

Regional ecosystem 10.3.1

Description: *Acacia argyrodendron* low woodland to open forest. *Eucalyptus coolabah*, *Grevillea striata* and *Atalaya hemiglauc* occasionally occur in the canopy. A secondary tree layer dominated by *Acacia argyrodendron* and *Eremophila mitchellii* is usually present. An *Eremophila mitchellii* shrub layer is usually present. Tussock grass ground layer. Occurs on alluvial plains with grey clay and texture contrast soils. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia argyrodendron* low woodland on alluvial plains

Supplementary descriptions: Turner et al. (1993), W4

Subregions: 1, 3, (2)

Protected areas: Forest Den NP, Moorrinya NP

Extent in reserves: Medium

Wetland: Not a Wetland

Special values:

Comments: 10.3.1: Texture contrast soils subject to pasture degradation and scalding. This regional ecosystem is subject to clearing for pasture development. Understorey largely removed/degraded due to grazing. Most clearing occurs on the clay soils.

Estimated extent:¹ Pre-clearing 39000 ha; Remnant 2021 26000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Subject to pasture degradation and scalding. Cracking clay soils with significant loss of ground cover.

Regional ecosystem 10.3.2

Description: [RE not in use]²: This vegetation community is now mapped as 10.3.1 and 10.3.5. *Acacia argyrodendron* or *Eucalyptus cambageana* usually with an understorey of *A. argyrodendron* dominate the very sparse to sparse canopy layer. The ground layer is very sparse. Occurs on alluvial plains with mostly grey clay soils and some areas of duplex soils in the east. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.3.2a: [RE not in use]²: This vegetation community is now mapped as 10.3.1. *Acacia argyrodendron* dominates the very sparse canopy. *A. argyrodendron*, *A. cambagei*, *Lysiphyllum carronii*, *Terminalia oblongata* are frequently present as scattered trees but may occasionally form a very sparse sub-canopy. *Eremophila mitchellii* and *Atalaya hemiglaucula* are frequently present as scattered small trees. *Carissa lanceolata* usually dominates the very sparse shrub layer. The dominant graminoids are variable including *Brachyachne convergens*, *Dactyloctenium radulans*, *Bothriochloa ewartiana*, *Enteropogon acicularis* and *Fimbristylis dichotoma*. Occurs on grey cracking clays sometimes with massive gilgai and texture contrast soils. Not a Wetland. (BVG1M: 26a).

10.3.2b: [RE not in use]²: This vegetation community is now mapped as 10.3.5. *Eucalyptus cambageana* open woodland to woodland usually with *Acacia argyrodendron* understorey on alluvium. *Eucalyptus cambageana* dominates the very sparse to sparse canopy. *Acacia argyrodendron* is occasionally present in the canopy and is frequently dominant in the very sparse to sparse small sub-canopy layer. *Eremophila mitchellii* is often present and *Terminalia oblongata* and *Atalaya hemiglaucula* are occasionally present in the low tree layer. *Carissa lanceolata* frequently dominates the very sparse shrub layer. *Enteropogon ramosus*, *Tripogon loliiformis*, *Eulalia aurea*, *Paspalidium caespitosum*, *Aristida personata* and *Sporobolus caroli* have been recorded as dominant graminoids in the very sparse to sparse ground layer. Occurs on alluvial plains (eastern). Not a Wetland. (BVG1M: 25a).

10.3.2bx1: [RE not in use]²: This vegetation community is now mapped as 10.3.5. *Eucalyptus cambageana* dominates the very sparse tree layer usually with very sparse understorey of *Acacia argyrodendron*, scattered shrubs or very sparse shrub layer, and very sparse ground layer with *Chrysopogon fallax*, *Enchylaena tomentosa*, *Enteropogon acicularis*, *Paspalidium caespitosum* and *Sporobolus caroli* present. Occurs on flat to gently undulating terrain with clayey soil. Not a Wetland. (BVG1M: 25a).

