

Regional ecosystem 5.3.1

Description: Eucalyptus camaldulensis woodland fringing streamlines. Eucalyptus coolabah is frequently present on the top of the river banks. Melaleuca argentea is present in the bed of major channels in the north, while Melaleuca trichostachya occupies this habitat further south. Melaleuca bracteata occurs along minor channels in the north, while Lophostemon grandiflorus subsp. riparius is occasionally present on the banks of major northern rivers. Shrubs are usually sparse in the streamlines. The ground layer is dense and dominated by tussock grasses, with Bothriochloa spp., Dichanthium fecundum and Themeda spp. usually dominating. Sedges are frequent on the channel floors and banks. Occurs along sandy or gravelly drainage lines, channels and inter-channel areas. Soils very deep, coarse sands, silty clays, sandy clay loams and gravelly loams. Riverine. (BVG1M: 16a).

Short description: Eucalyptus camaldulensis +/- Melaleuca spp. woodland on levees and banks of major rivers

Supplementary descriptions: Neldner (1991), 1a (60)

Subregions:

Protected areas:

Extent in reserves:

Wetland: Riverine

Special values: 5.3.1: High fauna diversity, especially birds.

Comments: 5.3.1: Heavily impacted by total grazing pressure. Habitat for feral pigs. Exotic weed species occur in disturbed sandy areas. Naturalised species associated with this regional ecosystem include *Vachellia farnesiana and *Parkinsonia aculeata.

Estimated extent:¹

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.2

Description: *Eucalyptus camaldulensis* predominates in the gravelly and sandy major channels, while *Eucalyptus coolabah* usually predominates on the clayey plains and banks immediately adjacent. A distinct but discontinuous, canopy is formed, with both *Eucalyptus camaldulensis* and *Eucalyptus coolabah* sometimes being present. Scattered shrubs may occur, but rarely form a well-defined layer. The ground layer is open and dominated by perennial grasses. Scattered forbs are present, and disturbed sandy areas are often invaded by introduced weeds. Occurs along sandy or gravelly upper drainage lines, channels and inter-channel flats. Also occurs as low woodland in drainage lines of some residuals. Soils variable and include deep, loose coarse sands, silty clays, sandy clay loams and very gravelly loams. Riverine. (BVG1M: 16a).

Short description: *Eucalyptus camaldulensis* +/- *Eucalyptus coolabah* open woodland on levees and banks of drainage lines

Supplementary descriptions: Neldner (1991), 1b (59); Boyland (1984), 1a; Wilson and Purdie (1990a), H1, W2 (74)

Subregions: 4, 2, 6, 9, (7), (5), (4.3), (6.10), (8), (4.4), (4.5)

Protected areas: Bladensburg NP, Diamantina NP, Pullen Pullen SWR

Extent in reserves: Low

Wetland: Riverine

Special values:

Comments: 5.3.2: Heavily impacted by total grazing pressure. Habitat for feral pigs.

Estimated extent:¹ Pre-clearing 108000 ha; Remnant 2021 108000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.3

Description: [RE not in use]²: This regional ecosystem is now mapped as 5.3.4. *Eucalyptus camaldulensis* predominates, with *Acacia georginae*, *A. cyperophylla* var. *cyperophylla* and *Atalaya hemiglaucula* frequently present and forming part of the open canopy. Scattered low shrubs such as *Senna artemisioides* subsp. *Oligophylla* and *Eremophila freelingii* usually present, but do not form a distinct layer. The ground layer is sparse to open, and dominated by tussock grasses. Occurs on streamlines and channels draining dissected residuals and plateaus. Soils gravelly loams to sandy clay loams. Occurs on streamlines and channels draining dissected residuals and plateaus. Soils gravelly loams to sandy clay loams. Riverine. (BVG1M: 16a).

Short description: *Eucalyptus camaldulensis* +/- *Atalaya hemiglaucula* +/- *Acacia georginae* +/- *Acacia cyperophylla* var. *cyperophylla* woodland on drainage lines within ranges

Supplementary descriptions: Neldner (1991), 1c (58)

Subregions:

Protected areas:

Extent in reserves:

Wetland: Riverine

Special values:

Comments: 5.3.3: Toko Ranges.

Estimated extent:¹

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.4

Description: Eucalyptus camaldulensis usually predominates, a number of Acacia spp. may be present and form part of the open canopy including Acacia aneura, Acacia cambagei, Acacia georginae and Acacia cyperophylla var. cyperophylla. Scattered shrubs are usually present including Atalaya hemiglauc, but do not form a distinct layer. The ground layer is sparse to open, and dominated by tussock grasses including Chrysopogon fallax, Eulalia aurea and Themeda triandra. Occurs on streamlines and channels draining dissected residuals and plateaus. Soils gravelly loams to sandy clay loams. Riverine. (BVG1M: 16a).

Short description: Eucalyptus camaldulensis +/- Acacia aneura +/- Acacia cambagei +/- Acacia georginae +/- Acacia cyperophylla var. cyperophylla woodland on drainage lines within ranges

Supplementary descriptions: Neldner (1991), 1d (58); Wilson and Purdie (1990a), A2, W2 (74)

Subregions: 4, 6, 2, (6.9), (4.4), (5), (1), (4.3), (7)

Protected areas: Welford NP, Diamantina NP, Pullen Pullen SWR, Goneaway NP

Extent in reserves: Medium

Wetland: Riverine

Special values:

Comments: 5.3.4: RE 5.3.3 was amalgamated into this RE. Winton plateau, Toko Range.

Estimated extent:¹ Pre-clearing 51000 ha; Remnant 2021 51000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.5

Description: Eucalyptus coolabah predominates forming a well-defined but discontinuous canopy with sparsely scattered trees such as Acacia cambagei and Lysiphyllum gilvum and shrubs such as Acacia salicina, Acacia stenophylla and Eremophila bignoniiflora occurring frequently. Duma florulenta often forms a shrub layer. The ground stratum ranges from sparse to dense and is dominated by perennial grasses and sedges. Species such as Cyperus victoriensis, Dichanthium fecundum, Paspalidium jubiflorum and Sporobolus mitchellii are common. Occurs on levees and banks of larger channels on broader braided alluvial plains. Soils very deep, brown or grey clays with sand and silt bands common in profile. Riverine. (BVG1M: 16a).

Short description: Eucalyptus coolabah open woodland +/- Duma florulenta shrubland on braided channel systems

Supplementary descriptions: Neldner (1991), 2a (63); Wilson and Purdie (1990a), W2 (75); Dawson (1974), W5 (26 in part)

Subregions: 4, 5, 1, (3), (4.5), (2), (4.4)

Protected areas: Welford NP, Bladensburg NP

Extent in reserves: Low

Wetland: Riverine

Special values:

Comments: 5.3.5: Asteraceae prevalent following favourable seasons. Heavily impacted by total grazing pressure. Habitat for feral pigs.

Estimated extent:¹ Pre-clearing 39000 ha; Remnant 2021 39000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.6

Description: Eucalyptus coolabah open woodland. The ground stratum is highly variable and ranges from very sparse to dense and in areas may be dominated by the perennial grasses *Eragrostis setifolia* and/or *Sporobolus mitchellii* and/or seasonally abundant ephemeral herbs. The latter includes the grasses *Dactyloctenium radulans*, *Dichanthium* spp. and *Iseilema vaginiflorum* which occur infrequently and the forbs *Alternanthera nodiflora*, *Calotis hispidula*, *Centipeda thespidioides*, *Stemodia glabella*, *Cullen cinereum*, *Senecio depressicola* and *Streptoglossa adscendens*, which are frequently present. A number of other ephemeral forbs, including species from the *Apiaceae*, *Convolvulaceae*, *Fabaceae*, *Goodeniaceae*, and *Malvaceae* occur infrequently but may be seasonally prominent. Occurs on flood plains. Associated soils are deep, grey and brown cracking clays. Not a Wetland. (BVG1M: 16c).

Vegetation communities in this regional ecosystem include:

5.3.6x1: Eucalyptus coolabah predominates forming an open woodland with a prominent low shrub stratum dominated by *Duma florulenta* and/or *Chenopodium auricomum* and/or *Atriplex nummularia*. Occurs on flood plains where incidence of floodwater inundation is somewhat extended due to constrictions or impediments. With decreasing duration of inundation grades into Eucalyptus coolabah open woodland on alluvial plains (5.3.6) and with increasing duration grades into *Duma florulenta* open shrubland (5.3.13a). Associated soils are deep, grey and brown cracking clays. Palustrine. (BVG1M: 16c).

5.3.6x2: Eucalyptus ochrophloia woodland, occasionally with Eucalyptus coolabah in wetter areas.

Chenopodium auricomum commonly occurs in the shrub layer, *Eremophila bignoniiflora* and *Eremophila maculata* may occur. The ground layer is seasonally variable, composed of perennial grasses and ephemeral herbs. Frequent species can include *Sclerolaena tricuspidis*, *Sclerolaena glabra*, *Sclerolaena anisacanthoides*, *Neobassia proceriflora*, *Eragrostis setifolia* and *Sporobolus actinocladius*. Occurs on alluvial plains or in shallow linear depressions. Soils are usually grey or brown alluvial cracking clays. Not a Wetland. (BVG1M: 16c).

Short description:	Eucalyptus coolabah open woodland on alluvial plains
Supplementary descriptions:	Neldner (1991), 2b (64); Boyland (1984), 1b, 1c; Dawson (1974), W5 (26 in part);
Subregions:	6, 3, 5, 9, 2, (11), (4), (4.2), (10), (6.10)
Protected areas:	Diamantina NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	5.3.6x2: High fauna diversity, particularly bird species. Seasonal nectar resource with potential to draw in little red flying fox (<i>Pteropus scapulatus</i>).
Comments:	5.3.6: Heavily impacted by total grazing pressure. Habitat for feral pigs. 5.3.6x1: Similar to 5.3.18a but a Eucalyptus coolabah low open woodland. Occurs where the flood plain is dissected into multiple segments typically running between dunes. Gradient is very low and slow moving floodwaters pond for sufficient time to act as a wooded palustrine wetland. Differs from 5.3.6 in duration and frequency of inundation and consequently frequency of <i>Duma florulenta</i> and <i>Chenopodium auricomum</i> . South western Georgina - Eyre plains. Bulloo river floodout. Heavily impacted by total grazing pressure. Habitat for feral pigs. 5.3.6x2: Highly valued for honey production. This community can grade into Eucalyptus coolabah open woodland. Occurs on the Bulloo River floodplain.
Estimated extent:¹	Pre-clearing 113000 ha; Remnant 2021 113000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.3.7

Description: Eucalyptus coolabah low open woodland, common canopy species include Lysiphyllum gilvum, Acacia stenophylla and Acacia cambagei. Usually with a prominent low shrub stratum dominated by Duma florulenta and sometimes Chenopodium auricomum. The channel beds and lower slopes of the banks are usually bare although the ephemeral sedge Cyperus pygmaeus and Isolepis australiensis and forbs such as Glinus lotoides, Mimulus gracilis, Stemodia glabella, Polygonum plebeium, Rorippa eustylis and Rumex crystallinus colonise the moist mud as floodwaters recede. The upper slopes and flats are dominated by the perennial graminoids Cyperus victoriensis and Sporobolus mitchellii, with Eragrostis setifolia common in some areas. Scattered tussocks of Paspalidium jubiflorum are frequently present. The ephemeral forb Cullen cinereum may be seasonally co-dominant while Persicaria lapathifolia and Polymeria longifolia are locally prominent in some areas. Calotis hispidula, Euphorbia drummondii and Wahlenbergia gracilis occur frequently, while a variety of other forbs are present infrequently. Occurs along major channels on alluvial plains with braided channel systems. Associated soils are often very deep, alkaline, grey, red or brown cracking clays with some alluvial texture contrast soils. Surface silt and sand often form a surface crust. Riverine. (BVG1M: 16c).

Short description: Eucalyptus coolabah +/- Lysiphyllum gilvum +/- Acacia stenophylla +/- Acacia cambagei low open woodland on major channels

Supplementary descriptions: Neldner (1991), 17a; Boyland (1984), 8; Dawson (1974), W4, W5 (26)

Subregions: 5, 2, 3, 4, (9), (6), (13), (4.2), (7), (1), (4.3), (6.9), (12), (8)

Protected areas: Diamantina NP, Welford NP

Extent in reserves: Low

Wetland: Riverine

Special values: 5.3.7: Potential habitat for NCA listed species: Acacia peuce.

Comments: 5.3.7: Tree height decreases in less frequently flooded areas. Low woodland may develop along larger channels. Merges into E. coolabah low open woodland (5.3.8a) on smaller channels. Highly modified floristic composition of ground layer. Feral pig habitat. Naturalised species associated with this regional ecosystem include *Portulaca oleracea.

Estimated extent:¹ Pre-clearing 92000 ha; Remnant 2021 92000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.8

Description: Eucalyptus coolabah low open woodland with a distinct and semi-continuous, low shrub layer dominated by *Duma florulenta*. Scattered shrubs including *Acacia stenophylla*, *Eremophila bignoniiflora* and *Chenopodium auricomum* occur frequently. The ground cover is dominated by the perennial grasses *Eragrostis setifolia* and *Sporobolus mitchellii* and/or seasonally abundant ephemeral herbs. The latter includes the grasses *Dactyloctenium radulans*, *Dichanthium* spp. and *Iseilema vaginiflorum* which occur infrequently and the forbs *Alternanthera nodiflora*, *Calotis hispidula*, *Centipeda thespidioides*, *Stemodia glabella*, *Cullen cinereum*, *Senecio depressicola* and *Streptoglossa adscendens*, which are frequently present. A number of other ephemeral forbs, including species from the Apiaceae, Convolvulaceae, Fabaceae, Goodeniaceae, and Malvaceae occur infrequently but may be seasonally prominent. Widespread on braided drainage systems, minor drainage lines, fringing flood plain lakes and on claypans in dunes. Associated soils are very deep, grey and brown cracking clays with a self mulching surface. Surface silt and sand bands are common in soil profile. Riverine. (BVG1M: 16a).

Vegetation communities in this regional ecosystem include:

5.3.8a: Eucalyptus coolabah low open woodland with a distinct and semi-continuous, low shrub layer dominated by *Duma florulenta*. Scattered shrubs including *Acacia stenophylla*, *Eremophila bignoniiflora* and *Chenopodium auricomum* occur frequently. The ground cover is dominated by the perennial grasses *Eragrostis setifolia* and *Sporobolus mitchellii* and/or seasonally abundant ephemeral herbs. The latter includes the grasses *Dactyloctenium radulans*, *Dichanthium* spp. and *Iseilema vaginiflorum* which occur infrequently and the forbs *Alternanthera nodiflora*, *Calotis hispidula*, *Centipeda thespidioides*, *Stemodia glabella*, *Cullen cinereum*, *Senecio depressicola* and *Streptoglossa adscendens*, which are frequently present. A number of other ephemeral forbs, including species from the Apiaceae, Convolvulaceae, Fabaceae, Goodeniaceae, and Malvaceae occur infrequently but may be seasonally prominent. Widespread on and between braided channels where water backs up on frequently flooded alluvial plains. Associated soils are very deep, grey and brown cracking clays with a self mulching surface. Surface silt and sand bands are common in soil profile. Riverine. (BVG1M: 16a).

5.3.8ax1: Eucalyptus coolabah sometimes with *Atalaya hemiglaucula* low open woodland. Tall shrubs may be conspicuous but rarely form a distinct layer. Low shrubs sometimes occur, but rarely form a well-defined layer. The ground flora is variable with either grasses or forbs conspicuous depending on seasonal conditions. In places there is little or no ground layer present. Treeless areas common. Occurs on smaller drainage lines, sometimes braided, within undulating clay plains. Soils deep, grey and brown cracking clays. Sand and silt bands may occur in profile. Riverine. (BVG1M: 16a).

5.3.8b: Eucalyptus coolabah low open woodland usually with *Duma florulenta* shrubs other scattered shrubs including *Acacia stenophylla*, *Eremophila bignoniiflora* and *Chenopodium auricomum* occur frequently. The ground cover is usually dominated by the perennial grasses *Eragrostis setifolia* and *Sporobolus mitchellii* and/or seasonally abundant ephemeral herbs. Occurs fringing and/or scattered across claypans in dunes. Associated soils are very deep, grey and brown cracking clays. Palustrine. (BVG1M: 16a).

5.3.8c: Eucalyptus coolabah low open woodland sometimes with *Duma florulenta* fringing larger flood plain lakes. The ground layer is variable in cover and floristics with either grasses or forbs conspicuous depending on seasonal conditions. In places there is little or no vegetation. Occurs fringing flood plain lakes. Associated soils are very deep, grey and brown cracking clays. Palustrine. (BVG1M: 16a).

Short description: Eucalyptus coolabah low open woodland +/- *Duma florulenta* on braided channels, drainage lines, flood plain lakes and claypans

Supplementary descriptions: Neldner (1991), 18 (66); Boyland (1984), 8; Wilson and Purdie (1990a), C1 (78)

Subregions: 5, 4, 3, 2, (6), (8), (9), (4.2), (11), (7), (1), (13), (4.3), (6.10), (12), (10), (4.1), (6.9), (4.4)

Protected areas: Diamantina NP, Astrebla Downs NP, Bladensburg NP, Pullen Pullen SWR

Extent in reserves: Medium

Wetland: Riverine

Special values:

Comments: 5.3.8: Includes areas co dominated or sometimes dominated by *Acacia stenophylla* low woodland. *Muehlenbeckia florulenta* forms dense stands. Flooding frequency high. Ground flora dominated by ephemeral forbs. Apiaceae, Brassicaceae, Convolvulaceae, Fabaceae, Goodeniaceae and Malvaceae species occur infrequently but are seasonally prominent. Includes many small braided (riverine channels) fringed by palustrine vegetated wetlands. Habitat for feral cats and pigs.

Estimated extent:¹ Pre-clearing 399000 ha; Remnant 2021 399000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.9

Description: *Acacia cambagei* dominates forming a distinct but discontinuous canopy with scattered emergent *Eucalyptus coolabah*. Structure of the canopy varies from a low woodland to low open woodland. *Acacia cambagei* regeneration is frequently present forming a low shrub layer. Other scattered shrubs may be present. The ground layer is dominated by *Eulalia aurea*, *Chrysopogon fallax* and *Cyperus* spp. in the channels and *Astrebla pectinata*, *Astrebla elymoides*, *Astrebla squarrosa* and *Eragrostis setifolia* on interchannel and fringing areas. In Ephemeral herbland may exist on inter-channel areas. Occurs on shallow braided channels on alluvia above major drainage lines. Soils very deep, red, brown and grey cracking clays, sometimes with exposed gypsum deposits. Riverine. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

5.3.9x1: *Acacia cyperophylla* var. *cyperophylla* low open woodland with *Acacia cambagei* and/or *Acacia georginae* frequently occurring as co-dominants and with occasional *Eucalyptus coolabah* or *Eucalyptus camaldulensis*. *Atalaya hemiglauc*a is usually present as scattered tall shrubs. *Senna artemisioides* subsp. *oligophylla* and/or *Eremophila freelingii* are frequently present as scattered shrubs. The ground layer varies from very sparse to open, and is commonly dominated by *Eulalia aurea*, *Themeda triandra*, *Eriachne mucronata*, *Enteropogon acicularis* and diverse forbs. Occurs on minor drainage lines draining dissected residuals and plateaus and extending onto adjacent clay plains. Soils generally deep gravelly loams, sandy loams to sandy clay loams. Lower in the landscape deep gravelly red clays and texture contrast soils. Riverine. (BVG1M: 24a).

