsonii* (E), *Eucalyptus argophloia* (V), *Eucalyptus beaniana* (V), *Eucalyptus broviniensis* (E), *Eucalyptus curtisii* (NT), *Eucalyptus decolor* (NT), *Eucalyptus pachycalyx* subsp. *waajensis* (E), *Eucalyptus raveretiana* (LC), *Eucalyptus scoparia* (V), *Eucalyptus sideroxylon* subsp. *improcera* (V), *Eucalyptus taurina* (V), *Eucalyptus virens* (V), *Fimbristylis vagans* (V), *Graptophyllum excelsum* (NT), *Grevillea hockingsii* (V), *Hakea trineura* (V), *Hernandia bivalvis* (NT), *Hibbertia elata* (NT), *Hibbertia monticola* (NT), *Homoranthus decumbens* (V), *Kardomia silvestris* (E), *Lepidium peregrinum* (LC), *Leptospermum venustum* (V), *Lissanthe brevistyla* (V), *Livistona fulva* (NT), *Livistona nitida* (NT), *Lomandra teres* (V), *Macropteranthes leiocaulis* (NT), *Macrozamia crassifolia* (V), *Macrozamia occidua* (V), *Macrozamia pauli-guilielmi* (E), *Macrozamia platyrhachis* (E), *Macrozamia serpentina* (E), *Macrozamia viridis* (E), *Marsdenia brevifolia* (V), *Melaleuca groveana* (NT), *Micromyrtus carinata* (E), *Micromyrtus patula* (E), *Micromyrtus rotundifolia* (V), *Myrsine serpenticola* (E), *Neoropera buxifolia* (V), *Newcastelia velutina* (V), *Ochrosperma obovatum* (V), *Olearia macdonnellensis* (E), *Parsonsia kroombitensis* (V), *Persoonia daphnoides* (NT), *Phaius australis* (E), *Pimelea leptospermoides* (NT), *Polianthion minutiflorum* (V), *Pomaderris coomingalensis* (E), *Pseudanthus pauciflorus* subsp. *arenicola* (NT), *Psydrax reticulata* (V), *Pterostylis setifera* (NT), *Pultenaea setulosa* (V), *Rhaponticum australe* (V), *Ricinocarpos canianus* (E), *Rutidosia crispata* (V), *Rutidosia glandulosa* (NT), *Rutidosia lanata* (V), *Samadera bidwillii* (V), *Sannantha brachypoda* (NT), *Shonia carinata* (V), *Solanum adenophorum* (E), *Solanum elachophyllum* (E), *Solanum lythrocarpum* (V), *Solanum papaverifolium* (E), *Solanum stenopterum* (V), *Sophora fraseri* (V), *Stackhousia tryonii* (NT), *Streblus pendulinus* (LC), *Tylophora woollsii* (E),

*Vittadinia decora* (NT), *Xerothamnella herbacea* (E) and *Zieria obovata* (V).

- Provides representation of several artersian discharge springs and ten Directory of Important Wetlands, namely - Balooone River Floodplain, Boggomoss Springs, Broadsound, Fairbairn Dam, Fitzroy River Delta, Fitzroy River Floodplain, Great Barrier Reef Marine Park, Palm Tree and Robinson Creeks and The Narrows.