Short description: *Acacia argyrodendron* with or without *Eucalyptus cambageana* open woodland on alluvial plains (eastern)

Supplementary descriptions: Thompson and Turpin (in prep), A10e, E65j

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.3.2: This ecosystem is subject to clearing for pasture development. Occurrences on texture contrast soils are subject to scalding. There is potential for *Parthenium* invasion on the heavy clay soils.
10.3.2a: Occurs mostly in subregion 3 with small areas in subregion 2 near Lake Buchanan and near Lake Dunn.

Estimated extent:¹

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Pasture degradation and scalding. Cracking clay soils with significant loss of ground cover.

Regional ecosystem 10.3.3

Description: Acacia harpophylla woodland to open forest over a tussock grass ground layer. Occurs on alluvial plains. Contains Palustrine. (BVG1M: 25a).

Vegetation communities in this regional ecosystem include:

10.3.3a: [RE not in use]²: This vegetation community is now mapped as 10.3.5. Eucalyptus cambageana dominates the very sparse canopy. Acacia harpophylla is occasionally present as scattered small trees with E. cambageana, Flindersia dissosperma, Lysiphyllum carronii and Eremophila mitchellii. Carissa lanceolata usually dominates the very sparse shrub layer. Eremophila mitchellii, Psydrax oleifolia and Atalaya hemiglauca are usually present in the shrub layer. Dominant graminoids in the ground layer are variable and include Enteropogon acicularis, Bothriochloa ewartiana, Paspalidium caespitosum, Sporobolus actinocladus, Oxychloris scariosa, Chrysopogon fallax, *Cenchrus ciliaris and Fimbristylis dichotoma. Occurs on alluvial plains. Not a Wetland. (BVG1M: 25a).

10.3.3b: [RE not in use]²: This vegetation community is now mapped as 10.3.3. Acacia harpophylla woodland to open forest. Occurs on heavy clay soils on alluvial plains. Contains Palustrine. (BVG1M: 25a).

Short description: Acacia harpophylla woodland on alluvial plains

Supplementary descriptions: Thompson and Turpin (in prep), A11, E65; Turner et al. (1978), W2

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Contains Palustrine

Special values: 10.3.3: Potential habitat for NCA listed species: Ammannia robertsii.

Comments: 10.3.3: Associated with gilgais that may support ephemeral wetlands. Widespread across eastern parts of the DEU. This regional ecosystem is subject to clearing for pasture development. Occurrences on texture contrast soils are subject to scalding.

10.3.3a: *Ocimum basilicum frequently present.

10.3.3b: Subject to clearing. Degraded pastures due to grazing over >70% of extent.

Estimated extent:¹ Pre-clearing 10 ha; Remnant 2021 10 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.3.4

Description: *Acacia cambagei* low woodland to woodland. A shrub layer dominated by *Eremophila mitchellii* and *Carissa lanceolata* usually occurs. Tussock grass ground layer. Occurs on heavy clay and texture contrast soils on alluvial plains. Contains Palustrine. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.3.4a: [RE not in use]²: This vegetation community is now mapped as 10.3.4. *Acacia cambagei* woodland (western). *Eremophila mitchellii* usually dominates the very sparse shrub layer or occurs as scattered shrubs to small trees. *Psydrax oleifolia* and *Atalaya hemiglauc*a are occasionally present. A small shrub layer sometimes occurs dominated by *Senna artemisioides* with or without suckers of *Acacia cambagei* or both species may occur as scattered shrubs. The ground layer is often poorly formed except under the canopy where there is usually a very sparse cover of dominants which include *Paspalidium caespitosum*, *Sporobolus actinocladus* and *Brachyachne convergens*. Occurs on alluvial plains (western). Contains Palustrine. (BVG1M: 26a).