Short description:	<i>Acacia cambagei</i> +/- <i>Eucalyptus coolabah</i> low woodland on braided channel systems
Supplementary descriptions:	Neldner (1991), 26b (16); Boyland (1984), 15a; Wilson and Purdie (1990a), W2 (72); Turner et al. (1978) A3, W3 (26)
Subregions:	4, 2, (5), (6), (1), (3), (4.2), (4.3), (4.4), (6.9), (7), (4.5), (10), (13), (4.1)
Protected areas:	Diamantina NP, Pullen Pullen SWR, Welford NP, Bladensburg NP, Goneaway NP
Extent in reserves:	Medium
Wetland:	Riverine
Special values:	5.3.9: Potential habitat for NCA listed species: <i>Acacia peuce</i> , <i>Calotis suffruticosa</i> , <i>Grevillea kennedyana</i> , <i>Sclerolaena blakei</i> , <i>Swainsona murrayana</i> .
Comments:	5.3.9: In most areas, 10-15% of the <i>A. cambagei</i> trees stand dead (Neldner, 1991). 5.3.9x1: RE 5.9.3c was amalgamated into this RE. Grades into 5.7.13 in upper drainage areas.
Estimated extent: ¹	Pre-clearing 259000 ha; Remnant 2021 256000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.3.10

Description: *Acacia cambagei* low open woodland with an open shrub layer comprising juvenile *Acacia cambagei*, *Senna artemisioides* subsp. *oligophylla* and *Eremophila* spp. frequently present. The very sparse to open ground layer commonly includes *Enteropogon acicularis*, *Eragrostis xerophila*, *Aristida latifolia* and *Sporobolus actinocladius*, with *Bothriochloa ewartiana* and *Chrysopogon fallax* locally abundant. A variety of ephemeral forbs occur infrequently but may be seasonally co-dominant. Occurs on minor drainage lines and alluvial plains adjacent to and draining dissected residuals and plateaus. Soils generally gravelly loams to deep red clays and texture contrast soils. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

5.3.10a: *Acacia cambagei* low open woodland with an open shrub layer comprising juvenile *Acacia cambagei*, *Senna artemisioides* subsp. *oligophylla* and *Eremophila* spp. frequently present. The very sparse to open ground layer commonly includes *Enteropogon acicularis*, *Eragrostis xerophila*, *Aristida latifolia* and *Sporobolus actinocladius*, with *Bothriochloa ewartiana* and *Chrysopogon fallax* locally abundant. A variety of ephemeral forbs occur infrequently but may be seasonally co-dominant. Occurs on minor drainage lines adjacent to and draining dissected residuals and plateaus. Soils generally gravelly loams to deep red clays and texture contrast soils. Riverine. (BVG1M: 26a).

5.3.10b: *Acacia cambagei* low open woodland with an open shrub layer comprising juvenile *Acacia cambagei*, *Senna artemisioides* subsp. *oligophylla* and *Eremophila* spp. frequently present. The very sparse to open ground layer commonly includes *Enteropogon acicularis*, *Eragrostis xerophila*, *Aristida latifolia* and *Sporobolus actinocladius*, with *Bothriochloa ewartiana* and *Chrysopogon fallax* locally abundant. A variety of ephemeral forbs occur infrequently but may be seasonally co-dominant. Occurs on alluvial plains adjacent to and draining dissected residuals and plateaus. Soils generally gravelly loams to deep red clays and texture contrast soils. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia cambagei* low open woodland +/- *Senna artemisioides* subsp. *oligophylla* +/- *Eremophila* spp. on minor drainage lines and alluvial plains

Supplementary descriptions: Neldner (1991), 8c (17); Boyland (1984), 4; Turner et al. (1993) S1 (66)

Subregions: 4, 6, 2, (5), (6.9), (9), (4.3), (3), (10), (6.10), (4.5), (4.4)

Protected areas: Diamantina NP, Pullen Pullen SWR, Lochern NP, Welford NP, Goneaway NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.3.10: Potential habitat for NCA listed species: *Eremophila stenophylla*.

Comments: 5.3.10a: Will be mapped in future releases.
5.3.10b: Will be mapped in future releases.

Estimated extent:¹ Pre-clearing 233000 ha; Remnant 2021 232000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.11

Description: *Acacia georginae* tall open shrubland with an open shrub layer of *Senna artemisioides* subsp. *oligophylla* and *Eremophila freelingii* frequently present. The ground layer varies from very sparse to open, and is usually dominated by perennial grasses. *Eragrostis setifolia* and *Enneapogon avenaceus* usually dominate on texture contrast soils and non-cracking red clays and *Bothriochloa ewartiana*, *Eulalia aurea*, *Eragrostis setifolia* and *Astrebla pectinata* usually dominate on alluvia and on red and brown cracking clays. A variety of forbs occur infrequently, but may be seasonally co-dominant. Occurs along on minor drainage lines and alluvial plains. Soils vary from deep, red and brown cracking clays to alluvial texture contrast soils and non-cracking clays. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia georginae* tall open shrubland +/- *Senna artemisioides* subsp. *oligophylla* +/- *Eremophila freelingii* on minor drainage lines and alluvial plains

Supplementary descriptions: Neldner (1991), 28d (23); Boyland (1984), 15b; Wilson and Purdie (1990a), S2 (11), A2 (43)

Subregions: 1, 10, 2, (4.1), (3)

Protected areas: Munga-Thirri NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 5.3.11: Georgina River area. In many areas 30-50% of tall shrubs stand dead, although regeneration of *Acacia georginae* present in some areas (Neldner, 1991).

Estimated extent:¹ Pre-clearing 93000 ha; Remnant 2021 93000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.12

Description: *Chenopodium auricomum* open shrubland commonly with *Duma florulenta*, occasional scattered *Eucalyptus coolabah* low trees, *Eremophila bignoniiflora* tall shrubs and *Acacia stenophylla* shrubs may be present. The ground layer composition and density varies in response to incidence of flooding and may be dominated by perennial grasses, sedges and/or ephemeral forbs. Occurs in intermittently inundated depressions on alluvial plains, interdune flats, clay pans and clay plains. Soils very deep, grey cracking clays of light to medium texture, and contain varying amounts of silt and sand. Palustrine. (BVG1M: 34g).

Vegetation communities in this regional ecosystem include:

5.3.12a: *Chenopodium auricomum* open shrubland commonly with *Duma florulenta* and occasional scattered *Eucalyptus coolabah* low trees, *Eremophila bignoniiflora* tall shrubs and *Acacia stenophylla* shrubs. The ground layer composition and density varies in response to incidence of flooding with *Eleocharis pallens* and/or *Eragrostis setifolia* commonly dominant. *Sporobolus mitchellii* is commonly dominant in channels where they occur. Occurs in intermittently inundated depressions on alluvial plains. Soils very deep, grey cracking clays of light to medium texture, and contain varying amounts of silt and sand. Palustrine. (BVG1M: 34g).

5.3.12b: *Chenopodium auricomum* open shrubland commonly with *Duma florulenta* and occasional *Eucalyptus coolabah* low trees and *Eremophila bignoniiflora* tall shrubs. Occurs in intermittently inundated depressions on interdune flats, clay pans and clay plains. Soils very deep, grey cracking clays of light to medium texture, and contain varying amounts of silt and sand. Palustrine. (BVG1M: 34b).

Short description: *Chenopodium auricomum* +/- *Duma florulenta* open shrubland in depressions on flood plains, interdune flats, clay pans and clay plains

Supplementary descriptions: Neldner (1991), 35a (76); Boyland (1984), 19a, 19b; Wilson and Purdie (1990a), C1, C2, W2 (79)

Subregions: 5, 3, 9, 2, (8), (6), (4), (1), (10), (4.2), (4.1), (12), (11), (6.10), (6.9), (7)

Protected areas: Diamantina NP, Pullen Pullen SWR

Extent in reserves: Low

Wetland: Palustrine

Special values: 5.3.12: Important seasonal water bird habitat.
5.3.12a: Important seasonal water bird habitat.
5.3.12b: Important seasonal water bird habitat.

Comments:

Estimated extent:¹ Pre-clearing 503000 ha; Remnant 2021 503000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.13

Description: Duma florulenta open shrubland commonly with *Chenopodium auricomum*, *Maireana aphylla* and occasional low trees and tall shrubs including *Acacia stenophylla*, *Acacia victoriae*, *Eremophila bignoniiflora*, *Eucalyptus coolabah*. The ground layer composition and density varies in response to incidence of flooding and may be dominated by perennial grasses, sedges and/or ephemeral forbs including *Eragrostis setifolia*, *Sporobolus mitchellii*, *Eleocharis pallens*, *Cyperus* spp., *Eleocharis plana*, *Echinochloa turneriana*, *Eriochloa pseudoacrotricha* and *Panicum laevinode*, *Cullen cinereum*, *Marsilea drummondii*, *Ipomoea diamantinensis*, *Alternanthera nodiflora*, *Senecio depressicola* and *Ethuliopsis cunninghamii*. Forbs commonly dominate after inundation in cooler months and legumes/grasses including *Aeschynomene indica* and/or *Sesbania cannabina* +/- *Echinochloa turneriana* commonly dominate after inundation in hotter months. Occurs in intermittently inundated depressions or fringing braided channels on alluvial plains, interdune flats, larger clay pans and occasionally clay plains. Associated soils are very deep, neutral to moderately alkaline, crusted, grey cracking clays. Soils may be self mulching and may have sand bands in the profile. Moderate gilgai micro relief. Palustrine. (BVG1M: 34g).

Vegetation communities in this regional ecosystem include:

5.3.13a: Duma florulenta open shrubland commonly with *Chenopodium auricomum*, *Maireana aphylla* and occasional low trees and tall shrubs including *Acacia stenophylla*, *Acacia victoriae*, *Eremophila bignoniiflora*, *Eucalyptus coolabah*. The ground layer composition and density varies in response to incidence of flooding and may be dominated by perennial grasses, sedges and/or ephemeral forbs including *Eragrostis setifolia*, *Sporobolus mitchellii*, *Eleocharis pallens*, *Cyperus* spp., *Eleocharis plana*, *Echinochloa turneriana*, *Eriochloa pseudoacrotricha* and *Panicum laevinode*, *Cullen cinereum*, *Marsilea drummondii*, *Ipomoea diamantinensis*, *Alternanthera nodiflora*, *Senecio depressicola* and *Ethuliopsis cunninghamii*. Forbs commonly dominate after inundation in cooler months and legumes/grasses including *Aeschynomene indica* and/or *Sesbania cannabina* +/- *Echinochloa turneriana* commonly dominate after inundation in hotter months. Occurs in intermittently inundated depressions or fringing braided channels on alluvial plains. Associated soils are very deep, neutral to moderately alkaline, crusted, grey cracking clays. Soils may be self mulching and may have sand bands in the profile. Moderate gilgai micro relief. Palustrine. (BVG1M: 34g).

5.3.13b: Duma florulenta open shrubland commonly with *Chenopodium auricomum*, *Maireana aphylla* and occasional low trees and tall shrubs including *Acacia stenophylla*, *Acacia victoriae*, *Eremophila bignoniiflora* and *Eucalyptus coolabah*. Occurs in intermittently inundated depressions on interdune flats, larger clay pans and occasionally clay plains. Associated soils are very deep, neutral to moderately alkaline, crusted, grey cracking clays. Soils may be self mulching and may have sand bands in the profile. Moderate gilgai micro relief. Palustrine. (BVG1M: 34b).

Short description:	Duma florulenta open shrubland in depressions on flood plains, interdune flats, clay pans and clay plains
Supplementary descriptions:	Neldner (1991), 35b (81); Boyland (1984), 19c; Wilson and Purdie (1990a), C1, C3 (80), L1 (80)
Subregions:	5, 3, (2), (8), (4), (10), (4.1), (11), (9), (7), (1), (6.10), (4.2)
Protected areas:	Diamantina NP
Extent in reserves:	Low
Wetland:	Palustrine
Special values:	5.3.13: Provides wetland water bird habitat. Potential habitat for threatened fauna species including freckled duck <i>Stictonetta naevosa</i> . Habitat for Grey Grasswrens, <i>Amytornis barbatus</i> (Jaensch and McFarland, in press).
Comments:	5.3.13: Shrub density varies with flooding frequency and intensity, and site drainage. Forbs abundant after winter floods. Ground layer composition varies with seasonal conditions and incidence of flooding. Management burning for pastoral production is a moderately common practice although the impacts on habitat value are unknown.
Estimated extent:¹	Pre-clearing 388000 ha; Remnant 2021 388000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.3.14

Description: *Atriplex nummularia* open shrubland commonly with *Chenopodium auricomum* and occasional scattered *Eucalyptus coolabah* low trees. The ground layer is typically sparse, although grasses and forbs may be seasonally abundant. Frequently occurring species include the forbs *Atriplex eardleyae*, *Atriplex spongiosa*, *Centipeda thespidioides*, *Salsola australis*, *Sclerolaena calcarata*, and *Teucrium racemosum* and the grasses *Chloris pectinata*, *Dactyloctenium radulans*, *Eragrostis dielsii*, *Eragrostis setifolia* and *Iseilema membranaceum*, *Iseilema vaginiflorum*, *Panicum laevinode*, *Sporobolus actinocladius* and *Sporobolus caroli*. Occurs on intermittently inundated scalded alluvial plains, clay pans and fringing flood plain lakes. Associated soils are very deep, grey cracking clays with a scalded surface. A strong surface crust overlies a strongly structured clay. Soil reaction trend is alkaline with gypsum occurring at depth. Not a Wetland. (BVG1M: 34b).

Short description: *Atriplex nummularia* +/- *Chenopodium auricomum* open shrubland on alluvial plains and clay pans between dunes

Supplementary descriptions: Neldner (1991), 35c (78); Boyland (1984), 20; Wilson and Purdie (1990a), A2 (82)

Subregions: 9, 3, 2, 5, (11), (10), (4.1)

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values: 5.3.14: Provides wetland habitat for a flora and fauna.

Comments: 5.3.14: Mainly occurs in the Georgina and Mulligan Rivers but small areas are found scattered across the bioregion. The saltbush *Atriplex nummularia* is heavily grazed which is associated with extensive surface scalding (Wilson and Purdie, 1990a) and a lack of regenerating in some areas.

Estimated extent:¹ Pre-clearing 34000 ha; Remnant 2021 34000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.15

Description: *Maireana aphylla* usually dominates this dwarf open shrubland although other species may occur. *Maireana astrotricha* may be locally prominent where gypsum deposits are close to the surface. Scattered shrubs of *Acacia* spp., *Atriplex nummularia*, *Senna phyllodinea*, *Chenopodium auricomum*, *Rhagodia spinescens* and *Eremophila polyclada* occur frequently. Scattered tussocks of the perennial grass *Eragrostis setifolia* occur frequently, with other grasses such as *Eragrostis* spp. and *Sporobolus* spp. occurring infrequently. A variety of mostly ephemeral forbs may be present. *Atriplex spongiosa* is usually present and species from Asteraceae, Chenopodiaceae and Malvaceae and other families occur infrequently. Occurs on interdune flats, clay pans and fringing gypsum deposits formed on recent alluvium associated with dune systems. Associated soils are very deep, crusted, grey cracking clays and minor wind-blown, sandy surfaced alluvial texture contrast soils. A gypsum layer may occur in the profile. Crusted non-coherent clays occur on the gypsum deposits. Palustrine. (BVG1M: 34b).

Vegetation communities in this regional ecosystem include:

5.3.15a: *Maireana aphylla* usually dominates this dwarf open shrubland although other species may occur. *Maireana astrotricha* may be locally prominent where gypsum deposits are close to the surface. Scattered shrubs of *Acacia* spp., *Atriplex nummularia*, *Senna phyllodinea*, *Chenopodium auricomum*, *Rhagodia spinescens* and *Eremophila polyclada* occur frequently. Scattered tussocks of the perennial grass *Eragrostis setifolia* occur frequently, with other grasses such as *Eragrostis* spp. and *Sporobolus* spp. occurring infrequently. A variety of mostly ephemeral forbs may be present. *Atriplex spongiosa* is usually present and species from Asteraceae, Chenopodiaceae and Malvaceae and other families occur infrequently. Occurs on interdune flats and clay pans. Associated soils are very deep, crusted, grey cracking clays and minor wind-blown, sandy surfaced alluvial texture contrast soils. A gypsum layer may occur in the profile. Crusted non-coherent clays occur on the gypsum deposits. Palustrine. (BVG1M: 34b).

5.3.15b: *Maireana aphylla* usually dominates this dwarf open shrubland although other species may occur. *Maireana astrotricha* may be locally prominent where gypsum deposits are close to the surface. Scattered shrubs of *Acacia* spp., *Atriplex nummularia*, *Senna phyllodinea*, *Chenopodium auricomum*, *Rhagodia spinescens* and *Eremophila polyclada* occur frequently. Scattered tussocks of the perennial grass *Eragrostis setifolia* occur frequently, with other grasses such as *Eragrostis* spp. and *Sporobolus* spp. occurring infrequently. A variety of mostly ephemeral forbs may be present. *Atriplex spongiosa* is usually present and species from Asteraceae, Chenopodiaceae and Malvaceae and other families occur infrequently. Occurs on or fringing intermittently inundated depressions and lakes and associated gypsum deposits formed on recent alluvium. Associated soils are very deep, crusted, grey cracking clays and minor windblown, sandy surfaced alluvial texture contrast soils. A gypsum layer may occur in the profile. Crusted non-coherent clays occur on the gypsum deposits. Palustrine. (BVG1M: 34g).

Short description: *Maireana* spp. dwarf open shrubland on alluvial plains, interdune flats, clay pans and clay plains

Supplementary descriptions: Neldner (1991), 35d (80); Boyland (1984), 21; Wilson and Purdie (1990a), L1 (85)

Subregions: 2, 3, 5, (11), (9), (10), (4), (4.1)

Protected areas:

Extent in reserves: No representation

Wetland: Palustrine

Special values: 5.3.15: Provides wetland habitat for flora and fauna.

Comments:

Estimated extent:¹ Pre-clearing 45000 ha; Remnant 2021 45000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.16

Description: *Eragrostis australasica* sparse tussock grassland occasionally with scattered *Eucalyptus coolabah* low trees. *Eragrostis australasica* often forms pure stands, but scattered *Maireana microcarpa* and *Duma florulenta* low shrubs may occur. The ground layer between the grass hummocks is usually extremely sparse (often bare), but various grasses such as *Diplachne fusca* and *Eragrostis dielsii* and forbs such as *Atriplex spongiosa*, *Maireana microcarpa*, *Teucrium racemosum* and *Frankenia uncinata* may be seasonally abundant. Occurs on intermittently inundated depressions and lakes on alluvial plains and interdune flats, and clay pans. Associated soils are very deep, strongly alkaline grey clays with a surface crust. And polygonal cracking surface. Heavy clays throughout and a gypsum layer may occur at depths. Palustrine. (BVG1M: 34b).

Vegetation communities in this regional ecosystem include:

5.3.16a: *Eragrostis australasica* sparse tussock grassland occasionally with scattered *Eucalyptus coolabah* low trees. *Eragrostis australasica* often forms pure stands, but scattered *Maireana microcarpa* and *Duma florulenta* low shrubs may occur. The ground layer between the grass hummocks is usually extremely sparse (often bare), but various grasses such as *Diplachne fusca* and *Eragrostis dielsii* and forbs such as *Atriplex spongiosa*, *Maireana microcarpa*, *Teucrium racemosum* and *Frankenia uncinata* may be seasonally abundant. Occurs on interdune flats and clay pans and less frequently in depressions on clay plains. Palustrine. (BVG1M: 34b).

5.3.16b: *Eragrostis australasica* sparse tussock grassland occasionally with scattered *Eucalyptus coolabah* low trees. *Eragrostis australasica* often forms pure stands, but scattered *Maireana microcarpa* and *Duma florulenta* low shrubs may occur. The ground layer between the grass hummocks is usually extremely sparse (often bare), but various grasses such as *Diplachne fusca* and *Eragrostis dielsii* and forbs such as *Atriplex spongiosa*, *Maireana microcarpa*, *Teucrium racemosum* and *Frankenia uncinata* may be seasonally abundant. Occurs on intermittently inundated depressions and lakes on flood plains. Palustrine. (BVG1M: 34g).

Short description:	<i>Eragrostis australasica</i> sparse tussock grassland on intermittently inundated depressions on flood plains, interdune flats, clay pans and clay plains
Supplementary descriptions:	Neldner (1991), 35e (82); Boyland (1984), 19d; Wilson and Purdie (1990a), L1 (84)
Subregions:	8, 9, 2, 5, 7, (4), (12), (6), (3), (10), (11), (6.11), (6.10), (13), (1)
Protected areas:	Munga-Thirri NP, Pullen Pullen SWR
Extent in reserves:	Low
Wetland:	Palustrine
Special values:	5.3.16: Habitat for threatened fauna species including grey grass wren <i>Amytornis barbatus</i> . Provides wetland habitat for flora and fauna.
Comments:	5.3.16: In places, <i>Eucalyptus coolabah</i> and the shrubs <i>Acacia stenophylla</i> and <i>Eremophila bignoniiflora</i> fringe this association. 5.3.16b: E. g. Bulloo Lakes.
Estimated extent: ¹	Pre-clearing 418000 ha; Remnant 2021 418000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.3.17

Description: *Tecticornia* spp. open succulent shrubland with occasional low isolated shrubs. Trees and tall shrubs do not occur. The ground cover is variable and composed mainly of forbs but grasses are present. In places near the margins of lakes, *Maireana* spp. open succulent shrubland and/or *Duma florulenta* open shrubland adjoins this association. Occurs in fringes around lakes and fringing dunes (lunettes)(e.g. in vicinity of Lake Machattie, Mulligan River and Eyre Creek), smaller playa lakes and localised alluvial areas. Soils deep and composed of predominantly fine grained material such as clay, silt and salts on the dunes. Soils of the alluvial areas very deep, alkaline, grey clays. Palustrine. (BVG1M: 34b).

Vegetation communities in this regional ecosystem include:

5.3.17a: *Tecticornia* spp. open succulent shrubland with occasional low isolated shrubs. Trees and tall shrubs do not occur. The ground cover is variable and composed mainly of forbs but grasses are present. Often grades into *Maireana* spp. dwarf open shrubland, *Duma florulenta* open shrubland and/or flood plain herblands. Occurs in fringes around flood plain lakes on fringing dunes (lunettes) and on depressions on flood plains (e.g. in vicinity of Lake Machattie, Mulligan River and Eyre Creek), Soils of the alluvial areas very deep, alkaline, grey clays. Palustrine. (BVG1M: 34b).

5.3.17b: *Tecticornia* spp. open succulent shrubland with occasional low isolated shrubs. Trees and tall shrubs do not occur. The ground cover is variable and composed mainly of forbs but grasses are present. In places near the margins of lakes, *Maireana* spp. open succulent shrubland and/or *Duma florulenta* open shrubland adjoins this association. Occurs in smaller playa lakes, clay pans and localised alluvial areas. Soils deep and composed of predominantly fine grained material such as clay, silt and salts on the dunes. Palustrine. (BVG1M: 34b).

Short description:	<i>Tecticornia</i> spp. open-succulent shrubland fringing playa lakes or clay pans
Supplementary descriptions:	Neldner (1991), 35f (79); Boyland (1984), Q
Subregions:	2, 3, 10, (5), (11), (4), (9), (1), (12)
Protected areas:	
Extent in reserves:	No representation
Wetland:	Palustrine
Special values:	5.3.17: Potential habitat for threatened fauna, e.g. night parrot <i>Pezoporus occidentalis</i> . 5.3.17a: Potential habitat for threatened fauna, e.g. night parrot <i>Pezoporus occidentalis</i> . 5.3.17b: Potential habitat for threatened fauna, e.g. night parrot <i>Pezoporus occidentalis</i> .
Comments:	5.3.17: Heavily impacted by grazing and trampling. 5.3.17a: Heavily impacted by grazing and trampling. 5.3.17b: Heavily impacted by grazing and trampling.
Estimated extent:¹	Pre-clearing 45000 ha; Remnant 2021 45000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.3.18

Description: Sparse to open grassland or herbland, with sparsely scattered *Eucalyptus coolabah* and/or *Chenopodium auricomum* open shrubland along channels. The perennial grass *Sporobolus mitchellii* occurs frequently and may be prominent, with a range of other grasses and forbs locally or seasonally dominant. Occurs on frequently flooded alluvial plains with shallow braided stream channels and formed from recent clay alluvia. Associated soils are very deep, neutral to strongly alkaline grey cracking clays. Surfaces may be crusted or self-mulching. Soils crack widely on drying and strongly sodic at depth. Contains Palustrine. (BVG1M: 31a).

Vegetation communities in this regional ecosystem include:

5.3.18a: *Chenopodium auricomum* open shrubland, frequently with pure stands of *Chenopodium auricomum*, however, scattered *Eucalyptus coolabah* low trees and *Eremophila bignoniiflora* tall shrubs may be present. The ground layer is usually sparse, and seasonally dominated by grasses, sedges and forbs. The sedge *Eleocharis pallens* or perennial grass *Eragrostis setifolia* frequently dominate the ground layer. *Sporobolus mitchellii* is frequently dominant in the channels. Occurs on braided channels on alluvial plains of major rivers. Associated soils are very deep, crusted, red, brown and grey cracking clays that are subject to scalding. Surfaces may be weakly self mulching. Palustrine. (BVG1M: 34g).

5.3.18b: Variable sparse to open-herbland with either grasses or forbs dominating the ground layer depending on incidence of flooding and seasonal conditions. At times extensive areas may be denuded of any species. *Sporobolus mitchellii* occurs frequently and may be prominent, while *Eragrostis setifolia* is locally common. After favourable seasons, herbs form a distinct but discontinuous ground cover. The dominant ephemerals include *Iseilema vaginiflorum*, *Arabidella nasturtium*, *Atriplex velutinella*, *Brachyscome dentata*, *Pycnosorus pleiocephalus*, *Ethuliopsis cunninghamii*, *Euphorbia drummondii*, *Goodenia fascicularis* and *Senecio depressicola*. Scattered low shrubs may occur with emergent trees fringing the association. Scattered low shrubs may occur. After summer local flooding, *Dactyloctenium radulans*, *Panicum laevinode*, *Iseilema* spp. and *Chloris pectinata* usually predominate. *Atriplex* spp., *Sclerolaena* spp., and Asteraceae are conspicuous after winter local flooding. *Echinochloa turneriana* usually predominates after early summer (general) flooding with *Pycnosorus pleiocephalus* and *Trigonella suavissima* conspicuous after early winter flooding. Occurs on braided channel systems on alluvial plains of major rivers. Associated soils are very deep, crusted, red, brown and grey cracking clays that are subject to scalding. Surfaces may be weakly self mulching. Not a Wetland. (BVG1M: 31a).

Short description:	Braided channel complex of major alluvial plains, includes <i>Chenopodium auricomum</i> open shrubland and variable sparse to open-herbland
Supplementary descriptions:	Dawson (19) C1; Neldner (1991) 48; Boyland (1984), 29b; Wilson and Purdie (1990a), C1, (75)
Subregions:	5, 3, 2, 9, (4), (6), (7), (8), (1), (4.2), (10), (4.1), (4.4), (6.10), (4.3), (13), (11), (6.9), (6.11)
Protected areas:	Diamantina NP, Welford NP, Pullen Pullen SWR, Lochern NP, Astrebla Downs NP
Extent in reserves:	Low
Wetland:	Contains Palustrine
Special values:	5.3.18: Potential habitat for threatened fauna species including plains-wanderer <i>Pedionomus torquatus</i> and fierce snake (western taipan) <i>Oxyuranus microlepidotus</i> . Provides wetland habitat for a wide range of water birds and other flora and fauna. 5.3.18a: Potential habitat for threatened fauna species including plains-wanderer <i>Pedionomus torquatus</i> and fierce snake (western taipan) <i>Oxyuranus microlepidotus</i> . Provides wetland habitat for a wide range of water birds and other flora and fauna. 5.3.18b: Potential habitat for threatened fauna species including plains-wanderer <i>Pedionomus torquatus</i> and fierce snake (western taipan) <i>Oxyuranus microlepidotus</i> . Provides wetland habitat for a wide range of water birds and other flora and fauna.
Comments:	5.3.18: Associated drainage lines are frequently fringed by <i>Eucalyptus coolabah</i> low open woodland or other species depending on the local habitat. Major component of 'channel country complex'. Varying degrees of degradation occur including scalding and vegetation loss associated with total grazing pressure (Dawson 1974). 5.3.18a: Includes many small braided (riverine channels) fringed by palustrine vegetated wetlands. Associated drainage lines are frequently fringed by <i>Eucalyptus coolabah</i> low open woodland or other species depending on the local habitat. Major component of 'channel country complex'. Varying degrees of degradation occur including scalding and vegetation loss associated with total grazing pressure (Dawson 1974). 5.3.18b: Associated drainage lines are frequently fringed by <i>Eucalyptus coolabah</i> low open woodland or other species depending on the local habitat. Major component of 'channel country complex'. Varying degrees of degradation occur including scalding and vegetation loss associated with total grazing pressure (Dawson 1974).

Estimated extent:¹ Pre-clearing 1831000 ha; Remnant 2021 1830000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.19

Description: Variable sparse to open-herbland with either grasses or forbs dominating the ground layer depending on incidence of flooding and seasonal conditions. At times extensive areas may be denuded of any species. *Sporobolus mitchellii* occurs frequently and may be prominent, while *Eragrostis setifolia* is locally common. After favourable seasons, herbs form a distinct but discontinuous ground cover. The dominant ephemerals include *Iseilema vaginiflorum*, *Arabidella nasturtium*, *Atriplex velutinella*, *Brachyscome dentata*, *Pycnosorus pleiocephalus*, *Ethuliopsis cunninghamii*, *Euphorbia drummondii*, *Senecio depressicola* and *Goodenia fascicularis*. Scattered low shrubs may occur with emergent trees fringing the association. Scattered low shrubs may occur. After summer local flooding, *Dactyloctenium radulans*, *Panicum laevinode*, *Iseilema* spp. and *Chloris pectinata* usually predominate. *Atriplex* spp., *Sclerolaena* spp., and *Asteraceae* are conspicuous after winter local flooding. *Echinochloa turneriana* usually predominates after early summer (general) flooding with *Pycnosorus pleiocephalus* and *Trigonella suavissima* conspicuous after early winter flooding. Occurs on parts of the alluvial plains of major rivers that are frequently flooded but less so than braided channel systems, with minor occurrences in well drained clay pans. Associated soils are very deep, crusted, red, brown and grey cracking clays that are subject to scalding. Surfaces may be weakly self mulching. Not a Wetland. (BVG1M: 31a).

Short description: Variable sparse to open herbland on frequently flooded alluvial plains

Supplementary descriptions: Dawson (1974), C2; Neldner (1991), 48 (71); Boyland (1984), 29a; Wilson and Purdie (1990a), C2, (77)

Subregions: 5, 3, 4, 2, (9), (6), (7), (13), (10), (4.2), (11), (6.9), (8), (4.3), (4.1), (4.4)

Protected areas: Diamantina NP, Astrebla Downs NP, Pullen Pullen SWR

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 5.3.19: Floristic composition varies depending on incidence and degree of flooding, and on temperature. Grasses predominate in summer, forbs predominate in winter. Cover of perennial grasses may reach 15%, but declines in dry years.

Estimated extent:¹ Pre-clearing 1027000 ha; Remnant 2021 1027000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.20

Description: *Eucalyptus coolabah* usually predominates, *Eucalyptus camaldulensis* is conspicuous in sandy or gravelly channels. A lower tree understorey or tall shrub layer may be present in places. Low shrubs frequently occur and in places form a distinct layer. The ground layer is variable being composed of grasses and forbs with either predominating depending on incidence of flooding and seasonal conditions. Occurs on the fringes of waterholes in major rivers and waterholes within braided channel systems as well as fringing billabongs or small lakes on flood plains. Soils very deep clays with sand and silt bands common in profile. Palustrine. (BVG1M: 34d).

Vegetation communities in this regional ecosystem include:

5.3.20a: *Eucalyptus coolabah* commonly with *Eucalyptus camaldulensis* open woodland fringing waterholes connected to braided channel systems. A lower tree understorey or tall shrub layer may be present in places. Low shrubs frequently occur and in places form a distinct layer. The ground layer is variable being composed of grasses and forbs with either predominating depending on incidence of flooding and seasonal conditions. Occurs fringing waterholes in braided channel systems. Soils very deep, brown or grey clays with sand and silt bands common in profile. Riverine. (BVG1M: 34d).

5.3.20b: *Eucalyptus coolabah* commonly with *Eucalyptus camaldulensis* open woodland fringing waterholes in major river systems. A lower tree understorey or tall shrub layer may be present in places. Low shrubs frequently occur and in places form a distinct layer. The ground layer is variable being composed of grasses and forbs with either predominating depending on incidence of flooding and seasonal conditions. Occurs fringing waterholes in major river systems. Soils very deep, brown or grey clays with sand and silt bands common in profile. Riverine. (BVG1M: 16a).

5.3.20c: *Eucalyptus coolabah* +/- *Eucalyptus camaldulensis* open woodland fringing billabongs on edge of flood plains divorced from channel systems. A lower tree understorey or tall shrub layer may be present in places. Low shrubs frequently occur and in places form a distinct layer. The ground layer is variable being composed of grasses and forbs with either predominating depending on incidence of flooding and seasonal conditions. Occurs fringing billabongs on flood plains divorced from channel systems. Soils very deep, brown or grey clays with sand and silt bands common in profile. Palustrine. (BVG1M: 34d).

- Short description:** *Eucalyptus coolabah* +/- *Eucalyptus camaldulensis* open woodland fringing billabongs, waterholes in major river systems and waterholes in braided channel systems
- Supplementary descriptions:** Neldner (1991), 51a (63); Boyland (1984), 32; Pettit (2002)
- Subregions:** 5, 3, 2, (9), (6), (10), (4.3), (4), (8), (4.2), (7), (1)
- Protected areas:** Diamantina NP, Welford NP, Astrebla Downs NP
- Extent in reserves:** Medium
- Wetland:** Palustrine
- Special values:** 5.3.20: Wetlands that provide drought refuge and water bird habitat. Habitat for threatened fauna species including freckled duck *Stictonetta naevosa*.
5.3.20a: Wetlands that provide drought refuge and water bird habitat. Habitat for threatened fauna species including freckled duck *Stictonetta naevosa*.
5.3.20b: Wetlands that provide drought refuge and water bird habitat. Habitat for threatened fauna species including freckled duck *Stictonetta naevosa*.
5.3.20c: Wetlands that provide drought refuge and water bird habitat. Habitat for threatened fauna species including freckled duck *Stictonetta naevosa*.

Comments:	<p>5.3.20: Function as important aquatic refugia during dry times (Hamilton et al. 2005). Highly modified floristic and structural composition due to heavy trampling and grazing by domestic stock and feral animals such as pigs. There is considerable floristic and structural variation in this regional ecosystem associated with local environmental conditions. Asteraceae spp. prevalent following favourable seasons. <i>E. coolabah</i> is found on higher, less frequently flooded areas compared to <i>E. camaldulensis</i> (Pettit 2002). Localised areas of soil compaction and bare ground are associated with domestic stock congregation points.</p> <p>5.3.20a: Function as important aquatic refugia during dry times (Hamilton et al. 2005). Highly modified floristic and structural composition due to heavy trampling and grazing by domestic stock and feral animals such as pigs. There is considerable floristic and structural variation in this regional ecosystem associated with local environmental conditions. Asteraceae spp. prevalent following favourable seasons. <i>E. coolabah</i> is found on higher, less frequently flooded areas compared to <i>E. camaldulensis</i> (Pettit 2002). Localised areas of soil compaction and bare ground are associated with domestic stock congregation points.</p> <p>5.3.20b: Function as important aquatic refugia during dry times (Hamilton et al. 2005). Highly modified floristic and structural composition due to heavy trampling and grazing by domestic stock and feral animals such as pigs. There is considerable floristic and structural variation in this regional ecosystem associated with local environmental conditions. Asteraceae spp. prevalent following favourable seasons. <i>E. coolabah</i> is found on higher, less frequently flooded areas compared to <i>E. camaldulensis</i> (Pettit 2002). Localised areas of soil compaction and bare ground are associated with domestic stock congregation points.</p> <p>5.3.20c: Function as important aquatic refugia during dry times (Hamilton et al. 2005). Highly modified floristic and structural composition due to heavy trampling and grazing by domestic stock and feral animals such as pigs. There is considerable floristic and structural variation in this regional ecosystem associated with local environmental conditions. Asteraceae spp. prevalent following favourable seasons. <i>E. coolabah</i> is found on higher, less frequently flooded areas compared to <i>E. camaldulensis</i> (Pettit 2002). Localised areas of soil compaction and bare ground are associated with domestic stock congregation points.</p>
Estimated extent: ¹	Pre-clearing 16000 ha; Remnant 2021 16000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Threatening processes other than clearing. Heavy trampling and grazing by domestic stock and feral animals such as pigs.

Regional ecosystem 5.3.21

Description: Variable sparse to open grassland, herbland or forbland often dominated by ephemeral grasses and forbs. At times extensive areas may be denuded of any species. The perennial grasses *Astrebula pectinata*, *Sporobolus mitchellii* and *Eragrostis setifolia* or annual grasses such as *Brachyachne convergens*, *Dactyloctenium radulans*, *Iseilema vaginiflorum*, *Panicum* spp. and *Sporobolus* spp. may be seasonally or locally prominent. A wide variety of forbs including *Cullen cinereum*, *Atriplex spongiosa*, *Salsola australis*, *Sclerolaena glabra*, *Osteocarpum acropterum*, *Minuria denticulata*, *Sclerolaena calcarata*, *Sclerolaena intricata*, *Sclerolaena muricata*, *Trianthema triquetra*, *Calotis hispidula*, *Euphorbia drummondii*, *Goodenia fascicularis*, *Arabidella nasturtium*, *Atriplex velutinella*, *Brachyscome dentata*, *Ethuliopsis cunninghamii* occur and may become seasonally or locally prominent. Trees and shrubs are usually absent, however limited areas of *Senna* spp. low open shrubland do occur. Occurs on flat, infrequently flooded alluvial plains of major rivers as well as on alluvia of distributaries of major rivers and along major drainage channels and creeks, with minor occurrences on interchannel alluvia and clay pans. Associated soils are very deep, crusted, red, brown and grey cracking clays that are subject to scalding and some wind-blown sand on the surface. Surfaces may be weakly self-mulching. Soils are neutral to very strongly alkaline and gypsum occurs at depth. Not a Wetland. (BVG1M: 31a).