10.3.4b: [RE not in use]²: This vegetation community is now mapped as 10.3.4. *Acacia cambagei* low woodland (eastern). *Acacia cambagei* dominates the sparse canopy. *Eremophila mitchellii* dominates the very sparse shrub layer. Shrubs frequently present include *Capparis anomala* and *Carissa lanceolata*. The ground layer is very sparse and sometime dominated by graminoids including *Paspalidium caespitosum*. Occurs on alluvial plains (eastern). Contains Palustrine. (BVG1M: 26a).

10.3.4c: [RE not in use]²: This vegetation community is now mapped as 10.3.4. *Acacia cambagei* woodland. *Acacia cambagei* dominates the very sparse canopy. Queensland ebony (*Lysiphyllum carronii*), yellowwood (*Terminalia oblongata*) and false sandalwood (*Eremophila mitchellii*) are commonly present in the very sparse small tree layer. The very sparse shrub layer is usually dominated by *Carissa lanceolata* or *C. ovata*. Other species usually present in this layer include *Ehretia membranifolia*, *Atalaya hemiglauc*a and *Capparis lasiantha*. The ground layer is usually very sparse but is sometimes mid-dense. Occurs mostly on massive gilgai (eastern). Contains Palustrine. (BVG1M: 26a).

10.3.4d: [RE not in use]²: This vegetation community is now mapped as 10.3.4dx1. *Acacia tephрина* low woodland. Occurs on alluvial plains. Not a Wetland. (BVG1M: 27a).

10.3.4dx1: [RE not in use]²: This vegetation community is now mapped as 10.4.5x3. *Acacia tephрина* woodland. Occurs on flat clay plain. Not a Wetland. (BVG1M: 27a).

Short description:	<i>Acacia cambagei</i> low woodland on alluvial plains
Supplementary descriptions:	Gunn et al. (1967), Fu; Turner et al. (1978), W4; Turner et al. (1993), W1
Subregions:	4, 1, 2, (3), (4.5), (11.7), (11.15), (4.4), (11.24), (11.8)
Protected areas:	Moorrinya NP, Forest Den NP
Extent in reserves:	Low
Wetland:	Contains Palustrine
Special values:	10.3.4: Habitat for endangered species <i>Ammannia roberts</i> ii. Larger gilgai may provide ephemeral wetland habitat. Associated with gilgais that may support ephemeral wetlands. 10.3.4c: Provides habitat for wetlands species in gilgai depressions.
Comments:	10.3.4: This ecosystem is subject to clearing for pasture development. Occurrences on texture contrast soils are subject to scalding. There is potential for <i>Parthenium</i> invasion on the heavy clay soils. 10.3.4a: Occurs mostly in subregion 1 with some areas in the south-east on the edge of the boundary in subregion 2. Includes some areas of <i>Acacia cambagei</i> on fine grained sandstones which require further investigation. 10.3.4b: Occurs mostly in subregions 2 and 4 with some small areas in subregion 3. Naturalised species associated with this regional ecosystem include * <i>Cenchrus ciliaris</i> , which may dominate the ground layer. 10.3.4c: Restricted to subregion 3. Naturalised species associated with this regional ecosystem include * <i>Ocimum basilicum</i> and * <i>Malvastrum americanum</i> , which is commonly present to abundant. 10.3.4d: Very rare vegetation community only recorded from two locations in subregion 1. It occurs as a sub-dominant community in a mosaic with <i>Acacia cambagei</i> and grasslands. Further research is required to determine the distribution, condition and comprehensive floristics of this ecosystem.
Estimated extent: ¹	Pre-clearing 109000 ha; Remnant 2021 43000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Pasture degradation and scalding, with significant loss of ground cover.

Regional ecosystem 10.3.5

Description: Eucalyptus cambageana woodland, commonly with Eucalyptus brownii. A secondary tree layer including Acacia cambagei, Acacia harpophylla, Lysiphyllum spp. And Eremophila mitchellii usually occurs. Sparse shrub layer dominated by Eremophila mitchellii is usually present. Tussock grass ground layer. Occurs on alluvial plains. Not a Wetland. (BVG1M: 16c).