Vegetation communities in this regional ecosystem include:

5.3.21a: Variable sparse to open grassland, herbland or forbland often dominated by ephemeral grasses and forbs. At times extensive areas may be denuded of any species. The perennial grasses *Astrebula pectinata*, *Sporobolus mitchellii* and *Eragrostis setifolia* or annual grasses such as *Brachyachne convergens*, *Dactyloctenium radulans*, *Iseilema vaginiflorum*, *Panicum* spp. and *Sporobolus* spp. may be seasonally or locally prominent. A wide variety of forbs including *Cullen cinereum*, *Atriplex spongiosa*, *Salsola australis*, *Sclerolaena glabra*, *Osteocarpum acropterum*, *Minuria denticulata*, *Sclerolaena calcarata*, *Sclerolaena intricata*, *Sclerolaena muricata*, *Trianthema triquetra*, *Calotis hispidula*, *Euphorbia drummondii*, *Goodenia fascicularis*, *Arabidella nasturtium*, *Atriplex velutinella*, *Brachyscome dentata*, *Ethuliopsis cunninghamii* occur and may become seasonally or locally prominent. Trees and shrubs are usually absent, however limited areas of *Senna* spp. low open shrubland do occur. Occurs on flat, infrequently flooded alluvial plains of major rivers as well as on alluvia of distributaries of major rivers and along major drainage channels and creeks, with minor occurrences on interchannel alluvia and clay pans. Associated soils are very deep, crusted, red, brown and grey cracking clays that are subject to scalding and some wind-blown sand on the surface. Surfaces may be weakly self-mulching. Soils are neutral to very strongly alkaline and gypsum occurs at depth. Not a Wetland. (BVG1M: 31a).

5.3.21b: *Senna* spp. open shrubland. The ground layer cover and floristics varies with seasonal conditions, and is often dominated by ephemeral grasses and forbs. At times extensive areas may be denuded of any species. The perennial grasses *Astrebula pectinata*, *Sporobolus mitchellii* and *Eragrostis setifolia* or annual grasses such as *Brachyachne convergens*, *Dactyloctenium radulans*, *Iseilema vaginiflorum*, *Panicum* spp. and *Sporobolus* spp. may be seasonally or locally prominent. A wide variety of forbs including *Cullen cinereum*, *Atriplex spongiosa*, *Salsola australis*, *Sclerolaena glabra*, *Osteocarpum acropterum*, *Minuria denticulata*, *Sclerolaena calcarata*, *Sclerolaena intricata*, *Sclerolaena muricata*, *Trianthema triquetra*, *Calotis hispidula*, *Euphorbia drummondii*, *Goodenia fascicularis*, *Arabidella nasturtium*, *Atriplex velutinella*, *Brachyscome dentata*, *Ethuliopsis cunninghamii* occur and may become seasonally or locally prominent. Occurs on flat, infrequently flooded alluvial plains of major rivers and distributaries, with minor occurrences on interchannel alluvia and clay pans. Associated soils are very deep, crusted, red, brown and grey cracking clays that are subject to scalding and some wind-blown sand on the surface. Surfaces may be weakly self-mulching. Soils are neutral to very strongly alkaline and gypsum occurs at depth. Not a Wetland. (BVG1M: 31a).

Short description:	Variable sparse to open herbland, <i>Senna</i> spp. open shrubland and bare scalded areas on infrequently flooded alluvia of major rivers their distributaries, drainage channels and creeks
Supplementary descriptions:	Neldner (1984), 68a,b,c,d; Boyland (1984), 28; Neldner (1991), 49 (72); Wilson and Purdie (1990a), A2 (81, 83).
Subregions:	2, 4, 6, 5, 3, (8), (7), (9), (10), (4.2), (12), (6.10), (1), (11), (4.3), (4.4), (6.11), (13), (4.5), (4.1), (6.9)
Protected areas:	Diamantina NP, Welford NP, Pullen Pullen SWR, Bladensburg NP, Astrebula Downs NP, Goneaway NP, Lochern NP, Lark Quarry CP
Extent in reserves:	Medium
Wetland:	Not a Wetland
Special values:	5.3.21: Potential habitat for NCA listed species: <i>Acacia peuce</i> .

Comments: 5.3.21: Severely scalded and saline areas devoid of vegetation. Highly modified floristic composition due to heavy total grazing pressure. Scalding locally common (Wilson and Purdie, 1990b; C2). Flooding frequency low, however, timing and duration of flooding affects floristic composition. Grasses predominate after summer floods, and forbs after winter floods.
5.3.21a: Severely scalded and saline areas devoid of vegetation. Highly modified floristic composition due to heavy total grazing pressure. Scalding locally common (Wilson and Purdie, 1990b; C2). Flooding frequency low, however, timing and duration of flooding affects floristic composition. Grasses predominate after summer floods, and forbs after winter floods.

Estimated extent:¹ Pre-clearing 1067000 ha; Remnant 2021 1067000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.22

Description: Open water, bare areas or sparse herbland of variable floristic and structural composition. Locally *Eleocharis pallens* and/or *Eragrostis setifolia* may predominate. An ephemeral herbland will often dominate bare areas exposed by receding water. Very occasional low shrubs such as *Chenopodium auricomum*, *Duma florulenta* and *Tecticornia* spp. may be present. Bare areas, water or scattered ephemeral vegetation of variable floristic and structural composition. Locally *Eleocharis pallens* and/or *Eragrostis setifolia* may predominate. An ephemeral herbland will often dominate bare areas exposed by receding water. Very occasional low shrubs such as *Chenopodium auricomum*, *Duma florulenta* and *Tecticornia* spp. may be present. Occurs on or fringing lakes and clay pans on flood plains, within interdunes or on sandplains minor occurrences on clay plains. Soils very deep, grey cracking clays. Lacustrine. (BVG1M: 34a).

Vegetation communities in this regional ecosystem include:

5.3.22a: Bare areas, water or scattered ephemeral vegetation of variable floristic and structural composition. Locally *Eleocharis pallens* and/or *Eragrostis setifolia* may predominate. An ephemeral herbland will often dominate bare areas exposed by receding water. Very occasional low shrubs such as *Chenopodium auricomum*, *Duma florulenta* and *Tecticornia* spp. may be present. Occurs on lakes and larger clay pans (area generally greater than 8 ha) in interdunes or on sandplains or less frequently on clay plains. Soils very deep, grey cracking clays. Lacustrine. (BVG1M: 34a).

5.3.22b: Bare areas, open water or scattered ephemeral vegetation of variable floristic and structural composition. An ephemeral herbland will often dominate bare areas exposed by receding water. Very occasional low shrubs such as *Chenopodium auricomum*, *Duma florulenta* and *Tecticornia* spp. may be present. Occurs on or fringing lakes on flood plains. Soils very deep, grey cracking clays. Lacustrine. (BVG1M: 34a).

5.3.22c: [RE not in use]²: This vegetation community is now mapped as 5.3.22a, 5.3.22b. Scattered ephemeral vegetation of variable floristic and structural composition. Bare areas, water, sedges or grasses may predominate. Occurs on lakes usually fed by drainage lines. Lacustrine. (BVG1M: 34a).

5.3.22d: Bare areas, water or scattered ephemeral vegetation of variable floristic and structural composition. Locally *Eleocharis pallens* and/or *Eragrostis setifolia* may predominate. An ephemeral herbland will often dominate bare areas exposed by receding water. Very occasional low shrubs such as *Chenopodium auricomum*, *Duma florulenta* and *Tecticornia* spp. may be present. Occurs on smaller clay pans (area generally less than 8 ha) in interdunes or on sandplains or less frequently on clay plains. Soils very deep, grey cracking clays. Palustrine. (BVG1M: 34b).

Short description: Sparse herbland, open water or bare areas on flood plain lakes and interdune clay pans and lakes

Supplementary descriptions: Neldner (1991), 51b; Boyland (1984), 32; Wilson and Purdie (1990a), L1

Subregions: 2, 5, 12, 10, 8, 9, (7), (3), (4), (1), (11), (6), (4.1), (4.2)

Protected areas: Diamantina NP, Munga-Thirri NP

Extent in reserves: Low

Wetland: Lacustrine

Special values: 5.3.22: Provides wetland habitat for flora and fauna.
5.3.22a: Provides wetland habitat for flora and fauna.
5.3.22b: Provides wetland habitat for flora and fauna.
5.3.22d: Provides wetland habitat for flora and fauna.

Comments: 5.3.22: Threatened by trampling of regeneration and high total grazing pressure.
5.3.22a: RE 5.3.22c was amalgamated into this RE. Claypans with areas generally <8 ha are classified as palustrine wetland and captured by 5.3.22d. Threatened by trampling of regeneration and high total grazing pressure.
5.3.22b: RE 5.3.22c was amalgamated into this RE. Threatened by trampling of regeneration and high total grazing pressure.
5.3.22d: RE 5.3.22c was amalgamated into this RE. Areas generally >8 ha are classified as lacustrine and captured by 5.3.22a. Threatened by trampling of regeneration and high total grazing pressure.

Estimated extent:¹ Pre-clearing 594000 ha; Remnant 2021 594000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.3.23

Description: Springs on recent alluvia and fine-grained sedimentary rocks. Occurs on recent alluvia and fine-grained sedimentary rock and fed by the Great Artesian Basin. Palustrine. (BVG1M: 34e).

Short description: Springs on recent alluvia and fine-grained sedimentary rocks

Supplementary descriptions: Supplementary description: Habermehl (1982); Ponder (in press); Fensham and Fairfax (2002); Fensham et al. (2004)

Subregions:

Protected areas:

Extent in reserves:

Wetland: Palustrine

Special values: 5.3.23: Potential habitat for several endemic species of flora and fauna.

Comments: 5.3.23: There may also be rare examples of springs in Tertiary aquifers, although no intact examples have been surveyed. All the springs are within Great Artesian Basin discharge areas. Impacted by artificial extraction, excavation, pig rooting and stock trampling.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Threatening processes other than clearing. Heavy trampling and grazing by domestic stock and feral animals such as pigs. Artificial extraction.

Regional ecosystem 5.5.1

Description: *Acacia aneura* low woodland. *Acacia aneura* often occurs in diffuse groves, with grasses dominating the intergrove spaces. *Atalaya hemiglauc*a, *Acacia excelsa* subsp. *angusta*, *Grevillea striata*, *Corymbia terminalis* and *Codonocarpus cotinifolius* are frequent canopy or emergent trees. Scattered shrubs may be present, but do not form a conspicuous layer. The ground layer varies from sparse to open, and is dominated usually by *Aristida* spp. or *Thyridolepis* spp. Scattered forbs are present. Occurs on gently undulating plains. Soils formed from Quaternary sands overlying Cretaceous sediments. Moderately deep to deep, acidic, sandy red earths and sandy light clays. Ironstone present on soil surface and in profile. Not a Wetland. (BVG1M: 23b).

Vegetation communities in this regional ecosystem include:

5.5.1x1: *Aristida* spp. open tussock grassland occasionally with scattered low trees such as *Corymbia terminalis*, *Acacia aneura*, *Hakea eyreana* and tall shrubs frequently present. There is usually a sparse to open, low shrub layer dominated by *Acacia tetragonophylla*, *Senna* spp., or *Eremophila* spp. In places tree density begins to approach a low open woodland. Occurs where superficial Cainozoic sand deposits overlie Cainozoic clay plains and alluvia, typically this occurs at the interface of clay plains and alluvia with Cainozoic sandplains and sandy red earths. Soils shallow to moderately deep, red clays with small areas of texture contrast soils where sand encroaches and earthy sands in run-on areas, or moderately deep to deep, acidic, sandy red earths and sandy light clays. Not a Wetland. (BVG1M: 31b).

5.5.1x2: *Acacia cambagei* +/- *Acacia aneura* low open woodland on Quaternary sediments. The ground flora is variable and composed of grasses and forbs. Tertiary and Pleistocene alluvium and areas where sandy red earths overly clay/alluvia, Moderately deep to deep, acidic, sandy red earths and sandy light clays. Not a Wetland. (BVG1M: 26a).

Short description:	<i>Acacia aneura</i> low woodland on Quaternary deposits
Supplementary descriptions:	Neldner (1991), 4a, 4b (1); Turner et al. (1978), M1 (15); Wilson and Purdie (1990), M1 (13, 15); Mills and Boyland (1979), M1 (11)
Subregions:	4, 2, (5), (6), (11), (8), (4.4), (10), (4.3), (7), (3), (6.9), (4.5)
Protected areas:	Munga-Thirri NP, Bladensburg NP, Lochern NP, Welford NP, Goneaway NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	5.5.1: Potential habitat for NCA listed species: <i>Solanum unispinum</i> .
Comments:	5.5.1: Winton plateau, Goneaway tableland. Severe sheet erosion and scalding common particularly in areas adjacent to floodplains (Turner et al. 1993). 5.5.1x1: Grades into herblands on Cainozoic clay deposits (Landzone 4) with decreasing level of superficial Cainozoic sand. Winton plateau, Paddy creek catchment, Birdsville. Severe sheet erosion and scalding common particularly in areas adjacent to floodplains (Turner et al. 1993). 5.5.1x2: Winton plateau, Goneaway tableland, Ethabuka.
Estimated extent:¹	Pre-clearing 447000 ha; Remnant 2021 442000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Threatening processes other than clearing. Sheet erosion and scalding common.

Regional ecosystem 5.5.2

Description: *Acacia aneura* usually predominates forming a distinct but very discontinuous canopy in distinct groves. Isolated trees emerge above the canopy. There is a distinct shrub layer of *Acacia sibirica* which is codominant or occasionally dominant. Other scattered low shrubs occur frequently. The ground layer is sparse and composed of grasses and forbs. Occurs on slightly undulating to undulating plains with slopes of less than 3% associated with the tops of dissected residuals. Soils shallow to very shallow, loamy red earths and lithosols with silcrete stone frequent on the soil. Not a Wetland. (BVG1M: 23b).

Short description: *Acacia aneura* low open woodland +/- *Acacia sibirica* +/- *Eremophila latrobei* on Quaternary deposits

Supplementary descriptions: Neldner (1991), 22; Boyland (1984), 13; Wilson and Purdie (1990a), H1 (16, 17); Turner et al. (1978) H1 (18); Mills and Boyland (1979), H3 (21), H1 (25)

Subregions: 6, 4, 2, 8, (9), (12), (5), (7), (4.4), (4.3), (13), (6.10), (6.9), (4.5)

Protected areas: Goneaway NP, Welford NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.5.2: Habitat for threatened plant species including *Grevillea kennedyana*.

Comments: 5.5.2: Sheet erosion and associated change in ground layer floristic composition locally common (Wilson and Purdie, 1990b; H1).

Estimated extent:¹ Pre-clearing 903000 ha; Remnant 2021 902000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.5.3

Description: *Acacia aneura*, and/or *Acacia sibirica* tall shrubland to low woodland on Quaternary sand sheets. Either *Acacia aneura* and/or *Acacia sibirica* forms a distinct canopy. Isolated trees such as *Corymbia terminalis* or *Corymbia blakei* may occur emerging above the canopy. Low shrubs are conspicuous forming a well defined layer in places. The ground flora is variable composed of grasses and forbs. Occurs on flat to gently undulating plains usually in run-on situations formed from Quaternary deposits overlying alluvium or Tertiary land surface. Associated soils are moderately deep to deep red earths with accumulations of loose sand on normally hard setting surface. Not a Wetland. (BVG1M: 23b).

Vegetation communities in this regional ecosystem include:

5.5.3a: *Acacia sibirica* predominates forming a distinct but discontinuous canopy layer. Usually *Acacia aneura* is present. Isolated trees such as *Corymbia terminalis* or *Corymbia blakei* may occur emerging above the canopy. Low shrubs are conspicuous forming a well defined layer in places. The ground flora is variable composed of grasses and forbs. Occurs on flat to gently undulating plains usually in run-on situations formed from Quaternary deposits overlying alluvium or Tertiary land surface. Associated soils are moderately deep to deep red earths with accumulations of loose sand on normally hard setting surface. Not a Wetland. (BVG1M: 23b).

5.5.3b: *Acacia aneura* low woodland. *Acacia aneura* predominates forming a distinct canopy layer. Isolated trees such as *Corymbia terminalis* or *Corymbia aparrerinja* may occur in the canopy or emerging above. Low shrubs are inconspicuous or absent. The ground flora is variable composed of grasses and forbs including *Eragrostis basedowii*. Occurs on flat to gently undulating sand plains and dune fields usually in run-on situations formed from Quaternary deposits overlying alluvium. Normally associated with the edge of flood plains. Associated soils are moderately deep to deep red earths with accumulations of loose sand on normally hard setting surface. Not a Wetland. (BVG1M: 23b).

Short description: *Acacia aneura*, and/or *Acacia sibirica* tall shrubland to low woodland on Quaternary sand sheets and dune fields

Supplementary descriptions: Neldner (1991), 25b (11); Boyland (1984), 17; Mills and Boyland (1979), S3 (10 in part)

Subregions: 4, 7, 2, (6), (6.10), (5)

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values:

Comments: 5.5.3b: Predominantly in the vicinity of the Cooper floodplain.

Estimated extent:¹ Pre-clearing 110000 ha; Remnant 2021 109000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.5.4

Description: *Acacia sibirica* predominates forming a well defined but discontinuous canopy layer. Scattered tall shrubs of *Acacia aneura* emerge and in places, isolated low trees of *Corymbia terminalis* occur. Other low shrubs may be present. The ground cover is sparse, and composed of grasses and forbs. Grades into *Acacia aneura* +/- *Acacia sibirica* tall open shrubland (5.5.2) in places. Occurs on flat to undulating plains and crests of dissected tablelands with slopes of 1 to 10%. Soils shallow, stony, acidic, red, earthy loam and clay-loam lithosols. Silcrete stones and boulders spread throughout. Not a Wetland. (BVG1M: 24a).

Vegetation communities in this regional ecosystem include:

5.5.4x1: *Aristida contorta* open tussock grassland with occasional scattered/groved *Acacia sibirica*, *Acacia aneura* and in places, isolated low trees of *Corymbia terminalis* occur. Other low shrubs may be present. The ground cover is sparse, and composed of grasses and forbs. Occurs on flat to undulating plains and crests of dissected tablelands with slopes of 1 to 10%. Soils shallow, stony, acidic, red, earthy loam and clay-loam lithosols. Silcrete stones and boulders spread throughout. Not a Wetland. (BVG1M: 31b).

Short description: *Acacia sibirica* +/- *Acacia aneura* +/- *Corymbia* spp. open shrubland on Quaternary sediments

Supplementary descriptions: Neldner (1991), 32a (35); Boyland (1984), 18b; Wilson and Purdie (1990a), H1, (18); Mills and Boyland (1979), H3

Subregions: 4, 2, 6, (8), (7), (4.4), (5), (12), (6.10), (4.3), (13)

Protected areas: Goneaway NP, Diamantina NP, Pullen Pullen SWR

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.5.4: Habitat for threatened plant species including *Eremophila alatisepala*.

Comments: 5.5.4: *A. sibirica* may be replaced by *A. clivicola* in the east.

Estimated extent:¹ Pre-clearing 508000 ha; Remnant 2021 508000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.5.5

Description: *Acacia sibirica* may occur in pure stands, but is frequently associated with *Hakea collina* in forming a diffuse low shrub layer with sparse canopy cover. *Eucalyptus exserta* (rarely) and *Corymbia blakei* are frequent emergents above the canopy. Other low shrubs may be present, but are only locally abundant. Scattered grasses and forbs form a sparse ground cover. Occurs on flat to gently undulating crests and upper slopes of dissected residuals. Slopes range from 1 to 3%. Soils very shallow, acidic, loam and clay-loam lithosols, overlying weathered and altered Cretaceous Winton Formation rocks. Exposed rock covers large areas; ironstone gravel often occurs at the surface. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia sibirica* +/- *Eucalyptus* spp. +/- *Corymbia* spp. open shrubland on crests and tops of sandstone ranges

Supplementary descriptions: Neldner (1991), 32b (34); Boyland (1984), 18a, c; Mills and Boyland (1979), R2 (26b)

Subregions: 4, (5), (6)

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values:

Comments:

Estimated extent:¹ Pre-clearing 22000 ha; Remnant 2021 22000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.5.6

Description: *Heliodendron basalticum* often predominates forming a distinct but discontinuous canopy. Other trees including *Grevillea striata*, *Atalaya hemiglauc*a, *Flindersia maculosa* and *Corymbia terminalis* are usually conspicuous. In other areas, *Acacia aneura* is the dominant species with the other trees noted above occurring as sub-dominants. In this situation, *Heliodendron basalticum* may occur in clumps. Scattered shrubs are usually present but rarely form a well defined layer. The ground layer is open and usually dominated by tussock grasses, with forbs being frequent. In small areas *Triodia bitextura* dominates the ground layer. Occurs on gently sloping, Quaternary sandplains sometimes on the level tops of dissected tablelands. Soils moderately deep sandy red earths with loose often with a weak crust. Surface textures are sandy loam. Not a Wetland. (BVG1M: 23a).

Vegetation communities in this regional ecosystem include:

5.5.6a: *Corymbia terminalis* low open woodland over *Triodia pungens* open hummock grassland, scattered shrubs such as *Senna artemisioides* subsp. *helmsii*, *S. artemisioides* subsp. *oligophylla*, *Gossypium australe* occur frequently and *Eremophila* spp., and *Acacia* spp. infrequently. *S. notabilis* is often common in recently burnt areas. The perennial grass *Paraneurachne muelleri* occurs frequently in the ground stratum between the spinifex hummocks. Most grasses, e.g. *Aristida* spp. and forbs, e.g. *Hibiscus* spp., and *Sida* spp. are present infrequently. Some species such as *Tephrosia brachycarpa* become abundant after burning. Occurs on Cainozoic sand deposits on level tops of dissected tablelands. Associated soils are moderately deep sandy red earths with loose often with a weak crust. Surface textures are sandy loam. Not a Wetland. (BVG1M: 33b).

5.5.6x1: *Triodia pungens* hummock grassland with occasional scattered low trees and tall shrubs including *Corymbia terminalis* +/- *Acacia aneura* +/- *Acacia excelsa* subsp. *angusta* +/- *Corymbia aparraerinja*. There is usually a sparse to open, low shrub layer dominated by *Acacia* spp. or *Eremophila* spp. Tussock grasses and forbs occur between the *Triodia pungens* hummocks. On low plateaus of Tertiary alluvia occasional scattered *Acacia cambagei* may occur. Fire frequency can affect density of woody species and *Triodia pungens*. Occurs on Quaternary sandplains sometimes on the level tops of dissected tablelands, and low level plateaus of Tertiary alluvia. Soils shallow to very deep, sandy red earths and earthy sands in run-on areas. Not a Wetland. (BVG1M: 33b).

Short description:	<i>Heliodendron basalticum</i> and/or <i>Acacia aneura</i> +/- <i>Corymbia terminalis</i> low open woodland on sand plains
Supplementary descriptions:	Neldner (1991), 13 (2), Turner et al. (1978), S2 (52, 53)
Subregions:	4, 5, (1), (6.9), (2), (4.4), (4.3), (4.5)
Protected areas:	Welford NP, Bladensburg NP
Extent in reserves:	Medium
Wetland:	Not a Wetland
Special values:	5.5.6: Potentially provides habitat for a number of small mammal species.
Comments:	5.5.6: Floristically diverse. Occurs around head waters of the Vergemont Creek in the north east of the bioregion. Highly modified floristic composition due to total grazing pressure and changed fire regime. Density of <i>Acacia aneura</i> reduced in some areas by cutting for drought feeding and regular burning to promote new grass growth. 5.5.6x1: Goneaway tablelands, Mayne River. Fire frequency can affect density of woody species and <i>Triodia pungens</i> . In local areas, <i>Acacia adsurgens</i> , <i>A. ancistrocarpa</i> and <i>A. cowleana</i> (run-on areas) may form tall shrublands with <i>T. pungens</i> ground layer.
Estimated extent:¹	Pre-clearing 143000 ha; Remnant 2021 140000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.6.1

Description: *Crotalaria eremaea* sparse to open herbland commonly with *Eragrostis eriopoda*. Floristic composition and cover is variable depending on seasonal conditions and may include *Salsola australis*, *Tribulus terrestris*, *Eriachne aristidea*, *Eragrostis basedowii*, and *Glinus lotoides*. Large areas may be devoid of vegetation. Occasional stunted trees such as *Hakea leucopoda*, *Owenia acidula*, *Atalaya hemiglaucula*, *Ventilago viminalis*, *Clerodendrum floribundum* or *Acacia aneura* may occur as well as occasional scattered shrubs such as *Gunnopsis quadrifida* or *Eremophila macdonnellii*, *Acacia ligulata* and *Senna* spp. Occurs on rounded and mobile crests and flanks of isolated and/or deflated dunes 5-10 metres high, formed from Quaternary aeolian sands overlying alluvia. Associated soils are very deep, acid to neutral, yellow siliceous sands. Clay content increases down the slope. Soils are loose at the crests and form crusts down the slope. Not a Wetland. (BVG1M: 33a).

Vegetation communities in this regional ecosystem include:

5.6.1x1: *Gunnopsis quadrifida* open succulent shrubland commonly with *Eremophila obovata*. *Eremophila macdonnellii* and various *Senna* spp. can also be locally common. In areas *Hakea leucopoda* may form an open shrubland. The ground layer is seasonably variable, but usually dominated by *Aristida holathera* var. *holathera* and a variety of forbs including *Gnephosis eriocarpa*, *Rhodanthe moschata*, *Scaevola parvibarbatula*, *Senecio gregorii* and *Abutilon otocarpum*. Asteraceae spp. are conspicuous in places following favourable seasons. Surface undulation is common with many small scalds/clay pans. Deflated low sandy rises on the interface of flood plains and dune fields. Usually found on the eastern side of flood plains and large lake beds adjacent to sand dunes. Locally undulating with numerous small scalds/pans. Yellow to white sands. Not a Wetland. (BVG1M: 33a).

Short description:	<i>Crotalaria eremaea</i> +/- <i>Eragrostis eriopoda</i> sparse to open herbland on isolated and/or deflated sand dunes on alluvium
Supplementary descriptions:	Neldner (1991), 41b (111); Boyland (1984), 30c; Dawson (1974), D5 (10, 11); Wilson and Purdie (1990a), D2, (4); Mills (1980), D3 (3)
Subregions:	5, 2, 3, 11, (7), (10), (6), (4), (8), (6.10), (9), (13), (4.2), (4.1)
Protected areas:	Munga-Thirri NP, Diamantina NP, Welford NP
Extent in reserves:	Medium
Wetland:	Not a Wetland
Special values:	
Comments:	<p>5.6.1: Most commonly occurs on isolated and/or deflated dunes associated with the Cooper Creek floodplain and its margins. Heavily grazed by rabbits. Composition of vegetation seasonally dependent. Asteraceae conspicuous in places following favourable seasons. A variation occurs where <i>Grevillea stenobotrya</i> becomes predominant forming a tall open shrubland. Naturalised species associated with this regional ecosystem include *<i>Portulaca oleracea</i>.</p> <p>5.6.1x1: Found mostly in west. Can be heavily grazed by stock given that it is associated with the margins of flood plains and large lakes. Asteraceae conspicuous in places following favourable seasons. Can also be invaded by buffel grass.</p>
Estimated extent:¹	Pre-clearing 292000 ha; Remnant 2021 292000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.6.2

Description: *Acacia georginae* and/or *Acacia cambagei* low open woodland. Low shrubs are common including *Eremophila obovata*, *Eremophila macdonnellii* and juvenile *Acacia georginae* and/or *Acacia cambagei*. The ground layer is seasonably variable, but usually dominated by *Aristida holathera* var. *holathera*, with *Enteropogon acicularis* and *Eragrostis eriopoda* being locally abundant. In places with deeper sand *Triodia longiceps* is often dominant. Tree height greatest in run-on areas. Occurs on interdune areas, at the interface of clay plains and dune fields, run-on areas, low sandy rises and on rounded dunes. Soils deep to very deep, sandy red earths, sandy-surfaced duplex soils, occasionally red earthy sands. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

5.6.2x1: *Acacia ramulosa* low open woodland. A lower shrub layer is well defined in places with *Acacia ligulata* common, but in other situations consists only of scattered shrubs. Ground cover is variable and composed of grasses and forbs +/- *Triodia basedowii*. Fire frequency can affect density of woody species and *Triodia basedowii*. Occurs on low dunes and sandplains of low relief associated with dunefields. Soils moderately deep red texture contrast soils with sandy loams overlying the sandy clays. Not a Wetland. (BVG1M: 33a).

Short description: *Acacia georginae* and/or *Acacia cambagei* low open woodland +/- *Eremophila* spp. on interdune areas and clay plains at interface with dune fields

Supplementary descriptions: Neldner (1991), 29 (21); Boyland (1984), 15b; Wilson and Purdie (1990a), S2 (9, 10)

Subregions: 10, 11, 2, (1), (6), (3), (4.1), (4), (5), (4.2), (6.10)

Protected areas: Munga-Thirri NP

Extent in reserves: High

Wetland: Not a Wetland

Special values:

Comments: 5.6.2: Mulligan River - Toko Range area.

Estimated extent:¹ Pre-clearing 744000 ha; Remnant 2021 744000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.6.3

Description: *Acacia calcicola* tall shrubland. *Acacia aneura* occurs frequently and co-dominates in places. Other scattered low trees or shrubs, such as *Acacia excelsa*, *Acacia ramulosa*, *Acacia tetragonophylla*, *Santalum lanceolatum*, *Senna phyllodinea*, *Enchylaena tomentosa*, *Eremophila duttonii* and *Rhagodia spinescens*, may be present. Ground cover is variable and composed of forbs and grasses including *Aristida holathera* var. *holathera*, *Aristida contorta*, *Sclerolaena* spp., *Ipomoea polymorpha*, *Sida platycalyx*, *Dactyloctenium radulans*, *Enteropogon acicularis*, *Atriplex spongiosa* and *Maireana spongiocarpa*. Occurs on cemented aprons on lower slopes and edges of low (2-3m) sand dunes occurring on flat alluvial plains. Associated soils are shallow to moderately deep (to very deep), red sandy loam to sandy clay loam usually with a ferruginous hard pan and some associated texture contrast soils. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia calcicola* +/- *A. aneura* tall shrubland between sand dunes

Supplementary descriptions: Boyland (1984), 16; Dawson (1974), D4, D5, D6 (20).

Subregions: 8, 2, (12)

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values:

Comments: 5.6.3: Lack of *Acacia calcicola* regeneration due to total grazing pressure. High level of rabbit infestation.

Estimated extent:¹ Pre-clearing 52000 ha; Remnant 2021 52000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Total grazing pressure. High level of rabbit infestation.

Regional ecosystem 5.6.4

Description: Various trees and tall shrubs occur forming a distinct but discontinuous canopy. *Acacia aneura* usually predominates, but in places *Atalaya hemiglaucula*, *Hakea leucoptera* and *Ventilago viminalis* may be co-dominant. Usually there is no well defined, low shrub layer, but in places, dense stands of *Dodonaea viscosa* subsp. *angustissima* and *Eremophila sturtii* may occur. The ground layer is seasonally variable and composed of grasses and forbs. The composition and structural formation of this association varies considerably. Occurs on low dunes with sloping flanks (less than 3%). The dunes are frequently reticulate and usually overlie recent clay alluvia. Often concentrated in areas fringing large lakes or flood plains. Soils are reddish-brown, coarse sands, or deep red, earthy to siliceous sands. Ferruginous hardpans are often present. Not a Wetland. (BVG1M: 23a).

Vegetation communities in this regional ecosystem include:

5.6.4a: [RE not in use]²: This vegetation community is now mapped as 5.6.4. *Atalaya hemiglaucula* +/- *Acacia aneura* +/- *Acacia* spp. +/- *Corymbia terminalis* tall open shrubland on sand dunes. Occurs on low dunes with sloping flanks (less than 3%). The dunes are frequently reticulate and usually overlie recent clay alluvia. Often concentrated in areas fringing large lakes or floodplains. Soils are reddish-brown, coarse sands, or deep red, earthy to siliceous sands. Ferruginous hardpans are often present. Not a Wetland. (BVG1M: 23a).

Short description: *Atalaya hemiglaucula* +/- *Acacia aneura* +/- *Acacia* spp. +/- *Corymbia terminalis* low open woodland on reticulate sand dunes

Supplementary descriptions: Boyland (1984), 6; Dawson (1974), D4, D6 (7).

Subregions: 8, 7, 9, 2, (5), (6), (4), (12), (4.2), (6.10), (6.11), (13)

Protected areas: Welford NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.6.4: High fauna diversity.

Comments: 5.6.4: RE 5.6.4a was amalgamated into this RE. Heavily grazed by rabbits resulting in a decrease in ground layer floristic diversity.

Estimated extent:¹ Pre-clearing 1087000 ha; Remnant 2021 1087000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.6.5

Description: *Triodia basedowii* hummock grassland predominates but where absent *Aristida holathera* +/- *Eragrostis eriopoda* may predominate forming a sparse to open tussock grassland, and/or forbs may predominate forming a sparse to open forbland. Isolated trees and tall shrubs are usually present. Usually low shrubs occur and may form a well defined layer in some situations. Fire frequency can affect density of woody species and *Triodia basedowii*. Occurs on low sloping flanks, non-mobile crests and sandy interdune areas of Quaternary sand dunes. Soils deep to very deep, red, yellow and white earthy sands, occasionally red siliceous sands. Not a Wetland. (BVG1M: 33a).

Vegetation communities in this regional ecosystem include:

5.6.5a: [RE not in use]²: This vegetation community has moved to 5.6.5. *Triodia basedowii* hummock grassland predominates but where absent *Aristida holathera* +/- *Eragrostis eriopoda* may predominate forming a sparse to open tussock grassland, and/or forbs may predominate forming a sparse to open forbland. Isolated trees and tall shrubs are usually present. Usually low shrubs occur and may form a well defined layer in some situations. Fire frequency can affect density of woody species and *Triodia basedowii*. Occurs on low sloping flanks, non-mobile crests and sandy interdune areas of Quaternary sand dunes. Soils deep to very deep, red, yellow and white earthy sands, occasionally red siliceous sands. Not a Wetland. (BVG1M: 33a).

5.6.5b: [RE not in use]²: This vegetation community has moved to 5.6.2x1. *Acacia ramulosa* low open woodland. A lower shrub layer is well defined in places with *Acacia ligulata* common, but in other situations consists only of scattered shrubs. Ground cover is variable and composed of grasses and forbs +/- *Triodia basedowii*. Fire frequency can affect density of woody species and *Triodia basedowii*. Occurs on low dunes and sandplains of low relief associated with dunefields. Soils moderately deep red texture contrast soils with sandy loams overlying the sandy clays. Not a Wetland. (BVG1M: 33a).

Short description:	Variable sparse to open-herbland or <i>Triodia basedowii</i> hummock grassland on dune flanks, crests and sandy interdunes
Supplementary descriptions:	Neldner (1991), 36 (106), 25a (13); Boyland (1984), 22; Wilson and Purdie (1990a), D1, D2 (1); Dawson (1974), D1, D2 (8).
Subregions:	10, 7, 2, 12, 8, 3, 11, (5), (4), (1), (4.2), (4.1), (6.11), (4.3), (13), (9), (6.10), (6.9)
Protected areas:	Munga-Thirri NP, Diamantina NP, Welford NP
Extent in reserves:	High
Wetland:	Not a Wetland
Special values:	5.6.5: High reptile diversity. Potential habitat for threatened fauna species including <i>mulgara Dasycerus cristicauda</i> . 5.6.5a: High reptile diversity. Potential habitat for threatened fauna species including <i>mulgara Dasycerus cristicauda</i> .
Comments:	5.6.5: Density of shrubs and floristic composition vary with topographic position and disturbance. <i>Triodia longiceps</i> may be dominant on calcareous sands in north-east section of Simpson Desert. Composition of ground flora dependent on seasonal conditions and to a lesser degree both current and past land use. Simpson Desert. Requires burning in a mosaic pattern to maintain habitat values. 5.6.5a: Density of shrubs and floristic composition vary with topographic position and disturbance. <i>Triodia longiceps</i> may be dominant on calcareous sands in north-east section of Simpson Desert. Composition of ground flora dependent on seasonal conditions and to a lesser degree both current and past land use. Simpson Desert. Requires burning in a mosaic pattern to maintain habitat values.
Estimated extent: ¹	Pre-clearing 2464000 ha; Remnant 2021 2464000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.6.6

Description: *Triodia basedowii* hummock grassland with scattered *Acacia* spp., *Senna* spp., *Grevillea* spp., *Eucalyptus* spp. trees /tall shrubs. In places approaches a tall open shrubland or low open woodland. Low shrubs are conspicuous forming a very well defined layer in places. Ground cover is variable depending on seasonal conditions both present and past as well as land use. Occurs on flat to gently undulating aeolian Cainozoic sandplains. Associated soils are generally deep to very deep, slightly acid to neutral, red earthy sands, sandy red earths and occasional red siliceous sands. Not a Wetland. (BVG1M: 33a).

Vegetation communities in this regional ecosystem include:

5.6.6a: [RE not in use]²: This vegetation community is now mapped as 5.6.6. Open grassland of *Eriachne mucronata*, *Aristida contorta* to forbland of *Sclerolaena lanicuspis* with isolated trees of *Ventilago viminalis*, *Corymbia terminalis*, *Atalaya hemiglauca* and *Grevillea striata*, with isolated shrubs of *Acacia tetragonophylla* or *Acacia brachystachya* and *Eremophila duttonii*. Occurs on flat to gently undulating aeolian Cainozoic sandplains. Associated soils are generally deep to very deep, slightly acid to neutral, red earthy sands, sandy red earths and occasional red siliceous sands. Not a Wetland. (BVG1M: 33a).

5.6.6b: [RE not in use]²: This vegetation community is now mapped as 5.6.6. *Triodia basedowii* predominates forming a distinct but discontinuous ground layer canopy (0.5-1.0m tall). Trees and tall shrubs emerge above the canopy almost approaching a tall open shrubland or low open woodland in places. Low shrubs are conspicuous forming a very well-defined layer in places where disturbance, either natural or man-made has occurred. Ground cover is variable depending on seasonal conditions both present and past as well as land use. Occurs on flat to gently undulating aeolian Cainozoic sandplains. Associated soils are generally deep to very deep, slightly acid to neutral, red earthy sands, sandy red earths and occasional red siliceous sands. Not a Wetland. (BVG1M: 33a).

Short description:	<i>Triodia basedowii</i> hummock grassland wooded with <i>Acacia</i> spp., <i>Senna</i> spp., <i>Grevillea</i> spp. +/- <i>Eucalyptus</i> spp. on sand plains
Supplementary descriptions:	Neldner (1991), 37a (107); Boyland (1984), 23; Wilson and Purdie (1990a), S1 (5); Mills (1980), S4, S6 (5)
Subregions:	7, 5, 4, (2), (4.1), (6.10), (1), (6.9), (10), (3), (4.2)
Protected areas:	Welford NP, Diamantina NP
Extent in reserves:	Medium
Wetland:	Not a Wetland
Special values:	5.6.6: Habitat for small reptiles and threatened fauna species. Possible habitat for <i>Pezoporus occidentalis</i> (night parrot).
Comments:	5.6.6: RE 5.6.6a and 5.6.6b were amalgamated into this RE. Extensive area to the north of the Simpson Desert. Requires burning in a mosaic pattern to maintain habitat values.
Estimated extent: ¹	Pre-clearing 317000 ha; Remnant 2021 314000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.6.7

Description: *Triodia basedowii* hummock grassland commonly with scattered *Eucalyptus pachyphylla* which may form a low open mallee woodland in places. Scattered shrubs are frequent. The ground between the *Triodia basedowii* hummocks is variable in cover and floristics depending on seasonal conditions includes *Aristida holathera* var. *holathera*, *Eragrostis eriopoda*. Occurs on level aeolian sand plains and low stable dune systems. Soils very deep, sandy red earths and red siliceous sands. Not a Wetland. (BVG1M: 33a).

Short description: *Triodia basedowii* hummock grassland +/- *Eucalyptus pachyphylla* on low sand dunes and sand plains

Supplementary descriptions: Neldner (1991), 37b, 37c (108); Boyland (1984), 23; Wilson and Purdie (1990a), S1 (6)

Subregions: 1, 10, (2), (5), (6.10), (4.1)

Protected areas: Munga-Thirri NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.6.7: Habitat for small reptiles and threatened fauna species including the night parrot *Pezoporus occidentalis*.

Comments: 5.6.7: East of Georgina River and along Gnallan-a-gea Creek in Simpson Desert. Requires burning in a mosaic pattern to maintain habitat values.

Estimated extent:¹ Pre-clearing 162000 ha; Remnant 2021 162000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.6.8

Description: *Zygochloa paradoxa* open tussock grassland and/or *Crotalaria eremaea* sparse herbland usually both with *Triodia basedowii*. Sparsely scattered low shrubs may be present. The ground between the tussocks/ hummocks and shrubs is usually bare, excepting when ephemeral herbs become seasonally abundant. Occurs on mobile crests and loose sandy slopes of Quaternary sand dunes. Soils very deep, white, yellow and red siliceous sands. Not a Wetland. (BVG1M: 33a).

Vegetation communities in this regional ecosystem include:

5.6.8a: *Zygochloa paradoxa* predominates forming an open tussock grassland. Scattered hummocks of *Triodia basedowii* may be frequent. Sparsely scattered low shrubs and tall forbs are usually present with *Crotalaria cunninghamii*, *Crotalaria eremaea*. *Acacia ligulata*, *Lechenaultia divaricata* and *Calotis erinacea* being the most frequent. The ground between the hummocks and shrubs is variable in cover and floristics depending on seasonal conditions with *Aristida holathera* var. *holathera*, *Euphorbia wheeleri* and *Cullen pallidum* common. Occurs on mobile crests and slopes of Quaternary sand dunes. Soils very deep, white, yellow and red siliceous sands. Not a Wetland. (BVG1M: 33a).

5.6.8b: *Crotalaria eremaea* sparse to open herbland commonly with *Eragrostis eriopoda*. Cover and floristic composition dependent on seasonal conditions large areas may be devoid of vegetation, includes *Tribulus terrestris*, *Aristida holathera*, *Eriachne aristidea*, *Eragrostis basedowii*, *Glinus lotoides*, *Blennodia pterosperma*, *Nicotiana velutina*. Occasional scattered trees or shrubs such as *Atalaya hemiglauc*, *Grevillea stenobotrya*, *Acacia ligulata*, *Acacia murrayana*, *Acacia tetragonophylla* or *Clerodendrum floribundum* may occur. Occurs on mobile crests and slopes of Quaternary sand dunes. Soils very deep, white, yellow and red siliceous sands. Not a Wetland. (BVG1M: 33a).

Short description:	<i>Zygochloa paradoxa</i> and/or <i>Crotalaria eremaea</i> +/- <i>Triodia basedowii</i> open tussock grassland and herbland on mobile crests and slopes of sand dunes
Supplementary descriptions:	Neldner (1991), 41a (109); Boyland (1984), 24; Wilson and Purdie (1990a), D1, D2 (2); Dawson (1974), D1, D2 (14).
Subregions:	10, 7, 2, (12), (5), (1), (11), (8), (3), (4), (13), (4.2), (4.1)
Protected areas:	Munga-Thirri NP, Diamantina NP
Extent in reserves:	High
Wetland:	Not a Wetland
Special values:	5.6.8: Habitat for the endemic eyrean grass wren <i>Amytornis goyderi</i> and threatened fauna species including the dusky hopping mouse <i>Notomys fuscus</i> , mulgara <i>Dasycercus cristicauda</i> and plant species including <i>Acacia peuce</i> . 5.6.8a: Habitat for the endemic eyrean grass wren <i>Amytornis goyderi</i> and threatened fauna species including the dusky hopping mouse <i>Notomys fuscus</i> , mulgara <i>Dasycercus cristicauda</i> and flora species. 5.6.8b: Habitat for the endemic eyrean grass wren <i>Amytornis goyderi</i> and threatened fauna species including the dusky hopping mouse <i>Notomys fuscus</i> , mulgara <i>Dasycercus cristicauda</i> and flora species.
Comments:	5.6.8: Heavily grazed by rabbits. 5.6.8a: Heavily grazed by rabbits. 5.6.8b: Heavily grazed by rabbits.
Estimated extent:¹	Pre-clearing 379000 ha; Remnant 2021 378000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.7.1

Description: *Acacia shirleyi* low woodland, common co-dominants include *Acacia catenulata*, *Acacia cyperophylla* var. *cyperophylla* and *Acacia aneura*. *Acacia shirleyi* usually predominates with *Acacia catenulata* dominating in patches. Occasional scattered *Eucalyptus* spp. and *Acacia cyperophylla* var. *cyperophylla*, especially along drainage areas. *Hakea collina*, *Acacia sibirica* and *Eremophila latrobei* are frequently present, and may form an open low shrub layer. The ground layer is sparse, consisting of scattered grasses and forbs. Exhibits very patchy dominance pattern in woody species. Occurs most extensively on crests and scarps of deeply weathered Cretaceous and Tertiary sediments. Soils shallow, stony lithosols and shallow red earths. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia shirleyi* +/- *Acacia catenulata* +/- *Acacia aneura* +/- *Acacia cyperophylla* var. *cyperophylla* low woodland on scarps and crests of residuals

Supplementary descriptions: Neldner (1991), 20a (28); Wilson and Purdie (1990a), R1 (20); Turner et al. (1978), R4

Subregions: 4, (4.5), (5), (4.4)

Protected areas: Bladensburg NP

Extent in reserves: High

Wetland: Not a Wetland

Special values: 5.7.1: Habitat for yellow footed rock wallaby *Petrogale xanthopus celeris*.

Comments: 5.7.1: Winton plateau, Goneaway tableland in central-east.

Estimated extent:¹ Pre-clearing 111000 ha; Remnant 2021 111000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.2

Description: *Acacia shirleyi* predominates forming a distinct canopy layer with occasional *Acacia aneura*, *Acacia catenulata*, *Acacia excelsa* subsp. *angusta* and *Eucalyptus thozetiana*. Scattered shrubs may be present, with *Eremophila latrobei* and *Acacia sibirica* the most frequent but rarely form a distinct layer. The ground layer is sparse, or occasionally dominated by an open layer of *Triodia* spp. hummock grasses. Forbs are extremely sparse. Occurs on scarp retreats and adjacent crests of dissected tablelands of deeply weathered Cretaceous and Tertiary sediments. Soils very shallow, loamy lithosols and rock. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia shirleyi* +/- *Eucalyptus thozetiana* +/- *Acacia aneura* +/- *Acacia cyperophylla* var. *cyperophylla* low woodland with *Triodia* spp. on scarps and crests of residuals

Supplementary descriptions: Neldner (1991), 20b (27); Wilson and Purdie (1990a), R1 (20); Turner et al. (1978), R4 (65)

Subregions: 4, 6, (2), (6.9), (4.5), (4.3), (7), (5), (4.4)

Protected areas: Diamantina NP, Goneaway NP, Pullen Pullen SWR, Bladensburg NP, Lark Quarry CP

Extent in reserves: High

Wetland: Not a Wetland

Special values: 5.7.2: Potential habitat for NCA listed species: *Nyssanthes longistyla*, *Ptilotus maconochiei*.

Comments: 5.7.2: Winton plateau, Goneaway tableland.

Estimated extent:¹ Pre-clearing 365000 ha; Remnant 2021 365000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.3

Description: *Eucalyptus normantonensis* tall open mallee shrubland. Scattered shrubs may occur but do not form a conspicuous layer. *Triodia* spp. generally dominate the open to mid-dense ground layer, with *Triodia molesta* dominant on the upper slopes, and *Triodia longiceps*, *Triodia pungens* and in places, *Triodia brizoides* dominating the lower slopes. Other grasses and forbs may be present depending on seasonal conditions and degree of disturbance. Occurs on plateau margins and slopes of dissected residuals of deeply weathered Cretaceous and Tertiary sediments. Soils very shallow, stony lithosols with areas of weathered rock outcropping. Not a Wetland. (BVG1M: 19d).

Vegetation communities in this regional ecosystem include:

5.7.3x1: *Eucalyptus socialis* subsp. *eucentrica* tall open mallee shrubland. Scattered shrubs may occur but do not form a conspicuous layer. *Triodia* spp. generally dominate the open to mid-dense ground layer, with *Triodia molesta* dominant on the upper slopes, and *Triodia longiceps*, *Triodia pungens* and in places, *Triodia brizoides* dominating the lower slopes. Other grasses and forbs may be present depending on seasonal conditions and degree of disturbance. Occurs on plateau margins and slopes of dissected residuals of deeply weathered Cretaceous and Tertiary sediments. Soils very shallow, stony lithosols with areas of weathered rock outcropping. Not a Wetland. (BVG1M: 19d).

Short description: *Eucalyptus normantonensis* tall open mallee shrubland with *Triodia* spp. on slopes and plateau margins of residuals

Supplementary descriptions: Neldner (1991), 30a (38); Wilson and Purdie (1990a), R1 (22); Turner et al. (1978), R2, R3 (38)

Subregions: 4, (6.9), (4.5), (4.4), (5), (4.3)

Protected areas: Bladensburg NP, Diamantina NP, Goneaway NP, Welford NP, Pullen Pullen SWR, Lark Quarry CP

Extent in reserves: High

Wetland: Not a Wetland

Special values: 5.7.3: Potential habitat for NCA listed species: *Ptilotus maconochiei*, *Solanum unispinum*.
5.7.3x1: Potential habitat for NCA listed species: *Ptilotus maconochiei*, *Solanum unispinum*.

Comments: 5.7.3: Requires burning in a mosaic pattern to maintain biodiversity.
5.7.3x1: Requires burning in a mosaic pattern to maintain biodiversity.

Estimated extent:¹ Pre-clearing 325000 ha; Remnant 2021 324000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.4

Description: *Eucalyptus thozetiana* low open woodland commonly with *Eucalyptus normantonensis* tall mallee shrubs. Scattered low shrubs may occur but do not form a conspicuous layer. *Triodia* spp. generally dominate the open to mid-dense ground layer, with *Triodia molesta* dominant on the upper slopes, and *Triodia longiceps*, *Triodia pungens* and in places, *Triodia brizoides* dominating the lower slopes. Other grasses and forbs may be present depending on seasonal conditions and degree of disturbance. Occurs on plateau margins and slopes of dissected residuals of deeply weathered Cretaceous and Tertiary sediments. Soils very shallow, stony lithosols with areas of weathered rock outcropping. Not a Wetland. (BVG1M: 19d).

Short description: *Eucalyptus thozetiana* low open woodland with *Triodia* spp. +/- *Eucalyptus normantonensis* on plateau margins and slopes of residuals

Supplementary descriptions: Neldner (1991), 30b (38); Turner et al. (1978), R3

Subregions: 4, (6.9), (5), (4.5), (4.4)

Protected areas: Welford NP, Diamantina NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.7.4: Potential habitat for NCA listed species: *Nyssanthus longistyla*.

Comments:

Estimated extent:¹ Pre-clearing 26000 ha; Remnant 2021 26000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.5

Description: *Acacia sibirica* open shrubland. Occasionally scattered low trees of *Acacia shirleyi*, *Acacia aneura*, *Acacia catenulata*, *Corymbia terminalis*, *Corymbia blakei* and *Corymbia aparrerinja* may occur. Other low shrubs may be present. The ground cover is sparse and typically comprises short tussock grasses and forbs, in places *Triodia* spp. may be dominant. Exposed weathered rock (duricrust) is common and often forms rock pavements devoid of vegetation. Treeless and shrubless areas are common. Occurs on flat to undulating plains and crests of dissected tablelands with slopes of 1 to 10%. Soils shallow, stony, acidic, red, earthy loam and clay-loam lithosols. Silcrete stones and boulders spread throughout. Exposed weathered rock often common. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia sibirica* open shrubland +/- *Acacia aneura* +/- *Acacia shirleyi* +/- *Triodia* spp. open shrubland on crests and tops of dissected tablelands and ranges

Supplementary descriptions: Neldner (1991), 32c (35); Wilson and Purdie (1990a), R1 (18); Turner et al. (1978), R2, R3 (65)

Subregions: 4, 6, (2), (7), (4.4), (9), (5), (8), (4.5)

Protected areas: Diamantina NP, Goneaway NP, Pullen Pullen SWR, Bladensburg NP

Extent in reserves: Medium

Wetland: Not a Wetland

Special values: 5.7.5: Potential habitat for NCA listed species: *Indigofera oxyrachis*, *Ptilotus maconochiei*, *Solanum unispinum*.

Comments:

Estimated extent:¹ Pre-clearing 871000 ha; Remnant 2021 870000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.6

Description: *Acacia cambagei* predominates forming a distinct but discontinuous and groved canopy. Often open stony areas are present. Scattered *Capparis anomala* and *Senna* spp. shrubs are locally prominent. The ground layer is sparse to open and usually dominated by *Triodia brizoides* or *T. longiceps*. Tussock grasses and forbs are usually present, with their abundance dependent on seasonal conditions. Occurs on lower slopes of scarp retreat zones formed from Tertiary residual material overlying fine grained sediments (land zone 9). Soils predominantly shallow, stony red clays with dense surface gravel or stone. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia cambagei* tall shrubland +/- *Triodia* spp. +/- *Senna* spp. on scarp footslopes and eroding pediments

Supplementary descriptions: Neldner (1991), 26a (19); Boyland (1984), 15a; Wilson and Purdie (1990a), R1 (36); ;Turner et al. (1978), R3 (10)

Subregions: 4, 6.9, (2), (4.5), (6), (5), (4.4)

Protected areas: Bladensburg NP, Diamantina NP, Welford NP, Goneaway NP

Extent in reserves: High

Wetland: Not a Wetland

Special values: 5.7.6: Potential habitat for NCA listed species: *Eremophila tetraptera*.

Comments:

Estimated extent:¹ Pre-clearing 96000 ha; Remnant 2021 96000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.7

Description: [RE not in use]²: This regional ecosystem is now mapped as 5.9.2x1. *Acacia cambagei* predominates and forms a distinct but discontinuous canopy. Other trees and shrubs are very sparse, except for young *Acacia cambagei*, which is dense in most areas. The ground layer is open and variable, with *Eragrostis xerophila* and *Sporobolus actinocladius* frequently dominant. In many areas, 80-90% of low trees stand dead, but dense *Acacia cambagei* regeneration usually present. Occurs predominantly on flat to gently undulating plains. Soils shallow to moderately deep, stony red clays or desert loams, with surface ironstone or silcrete gravel. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

5.7.7x1: [RE not in use]²: This regional ecosystem is now mapped as 5.9.2x1. *Acacia cambagei* predominates and forms a distinct but discontinuous canopy. Other trees and shrubs are very sparse, except for young *Acacia cambagei*, which is dense in most areas. The ground layer is open and variable, with *Eragrostis xerophila* and *Sporobolus actinocladius* frequently dominant. In many areas, 80-90% of low trees stand dead, but dense *Acacia cambagei* regeneration usually present. Occurs on sediments on undulating plains. Soils shallow to moderately deep, stony red clays or desert loams, with surface ironstone or silcrete gravel. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia cambagei* low open woodland with *Eragrostis xerophila*, *Sporobolus actinocladius* on sediments on undulating plains

Supplementary descriptions: Neldner (1991), 26d (15); Boyland (1984), 15a, Wilson and Purdie (1990a), T1 (LU 37)

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments:

Estimated extent:¹

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.8

Description: This regional ecosystem is now mapped as 5.7.8x1. *Acacia peuce* occurs in mono-specific stands, forming a low open woodland. Scattered low shrubs such as *Senna artemisioides* subsp. *oligophylla*, *Senna artemisioides* subsp. *coriacea*, *Senna phyllodinea*, *Eremophila maculata* subsp. *maculata*, *Enchylaena tomentosa* and *Maireana aphylla* usually occur. The ground layer is usually sparse, and dominated by *Aristida* spp. and *Sclerolaena* spp. Occurs on undulating plains between dunes. Associated soils include deep desert loams with silcrete gravel on surface in places. Wind-blown sand also occurs on the surface in places. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

5.7.8x1: *Acacia peuce* occurs in mono-specific stands, forming a very low open woodland. Scattered low shrubs such as *Senna artemisioides* sub. *oligophylla*, *S. artemisioides* subsp. *coriacea*, *S. phyllodinea*, *Eremophila maculata*, *Enchylaena tomentosa* and *Maireana aphylla* commonly occur. The ground layer is usually sparse, varies with seasonal conditions and is commonly dominated by *Aristida contorta* and *Sclerolaena* spp. Treeless areas common. Grades into *Aristida contorta* sparse to open herbland on Cainozoic colluvial and residual deposits (5.9.4x1) with decreasing tree density. Occurs on interface of flat to undulating Cainozoic clay plains with Quaternary sand dunes. Associated soils include deep desert loams, deep texture contrast soils with a sandy A horizon both often with silcrete gravel on surface in places. Wind-blown sand also occurs on the surface in places. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia peuce* low open woodland between dunes

Supplementary descriptions: Deveson, (1980); Boyland (1984), 5

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values: 5.7.8: Habitat for threatened species of flora (*Acacia peuce*) and of fauna (kowari *Dasyuroides byrnei*, and grey falcon (*Falco hypoleucos*). The ecosystem supports a high density of raptors with nesting sites including the grey falcon mentioned above.
5.7.8x1: Habitat for threatened species of flora (*Acacia peuce*) and of fauna (kowari *Dasyuroides byrnei*, and grey falcon (*Falco hypoleucos*). The ecosystem supports a high density of raptors with nesting sites including the grey falcon mentioned above.

Comments: 5.7.8: Lack of *Acacia peuce* regeneration possibly due to grazing pressure.
5.7.8x1: Was previously mapped as 5.7.8. Created to move 5.7.8 to landzone 4. Lack of *Acacia peuce* regeneration possibly due to grazing pressure.

Estimated extent:¹ Pre-clearing 3000 ha; Remnant 2021 3000 ha

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Remnant areas show a lack of *Acacia peuce* regeneration possibly due to grazing pressure.

Regional ecosystem 5.7.9

Description: *Aristida contorta*, *Eriachne pulchella* and *Eragrostis pergracilis* are the most frequent grasses, and usually form a seasonally variable sparse tussock grassland or sparse herbland. Forbs may be common seasonally, but occur infrequently. Low trees and low shrubs occur as very sparsely scattered emergents. Occurs in central region on gently undulating tops of residuals, and in small valleys of dissected low hills and tablelands. Soils very shallow, gravelly, red earths or shallow desert loams with surface ironstone gravel. Not a Wetland. (BVG1M: 31b).

Short description: *Aristida* spp., *Eriachne pulchella* open tussock grassland wooded with *Eucalyptus* spp. +/- *Acacia sibirica* on undulating tops of dissected tablelands and ranges

Supplementary descriptions: Neldner (1991), 46c (101); Wilson and Purdie (1990a), H1 (16); Turner et al. (1978), R2 (72)

Subregions: 4, 6, 4.4

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values:

Comments:

Estimated extent:¹ Pre-clearing 15000 ha; Remnant 2021 15000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.10

Description: *Aristida latifolia* predominates forming a sparse to open tussock grassland. In places, the soil is virtually devoid of vegetation. *Aristida contorta* and sparsely scattered tussocks of *Astrebale pectinata* are frequent. Ephemeral grasses such as *Enneapogon avenaceus* and *Tripogon loliiformis*, and forbs such as *Rhodanthe floribunda*, *Minuria leptophylla*, *Salsola australis* and *Stenopetalum nutans* may be seasonally prominent and codominant. Scattered low shrubs of *Acacia tetragonophylla* and *Senna* spp. are very sparsely scattered. Occurs on flat to gently undulating plains formed from weathered Cretaceous sediments. Soils generally shallow to deep, crusted red clays with small amounts of ironstone, chalcedony, laterite or silcrete gravel in profile and on surface. Not a Wetland. (BVG1M: 31b).

Vegetation communities in this regional ecosystem include:

5.7.10x1: *Aristida contorta* dominates this sparse herbland. Other short grasses such as *Enneapogon avenaceus*, *Tripogon loliiformis* may be codominant. Forbs such as *Heliotropium filaginoides*, *Ptilotus* spp., *Rhodanthe floribunda*, *Maireana dichoptera* and *Sclerolaena lanicuspis* may predominate after winter rain. Sparsely scattered shrubs may occur in places. Short grasses build up after wet summers, while forbs common after winter rainfall. Occurs on rises, low hills, rocky outcrops and scarps of deeply weathered Tertiary Marion, Cretaceous Winton and Mackunda Formations. Soils very shallow, loamy, gravelly, hard setting, lithosols with lateritic outcrops, widespread gravel. Not a Wetland. (BVG1M: 31b).

5.7.10x2: A variety of shrub species occur together to form an open shrubland including *Senna artemisioides* subsp. *helmsii*, *Senna artemisioides* subsp. *oligophylla*, *Senna glutinosa* subsp. *pruinosa*, *Eremophila freelingii*, *Eremophila latrobei*, and *Dodonaea microzyga*. Other frequent shrubs include *Maireana georgei*, *Acacia tetragonophylla*, *Acacia sibirica* and *Scaevola spinescens*. The sparse ground layer is dominated by the short grasses *Aristida contorta*, *Enneapogon avenaceus*, *Digitaria brownii* and *Enneapogon polyphyllus*, and the forbs *Abutilon fraseri*, *Ptilotus* spp. and *Sclerolaena* spp. Shrub density highest in drainage lines on residual scarps. Rises, low hills, rocky outcrops and scarps of deeply weathered Tertiary Marion, Cretaceous Winton and Mackunda Formations. Soils very shallow, loamy, gravelly, hard setting, lithosols with lateritic outcrops, widespread gravel. Not a Wetland. (BVG1M: 24b).

5.7.10x3: A variety of low shrub species occur together to form an open shrubland. *Senna artemisioides* subsp. *oligophylla*, *Acacia calcicola*, *Senna glutinosa* subsp. *pruinosa*, *Eremophila tetraptera* usually dominate the low shrub layer. Other frequent shrubs include *Eremophila freelingii*, *Eremophila oppositifolia* subsp. *rubra*, *Dodonaea microzyga*, *Acacia sibirica*, *Senna artemisioides* subsp. *helmsii* and *Scaevola spinescens*. The sparse ground layer is dominated by the short grasses *Aristida* spp., *Enneapogon avenaceus*, *Digitaria brownii* and *Enneapogon polyphyllus*, and the forbs *Euphorbia australis* var. *subtomentosa*, *Anemocarpa podolepidium*, *Lawrenzia glomerata*, *Abutilon fraseri*, *Ptilotus* spp. and *Sclerolaena* spp. Shrub density is highly variable, highest in drainage lines and on scarps, herb dominated or bare areas are common. Occurs on flat to undulating tops and low scarps of dissected tablelands where deeply weathered Tertiary limestones of the Springvale formation outcrop. Soils are very shallow, crusted calcareous lithosols with limestone fragments and gypsum deposits. Not a Wetland. (BVG1M: 24b).

Short description:	<i>Aristida latifolia</i> +/- <i>Aristida contorta</i> sparse grassland wooded with <i>Acacia tetragonophylla</i> +/- <i>Senna</i> spp. on weathered Cretaceous sediments
Supplementary descriptions:	Neldner (1991), 46d (98)
Subregions:	2, 4, (1), (4.2), (10), (3), (5), (4.1), (4.3), (11)
Protected areas:	Diamantina NP, Pullen Pullen SWR
Extent in reserves:	Medium
Wetland:	Not a Wetland
Special values:	5.7.10: Potential habitat for NCA listed species: <i>Eremophila tetraptera</i> . 5.7.10x3: Habitat for threatened plant species including <i>Eremophila tetraptera</i> .
Comments:	5.7.10x3: Springvale Formation, Hamilton Range.
Estimated extent:¹	Pre-clearing 280000 ha; Remnant 2021 280000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.7.11

Description: [RE not in use]²: This regional ecosystem is now mapped as 5.9.5x1. Ephemeral forbs usually predominate with *Atriplex spongiosa*, *Sclerolaena lanicuspis* and *Sclerolaena glabra* being the most abundant. *Atriplex fissivalvis*, *Rhodanthe floribunda*, *Maireana ciliata* and *Osteocarpum dipterocarpum* are locally abundant, while *Gnephosis arachnoidea* and *Salsola australis* occur frequently. *Tripogon loliiformis* and *Sporobolus actinocladus* become codominant or dominant in areas where the stone pavement is less dense. *Astrebla pectinata* and ephemeral forbs become dominant where the stone pavement is absent and in gilgai depressions. Local deposits of windblown sand support ephemeral forbs such as *Calotis plumulifera*, *Gnephosis eriocarpa*, *Rhodanthe moschata* and *Polycalymma stuartii*. Trees and shrubs are usually absent. Floristic composition varies with seasonal conditions, density of stone pavement and gilgai micro relief. Occurs on flat to gently undulating plains and on benched areas where gilgai micro relief present that are formed on mantled pediments, fresh rock and deeply weathered rock associated with erosion of the Tertiary land surface exposing Cretaceous sediments. Soils deep to moderately deep, desert loams with very dense silcrete, or occasionally ironstone, surface pavement. Red and brown cracking clays occur in gilgai. Not a Wetland. (BVG1M: 31b).

Short description: Fluctuating climax of *Atriplex* spp., *Sclerolaena* sp. +/- short grasses, open formland on mantled pediments with dense silcrete cover

Supplementary descriptions: Wilson and Purdie (1990a), P2, minor F4 (60); Neldner (1991), 50 (104); Mills R4 (69)

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 5.7.11: Occasionally, scattered *Acacia sibirica* is present. Soils subject to sheet and some gully erosion with associated change in floristic composition (Wilson and Purdie 1990b; P2).

Estimated extent:¹

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.12

Description: *Acacia cyperophylla* var. *cyperophylla*, +/- *Acacia aneura* low woodland. Scattered low shrubs are usually present, and frequently form a very sparse low shrub layer. The ground layer is sparse with a variety of ephemeral tussock grasses and forbs occurring infrequently. *Triodia pungens* frequently dominates the ground layer in the central-east. Occurs mainly on scarps and crests in central-western residuals. Minor outliers on rises, low hills and scarps of deeply weathered Tertiary and Cretaceous sediments. Soils are usually very shallow, gravelly lithosols with exposed deeply weathered rock common. Siliceous gravel and stone usually spread throughout the profile. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia cyperophylla* var. *cyperophylla* +/- *Acacia aneura* low woodland on rises, low hills, rocky outcrops and scarps of deeply weathered Tertiary and Cretaceous sediments.

Supplementary descriptions: Neldner (1991), 27a (32); Boyland (1984), E; Wilson and Purdie (1990a), R2 (26)

Subregions: 2, 1, 4, (4.1), (10)

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values: 5.7.12: Potential habitat for NCA listed species: *Solanum unispinum*.

Comments: 5.7.12: In the central-east, and Allen's Range south of Winton.

Estimated extent:¹ Pre-clearing 48000 ha; Remnant 2021 48000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.13

Description: *Acacia cyperophylla* var. *cyperophylla* tall shrubland with *Acacia cambagei* and/or *Acacia georginae* frequent codominants, *Atalaya hemiglauc*a is usually present as scattered tall shrubs. *Eucalyptus coolabah* or *Eucalyptus camaldulensis* may occur as scattered trees in some drainage lines. Low shrubs are frequently present, but only rarely is a conspicuous low shrub layer of *Senna artemisioides* subsp. *oligophylla* and/or *Eremophila freelingii* formed. The ground layer varies from sparse to open, and is usually dominated by *Eulalia aurea*, *Themeda triandra*, *Eriachne mucronata* and *Enteropogon acicularis*. Scattered forbs and sub shrubs are also commonly present. Occurs on smaller drainage lines associated with dissected tablelands and residuals and adjoining undulating plains. Soils variable depending on position, but mainly deep, gravelly, sandy clay loams in upper drainage lines, and deep, gravelly, red clays lower in landscape. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia cyperophylla* var. *cyperophylla* +/- *Acacia cambagei* or *Acacia georginae* +/- *Atalaya hemiglauc*a tall shrubland on drainage lines

Supplementary descriptions: Neldner (1991), 27b (33); Wilson and Purdie (1990a), R2 (27)

Subregions: 4, 2, 1, (4.5), (4.1), (3), (4.2), (4.3), (5)

Protected areas: Diamantina NP, Goneaway NP, Pullen Pullen SWR, Lark Quarry CP

Extent in reserves: High

Wetland: Not a Wetland

Special values:

Comments:

Estimated extent:¹ Pre-clearing 36000 ha; Remnant 2021 36000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.14

Description: *Acacia sibirica* predominates and together with *Hakea eyreana* forms a very sparse canopy layer. Scattered emergent *Acacia aneura* and *Corymbia terminalis* are frequently present. A number of scattered shrubs are present, but do not form a conspicuous layer. The ground layer is very sparse with much exposed rock on the surface. Occurs on crest and slopes of dissected Tertiary sandstone tablelands. Soils shallow, stony, lithosols and gravelly red earths, with exposed calcareous sandstone and occasionally silcrete duricrust. Not a Wetland. (BVG1M: 24a).

Vegetation communities in this regional ecosystem include:

5.7.14x1: A variety of shrub species occur together to form an open shrubland. *Senna artemisioides* subsp. *oligophylla*, *Acacia sibirica*, *Eremophila freelingii*, *Acacia calcicola* usually dominate the shrub layer with scattered *Corymbia terminalis* and *Atalaya hemiglaucæ* trees frequently present. The ground layer is very sparse with exposed rock common. Treeless and shrubless areas are common. Occurs on crest and slopes of dissected Tertiary sandstone tablelands. Soils shallow, stony, lithosols and gravelly red earths, with exposed calcareous sandstone and occasionally silcrete duricrust. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia sibirica*, *Hakea eyreana* +/- *Acacia aneura* +/- *Eremophila freelingii* open shrubland on sandstones

Supplementary descriptions: Neldner (1991), 32d (36)

Subregions: 1, 4, (4.2), (2), (10), (5)

Protected areas: Diamantina NP

Extent in reserves: Medium

Wetland: Not a Wetland

Special values:

Comments: 5.7.14: Toko Range.

5.7.14x1: Moses sandstone, Hamilton Range Diamantina National Park.

Estimated extent:¹ Pre-clearing 36000 ha; Remnant 2021 36000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.7.15

Description: *Triodia longiceps* +/- *Triodia* spp. hummock grassland, scattered shrubs and emergent low trees may occur but do not form conspicuous layers. In places *Triodia molesta* may be dominant on the upper slopes, and *Triodia longiceps*, *Triodia pungens* and occasionally, *Triodia brizoides* dominating the lower slopes. Other grasses and forbs may be present depending on seasonal conditions and degree of disturbance. Occurs on talus slopes of dissected tablelands and residuals on deeply weathered Tertiary and Cretaceous sediments. Soils generally shallow, gravelly red earths and lithosols. Not a Wetland. (BVG1M: 33b).

Short description: *Triodia longiceps* +/- *Triodia* spp. hummock grassland on talus slopes of dissected tablelands and residuals

Supplementary descriptions: Neldner (1991), 38b

Subregions: 4, (4.5), (4.4), (4.3), (5)

Protected areas: Diamantina NP, Pullen Pullen SWR, Bladensburg NP, Goneaway NP, Lark Quarry CP

Extent in reserves: High

Wetland: Not a Wetland

Special values: 5.7.15: Habitat for threatened fauna including *Pezoporus occidentalis* (night parrot).

Comments: 5.7.15: Goneaway tablelands, Diamantina National Park. Requires burning in a mosaic pattern to maintain biodiversity.

Estimated extent:¹ Pre-clearing 54000 ha; Remnant 2021 53000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.9.1

Description: A variety of low shrub species occur together to form an open shrubland. Common dominants include *Senna* spp., *Eremophila* spp., *Acacia* spp., *Maireana* spp. Sparsely scattered *Acacia cambagei/georginae* or *Corymbia terminalis* may occur as emergent trees in places. The ground layer is a seasonally variable sparse to open-herbland. Occurs on both flat to gently undulating clay plains and mantled pediments on fresh Cretaceous sediments as well as on tablelands and footslopes of Tertiary and Cretaceous limestone outcrops. Soils stony, deep to moderately deep, red and brown cracking clays, or rarely desert loams or on limestones predominantly shallow, red, calcareous loams and earths with limestone fragments in profile and on surface. Not a Wetland. (BVG1M: 24b).

Vegetation communities in this regional ecosystem include:

5.9.1a: A variety of low shrub species occur together to form an open shrubland. *Senna artemisioides* subsp. *helmsii*, *Senna artemisioides* subsp. *oligophylla*, *Senna glutinosa* subsp. *pruinosa*, *Eremophila freelingii* and *Dodonaea microzyga* usually dominate the low shrub layer. Other frequent shrubs include *Eremophila tetraptera*, *Acacia tetragonophylla* and *Scaevola spinescens*. On Tertiary limestones in the far SW corner *Maireana aphylla* may be dominant. Sparsely scattered *Acacia cambagei/georginae* or *Corymbia terminalis* may occur as emergent trees. The sparse ground layer is dominated by short grasses and forbs including *Aristida* spp., *Enneapogon avenaceus*, *Euphorbia australis*, *Anemocarpa podolepidium*, *Lawrenzia glomerata*, *Digitaria brownii* and *Enneapogon polyphyllus*, *Abutilon fraseri*, *Ptilotus* spp. and *Sclerolaena* spp. Shrub density highest in drainage lines. Occurs on flat to gently undulating tableland tops and footslopes of Tertiary and Cretaceous limestone outcrops. Soils predominantly shallow, red, calcareous loams and earths with limestone fragments in profile and on surface. Not a Wetland. (BVG1M: 24b).

5.9.1b: *Senna artemisioides* subsp. *helmsii* and/or *Senna artemisioides* subsp. *oligophylla* and/or *Senna glutinosa* subsp. *pruinosa* +/- *Eremophila* spp. +/- *Acacia* spp. open shrubland. The ground layer is a seasonally variable sparse to open-herbland commonly with *Astrebla* spp. *Dactyloctenium radulans*, *Brachyachne convergens*, *Iseilema* spp., *Atriplex* spp. and *Sclerolaena* spp. Occurs on flat to gently undulating clay plains with slopes usually less than 3% (sometimes up to 5%). Soils stony, deep to moderately deep, red and brown cracking clays, or rarely desert loams. Occurs on mantled pediments and fresh Cretaceous sediments. Not a Wetland. (BVG1M: 24b).

5.9.1x1: *Maireana aphylla* +/- *Acacia victoriae* +/- *Senna* spp. open shrubland. The sparse ground layer varies depending on seasonal conditions and is usually dominated by short grasses and forbs including *Aristida contorta* +/- *Oxychloris scariosa* +/- *Enneapogon avenaceus* +/- *Sporobolus actinocladus*. Ephemeral forbs may predominate after winter rain. Local shallow deposits of windblown sand support ephemeral forbs such as *Calotis plumulifera*, *Gnephosis eriocarpa*, *Rhodanthe moschata* and *Polycalymma stuartii*. Occurs on level to gently undulating superficial Cainozoic clay deposits overlying Cretaceous sediments. Soils shallow to moderately deep, stony red clays or desert loams. Weak gilgai development occurs. Not a Wetland. (BVG1M: 24b).

Short description:	<i>Senna</i> spp., <i>Eremophila</i> spp. +/- <i>Acacia</i> spp. +/- <i>Maireana</i> spp. open shrublands on fresh Cretaceous sediments and Cretaceous or Tertiary limestones
Supplementary descriptions:	Neldner (1991), 34 (53, 54); Wilson and Purdie (1990a), R3 (29), R5 (34)
Subregions:	2, 1, 4, (11), (10), (3), (5)
Protected areas:	Diamantina NP, Pullen Pullen SWR
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	5.9.1: Potential habitat for NCA listed species: <i>Eremophila tetraptera</i> . 5.9.1a: Habitat for threatened plant species including <i>Eremophila tetraptera</i> .
Comments:	5.9.1x1: Created to differentiate Cainozoic residual and colluvial clays (Landzone 4) from in situ clays (Landzone 9). These Cainozoic clays have a weak potassic signature indicating either leaching of potassium during deep weathering or mixing with leached material during transport, as opposed to fresh Cretaceous clays which retain a strong Potassic signature. South Western Corner, Sturt Stony Desert.
Estimated extent:¹	Pre-clearing 109000 ha; Remnant 2021 109000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.9.2

Description: *Senna artemisioides* subsp. *helmsii* +/- *Senna artemisioides* subsp. *oligophylla* +/- *Acacia georginae* +/- *Acacia* spp. open shrubland. Other low shrubs are frequently present. Scattered emergent low trees may be present in places. The ground layer is usually sparse to open, and dominated by *Aristida* spp., *Enneapogon* spp., *Salsola australis*, and a variety of forbs. In gilgai, *Astrebla pectinata*, *Chrysopogon fallax* and *Eulalia aurea* may be abundant. Occurs on flat to gently undulating tableland tops and footslopes of Cambrian limestone residuals. Soils predominantly shallow, red, calcareous loams and earths with limestone fragments in profile and on surface. Not a Wetland. (BVG1M: 24b).

Vegetation communities in this regional ecosystem include:

5.9.2x1: *Acacia cambagei* predominates and forms a distinct but discontinuous canopy. Other trees and shrubs are very sparse, except for young *Acacia cambagei*, which is dense in most areas. The ground layer is open and variable, with *Eragrostis xerophila* and *Sporobolus actinocladus* common and a range of forbs including *Sclerolaena* spp., *Abutilon fraseri*, *Boerhavia* spp., *Hibiscus brachysiphonius* and **Portulaca oleracea*. In many areas, 80-90% of low trees stand dead, but dense *Acacia cambagei* regeneration usually present. Occurs on fresh Cretaceous sediments on undulating plains. Soils shallow to moderately deep, stony red clays or desert loams, with surface ironstone or silcrete gravel. Not a Wetland. (BVG1M: 26a).

5.9.2x2: *Acacia cambagei* low open woodland. Other trees and shrubs are very sparse but may include *Santalum lanceolatum* and *Eremophila mitchellii*. Scattered shrubs may be present, including *Senna* spp. and *Eremophila* spp. The ground layer is variable, with *Astrebla pectinata* common. Occurs on superficial Cainozoic clay deposits on undulating plains. Soils shallow to moderately deep, stony red clays or desert loams, with surface ironstone or silcrete gravel. Weak Gilgai development occurs. Not a Wetland. (BVG1M: 26a).

5.9.2x3: *Acacia cambagei* low open woodland. Other trees and shrubs are very sparse but may include *Santalum lanceolatum* and *Eremophila mitchellii*. Scattered shrubs may be present, including *Senna* spp. and *Eremophila* spp. The ground layer is variable, with *Astrebla pectinata* and *Sclerolaena* spp. common. Occurs on Tertiary and Pleistocene alluvium and areas where sandy red earths overly clay/alluvia, moderately deep to deep, acidic, sandy red earths and sandy light clays. Not a Wetland. (BVG1M: 26a).

Short description: *Senna artemisioides* subsp. *helmsii* +/- *Senna artemisioides* subsp. *oligophylla* +/- *Acacia georginae* +/- *Acacia* spp. open shrubland on Cambrian limestone

Supplementary descriptions: Neldner (1991), 33 (52); Wilson and Purdie (1990a), R3 (29), R5 (34)

Subregions: 4, 6, 2, (4.4), (1), (5), (4.5), (6.10), (3), (7), (9), (4.1)

Protected areas: Diamantina NP, Bladensburg NP, Pullen Pullen SWR, Lochern NP, Lark Quarry CP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 5.9.2: Habitat for threatened plant species including *Eremophila tetraptera*.
5.9.2x1: Habitat for threatened plant species including *Eremophila tetraptera*.

Comments: 5.9.2: Many *Acacia georginae* tall shrubs stand dead with little regeneration present.
5.9.2x1: RE 5.7.7 and 5.7.7x1 were amalgamated into this RE. Many *Acacia cambagei* tall shrubs stand dead with little regeneration present.
5.9.2x2: Created to differentiate Cainozoic residual and colluvial clays (Landzone 4) from in situ clays (Landzone 9). These Cainozoic clays have a weak potassic signature indicating either leaching of potassium during deep weathering or mixing with leached material during transport, as opposed to fresh Cretaceous clays which retain a strong Potassic signature.
5.9.2x3: Created to differentiate Quaternary deposits (Landzone 5), from in situ clays (Landzone 9) and Cainozoic residual and colluvial clays (Landzone 4).

Estimated extent:¹ Pre-clearing 664000 ha; Remnant 2021 645000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 5.9.3

Description: *Astrebla* spp. +/- short grasses +/- forbs open tussock grassland to herbland. *Astrebla pectinata* typically predominates but locally *Astrebla lappacea* may dominate, a *Sclerolaena* spp. sparse-forbland may at times predominate, other tussock grasses may be present occupying the spaces between the tussocks of *Astrebla* spp. *Dactyloctenium radulans*, *Brachyachne convergens* and *Iseilema* spp. may predominate in some areas. Forbs such as *Atriplex* spp., *Sclerolaena* spp., *Trianthema triquetra*, **Portulaca oleracea* and *Salsola australis* occur and in less favourable seasons tend to predominate forming a sparse ground cover (<10%). Isolated shrubs including *Senna artemisioides* subsp. *oligophylla*, *Senna phyllodinea* and *Acacia victoriae* may be conspicuous, but trees are absent. Occurs on flat to gently undulating plains with slopes usually less than 3% (sometimes up to 5%). Soils stony, deep to moderately deep, red and brown cracking clays, or rarely desert loams. Occurs on mantled pediments and fresh Cretaceous sediments. Not a Wetland. (BVG1M: 30b).

Vegetation communities in this regional ecosystem include:

5.9.3a: *Astrebla lappacea* and/or *Sclerolaena* spp. open tussock grassland/herbland. Either *Astrebla lappacea* open tussock grassland or an open to sparse-forbland of *Sclerolaena bicornis* and/or *Sclerolaena calcarata* and/or *Sclerolaena lanicuspis* and/or *Sclerolaena* spp. may be dominant depending on seasonal conditions. *Dactyloctenium radulans*, *Brachyachne convergens* and *Iseilema* spp. may predominate in some areas. Other forbs such as *Atriplex* spp., *Trianthema triquetra*, **Portulaca oleracea* and *Salsola australis* are common. Occurs on flat to gently undulating plains with shallow to moderately deep alkaline self mulching cracking clay soils, fresh Cretaceous sediments. Not a Wetland. (BVG1M: 30b).

5.9.3b: Variable herbland on fresh Cretaceous sediments. Dominant species varies considerably depending on seasonal conditions and may include variable combinations of; *Astrebla* spp., *Aristida latifolia*, *Dactyloctenium radulans*, *Iseilema vaginiflorum*, *Atriplex* spp., *Sclerolaena* spp. A large number of forb species may occur, many of them ephemeral and seasonally abundant. In less favourable seasons ground cover can be very sparse with *Dactyloctenium radulans* and *Iseilema vaginiflorum* dominating, especially in areas with significant grazing. Occurs on flat to gently undulating plains (< 1%) of fresh Cretaceous sediments. Shallow to moderately deep brown cracking clay soils with self-mulching surface. Not a Wetland. (BVG1M: 30b).

5.9.3c: [RE not in use]²: This vegetation community is now mapped as 5.3.9x1. *Acacia cyperophylla* var. *cyperophylla* low woodland with *Acacia cambagei* sometimes co-dominant. Scattered *Atalaya hemiglaucula* may be present while in some areas *Senna artemisioides* subsp. *oligophylla* and *Eremophila freelingii* for a prominent low shrub layer. The ground layer is generally sparse and comprising a variety of grass and forb species such as *Eriachne mucronata*, *Salsola australis* or *Roepera ammophila*. Occurs on drainage lines within stony plains. Soils are generally deep gravelly massive to weakly structured sandy loams to sandy clay loams. Not a Wetland. (BVG1M: 24a).

5.9.3x1: [RE not in use]²: This vegetation community is now mapped as 5.9.3b. *Astrebla squarrosa* usually predominates with *Astrebla pectinata* being codominant, and together form a tussock grassland. *Iseilema vaginiflorum* and *Aristida latifolia* are frequent and abundant in heavily grazed areas. Shrubs are very sparse and infrequent. A number of forbs occur and may become abundant after winter rain. Occurs on flat clay plains of Winton plateau. Associated soils are moderately deep grey cracking clays, strongly self-mulching surface. Not a Wetland. (BVG1M: 30b).

5.9.3x2: *Astrebla pectinata* and/or *Astrebla lappacea* and/or *Aristida latifolia* open herbland. In some areas *Dactyloctenium radulans*, *Brachyachne convergens* and *Iseilema* spp. may be seasonally common. Forbs such as *Atriplex* spp. and *Sclerolaena* spp. occur, and in less favourable seasons tend to predominate. Isolated shrubs of *Acacia tetragonophylla* or *Senna* spp. may occur. Occurs on level to gently undulating plains formed by superficial Cainozoic clay deposits overlying a range of geologies. Soils shallow to deep, crusted red and minor brown medium to heavy clays. Small to moderate amounts of ironstone, chalcedony, laterite, and silcrete gravel occur in the profile and on the surface. Not a Wetland. (BVG1M: 30b).

5.9.3x3: Seasonally variable sparse to open tussock grassland/herbland, dominant grasses include *Astrebla pectinata*, *Aristida* spp., *Enneapogon avenaceus* and *Sporobolus actinocladius*. Annual grasses such as *Dactyloctenium radulans*, *Iseilema vaginiflorum* and *Brachyachne ciliaris* may be seasonally abundant. Forbs such as *Atriplex* spp., *Sclerolaena* spp., *Osteocarpum acropterum*, *Maireana* spp., **Portulaca oleracea*, *Salsola australis* and *Neobassia proceriflora* are common and in less favourable seasons tend to predominate forming a sparse ground cover (<10%). Isolated shrubs may be conspicuous, but trees are absent. Occurs on flat to gently undulating plains with abundant ironstone surface gravel cover. Soils moderately deep to deep, may be weakly gilgaied or strongly gilgaied with depressions parallel to the contour, crusted, red cracking clays. Ground cover always sparse, varies with amount of stone cover and seasonal conditions. Not a Wetland. (BVG1M: 30b).

Short description: *Astrebla* spp. +/- short grasses +/- forbs open tussock grassland to herbland on Cretaceous sediments
Supplementary descriptions: Neldner (1991), 47a (92); Boyland (1984), 27; Dawson (1974), F1-4 (84, 85); Wilson and Purdie (1992), F4 (55); Mills (1980), F2 (69)

Subregions:	2, 4, 6, (5), (7), (4.2), (8), (4.4), (1), (3), (12), (6.10), (11), (13), (9), (4.3), (10), (4.1), (6.9)
Protected areas:	Diamantina NP, Pullen Pullen SWR, Bladensburg NP, Astrebla Downs NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	
Comments:	<p>5.9.3: Surface stone (gibbers) may be desert varnished (Dawson, 1984; Wilson and Purdie, 1992). Composition of flora depends on seasonal conditions and past land use. <i>Astrebla elymoides</i> and <i>A. squarrosa</i> associated with infrequent gilgai. A fluctuating climax with <i>Astrebla pectinata</i> and short grasses dominating in favourable years, and <i>Atriplex</i> spp. And <i>Sclerolaena</i> spp. Dominating in poorer seasons. It is not unusual for <i>Astrebla</i> spp. To be inconspicuous for considerable periods, particularly under grazing.</p> <p>5.9.3b: RE 5.9.3x1 was amalgamated into this RE.</p> <p>5.9.3x2: Created to differentiate Cainozoic residual and colluvial clays (Landzone 4) from in situ clays (Landzone 9). These Cainozoic clays have a weak potassic signature indicating either leaching of potassium during deep weathering or mixing with leached material during transport, as opposed to fresh Cretaceous clays which retain a strong Potassic signature.</p>
Estimated extent: ¹	Pre-clearing 3389000 ha; Remnant 2021 3383000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.9.4

Description: *Aristida contorta* usually predominates forming an open to sparse tussock grassland. Other short grasses including *Oxychloris scariosa*, *Enneapogon avenaceus*, *Sporobolus actinocladus* and *Tripogon loliiformis* are common. Annual grasses such as *Brachyachne prostrata* and *Eriachne pulchella* occur frequently, while the perennial *Aristida latifolia* and *Eragrostis xerophila* may be locally common. Forbs such as *Gnephosis arachnoidea*, *Rhodanthe floribunda*, *Maireana dichoptera* and *Sclerolaena lanicuspis* may predominate after winter rain. Sparsely scattered shrubs may occur in places. Short grasses build up after wet summers, while forbs common after winter rainfall. Occurs on flat to gently undulating plains with abundant surface gravel cover of ironstone, chalcedony, laterite, silcrete or silicified sandstone. Soils shallow to deep, desert loams, with gravelly, sandy clay loams overlying structured medium clays. Ground cover always sparse, varies with amount of stone cover and seasonal conditions. Not a Wetland. (BVG1M: 31b).

Vegetation communities in this regional ecosystem include:

5.9.4x1: *Aristida contorta* sparse to open tussock grassland +/- *Oxychloris scariosa* +/- *Enneapogon avenaceus* +/- *Sporobolus actinocladus*. Ephemeral forbs may predominate after winter rain. Sparsely scattered shrubs such as *Senna* spp. And *Acacia tetragonophylla* may occur in places. Local shallow deposits of windblown sand support ephemeral forbs such as *Calotis plumulifera*, *Gnephosis eriocarpa*, *Rhodanthe moschata* and *Polycalymma stuartii*, and less commonly isolated patches of *Senna* spp. Shrubland. Sparsely scattered trees, such as *Corymbia terminalis*, *Hakea eyreana*, and *Grevillea striata* may occur in places. Floristic composition varies with seasonal conditions, density of stone pavement and gilgai micro relief. Occurs on level to gently undulating plains formed by Cainozoic colluvial and residual deposits overlying deeply weathered Cretaceous sediments. Associated soils shallow to deep gravelly to sandy desert loams. Not a Wetland. (BVG1M: 31b).

5.9.4x2: *Astrelba pectinata* sparse to open herbland commonly with *Sporobolus actinocladus*, *Brachyachne ciliaris*, *Atriplex* spp., *Sclerolaena* spp., *Salsola australis* and *Osteocarpum* spp. Mosaic of sparse to open tussock grassland in gilgai depressions dominated by *Astrelba pectinata*, and sparse herbland on benches and dense gravels dominated by *Sporobolus actinocladus*, *Brachyachne ciliaris*, *Enneapogon avenaceus*, *Sclerolaena* spp., *Atriplex* spp., *Salsola australis*, *Osteocarpum* spp., **Portulaca oleracea*. Occurs on level to gently undulating plains formed by Cainozoic colluvial and residual deposits overlying deeply weathered Cretaceous sediments. Deep stony often gilgaied soils with depressions sometime parallel to contour, soils range from desert loams to moderately deep crusted red-brown cracking clays. Moderate to large amounts of ironstone gravel on surface. Not a Wetland. (BVG1M: 30b).

Short description:	<i>Aristida contorta</i> sparse tussock grassland on fresh Cretaceous sediments with dense gravel cover
Supplementary descriptions:	Wilson and Purdie (1990a), P1 (56), P2 (60); Neldner (1991), 47b (96)
Subregions:	2, 4, 1, 12, (8), (5), (10), (4.2), (11), (3), (4.1)
Protected areas:	Diamantina NP, Pullen Pullen SWR, Munga-Thirri NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	5.9.4: Habitat for threatened fauna species including kowari <i>Dasyuroides byrnei</i> . 5.9.4x2: Habitat for threatened fauna species including kowari <i>Dasyuroides byrnei</i> .
Comments:	5.9.4: Some localised sheet erosion and associated change in floristic composition evident (Wilson and Purdie 1990b; F4). 5.9.4x1: Created to differentiate Cainozoic residual and colluvial clays (Landzone 4) from in situ clays (Landzone 9). These Cainozoic clays have a weak potassic signature indicating either leaching of potassium during deep weathering or mixing with leached material during transport, as opposed to fresh Cretaceous clays which retain a strong Potassic signature. 5.9.4x2: Created to differentiate Cainozoic residual and colluvial clays (Landzone 4) from in situ clays (Landzone 9). These Cainozoic clays have a weak potassic signature indicating either leaching of potassium during deep weathering or mixing with leached material during transport, as opposed to fresh Cretaceous clays which retain a strong Potassic signature. Some localised sheet erosion and associated change in floristic composition evident (Wilson and Purdie 1990b; F4).
Estimated extent:¹	Pre-clearing 940000 ha; Remnant 2021 939000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 5.9.5

Description: *Atriplex* spp., *Salsola australis* and *Sclerolaena* spp. usually predominate and form an open herbland, with occasional scattered *Astrebla* spp. Grasses such as *Dactyloctenium radulans* and *Sporobolus actinocladus* may predominate depending on seasonal conditions and management. Forbs such as *Osteocarpum acropterum*, *Maireana* spp., *Portulaca oleracea* and *Neobassia proceriflora* are common. Occurs on gently undulating to convex plains in south. Soils deep, stony, red and brown clays, often weak gilgai micro relief. Variable cover of silcrete gravel, stone and boulders occurs on soil surface. Not a Wetland. (BVG1M: 31b).

Vegetation communities in this regional ecosystem include:

5.9.5x1: Variable herbland with *Atriplex spongiosa*, *Sclerolaena lanicuspis* and *Sclerolaena glabra* being common dominants. *Atriplex fissivalvis*, *Rhodanthe floribunda*, *Maireana ciliata* and *Osteocarpum dipterocarpum* are often locally abundant, while *Gnephosis arachnoidea* and *Salsola australis* occur frequently. *Tripogon loliiformis* and *Sporobolus actinocladus* become codominant or dominant in areas where the stone pavement is less dense. *Astrebla pectinata* and ephemeral forbs become dominant where the stone pavement is absent and in gilgai depressions. Local deposits of windblown sand support ephemeral forbs such as *Calotis plumulifera*, *Gnephosis eriocarpa*, *Rhodanthe moschata* and *Polycalymma stuartii*. Trees and shrubs are usually absent. Floristic composition varies with seasonal conditions, density of stone pavement and gilgai micro relief. Occurs on mantled pediments with dense silcrete cover and gilgai micro relief present. Soils deep to moderately deep, desert loams with very dense silcrete, or occasionally ironstone, surface pavement. Red and brown cracking clays occur in gilgai. Not a Wetland. (BVG1M: 31b).

5.9.5x2: *Atriplex spongiosa* +/- *Sclerolaena lanicuspis* +/- *Sclerolaena glabra* sparse to open herbland. *Atriplex fissivalvis*, *Rhodanthe floribunda*, *Maireana ciliata* and *Osteocarpum dipterocarpum* are locally abundant, while *Gnephosis arachnoidea* and *Salsola australis* occur frequently. *Tripogon loliiformis* and *Sporobolus actinocladus* become codominant or dominant in areas where the stone pavement is less dense. Ephemeral forbs become dominant where the stone pavement is absent and in gilgai depressions. Local deposits of windblown sand support ephemeral forbs such as *Calotis plumulifera*, *Gnephosis eriocarpa*, *Rhodanthe moschata* and *Polycalymma stuartii*. Occasional scattered *Senna phyllodinea* and *Senna* spp. in drainage depressions. Floristic composition varies with seasonal conditions, density of stone pavement and gilgai micro relief. Occurs on flat to gently undulating plains and on benched areas where gilgai micro relief present where Cainozoic residual/colluvial/alluvial deposits overly deeply weathered Cretaceous sediments. Soils deep to moderately deep, desert loams beneath a very dense silcrete, (or occasionally ironstone) gravel forming a desert pavement. Red and brown cracking clays occur in gilgai. Not a Wetland. (BVG1M: 31b).

Short description:	<i>Atriplex</i> spp. and/or <i>Sclerolaena</i> spp. and/or <i>Salsola australis</i> open herbland on Cretaceous sediments
Supplementary descriptions:	Wilson and Purdie (1990a), F1 (46), F2 (48); Mills and Boyland (1979) F3 (62), F8 (68); Neldner (1991), 47c; Boyland (1984), 27
Subregions:	2, 4, (5), (11), (1), (3), (10), (6), (4.1), (4.2), (4.5), (4.3)
Protected areas:	Diamantina NP, Pullen Pullen SWR, Lark Quarry CP
Extent in reserves:	Medium
Wetland:	Not a Wetland
Special values:	5.9.5: Habitat for threatened fauna species including kowari <i>Dasyuroides byrnei</i> . 5.9.5x1: Habitat for threatened fauna species including kowari <i>Dasyuroides byrnei</i> . 5.9.5x2: Habitat for threatened fauna species including kowari <i>Dasyuroides byrnei</i> .
Comments:	5.9.5x1: RE 5.7.11 was amalgamated into this RE. Soils subject to sheet and some gully erosion with associated change in floristic composition (Wilson and Purdie 1990b; P2). 5.9.5x2: Created to differentiate Cainozoic residual and colluvial clays (Landzone 4) from in situ clays (Landzone 9). These Cainozoic clays have a weak potassic signature indicating either leaching of potassium during deep weathering or mixing with leached material during transport, as opposed to fresh Cretaceous clays which retain a strong Potassic signature. Soils subject to sheet and some gully erosion with associated change in floristic composition (Wilson and Purdie 1990b; P2).
Estimated extent:¹	Pre-clearing 871000 ha; Remnant 2021 870000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

¹ Estimated extent is from the current released version of the pre-clearing and remnant regional ecosystem mapping. Figures are rounded for simplicity. For more precise estimates, including breakdowns by tenure and other themes see remnant vegetation in Queensland (<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/remnant-vegetation/>)

² Superseded: Revision of the regional ecosystem classification removed this regional ecosystem code from use. It is included in the regional ecosystem description database because the RE code may appear in older versions of RE mapping and the Vegetation Management regulation.