Short description: Eucalyptus cambageana woodland on alluvial plains

Supplementary descriptions: Lorimer (1998), Qa6;

Subregions: 2, 4, 3, (11.7), (11.15), (11.8)

Protected areas: Cudmore (Limited Depth) NP, Cudmore RR

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments:

Estimated extent:¹ Pre-clearing 17000 ha; Remnant 2021 9000 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.3.6

Description: *Eucalyptus brownii* woodland, occasionally with *Corymbia dallachiana*. A secondary tree layer of *Eucalyptus brownii* usually occurs. Variable shrub layer dominated by *Carissa lanceolata*. Tussock grass ground layer, occasionally with *Triodia pungens*. Occurs on alluvial plains. Contains Palustrine. (BVG1M: 17a).

Vegetation communities in this regional ecosystem include:

10.3.6a: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *Eucalyptus brownii* dominates the very sparse to sparse canopy. *Corymbia dallachiana* and *E. melanophloia* frequently occur in the canopy and sometimes as codominants. *Lysiphyllum carronii*, *Acacia excelsa*, *Grevillea striata*, *Atalaya hemiglaucula*, *Eremophila mitchellii*, *Melaleuca nervosa* and *Ventilago viminalis* frequently occur in the very sparse lower tree layer. There is often a very sparse shrub layer usually dominated by *Carissa lanceolata*. Other shrubs frequently present include *Denhamia cunninghamii*, *Eremophila mitchellii*, *Acacia salicina*, *A. sericophylla* and *Psydrax oleifolia*. The ground layer varies from very sparse to mid-dense with variable dominant graminoids including *Bothriochloa ewartiana*, *Aristida latifolia*, *Triodia pungens*, *Aristida calycina*, *Fimbristylis dichotoma*, *Chrysopogon fallax*, *Iseilema vaginiflorum*, *Dichanthium fecundum*, *Eragrostis lacunaria*, *Tripogon loliiformis* and *Eulalia aurea*. Occurs on alluvial plains. Not a Wetland. (BVG1M: 17a).

10.3.6ax1: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *Eucalyptus brownii* dominates the very sparse tree layer with scattered shrubs and very sparse ground layer frequently dominated by *Aristida contorta*. Occurs on flat to gently undulating sandplain. Not a Wetland. (BVG1M: 17a).

10.3.6ax2: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *Eucalyptus brownii* dominates the very sparse tree layer. Scattered shrubs may be present. The sparse to very sparse ground layer is dominated by *Dichanthium fecundum* and *Eulalia aurea*. Occurs on flat plain with shallow sandy cover. Not a Wetland. (BVG1M: 17a).

10.3.6ax3: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *Eucalyptus brownii* dominates the very sparse tree layer with very sparse ground layer dominated by *Aristida latifolia*, *Dactyloctenium radulans*, *Dichanthium fecundum* and *Fimbristylis dichotoma*. Occurs on flat plain with sandy cover. Not a Wetland. (BVG1M: 17a).

10.3.6ax4: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *Eucalyptus brownii* dominates the very sparse tree layer with sometimes scattered understorey trees, very sparse shrub layer and very sparse to sparse ground layer predominated by *Enneapogon polyphyllus*, *Bulbostylis barbata* and *Sporobolus australasicus*. Occurs on undulating terrain with clayey soil. Not a Wetland. (BVG1M: 17a).

10.3.6b: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *Heliodendron basalticum* dominates the very sparse canopy. *Atalaya hemiglaucula*, *Eremophila mitchellii* and *Grevillea parallela* are also present in the canopy. *Eucalyptus brownii* can be present as an emergent or as scattered small trees. *Carissa lanceolata* usually dominates the very sparse shrub layer. *Themeda triandra*, *Sporobolus australasicus*, and *Aristida jerichoensis* can be present in the very sparse ground layer. Occurs on alluvial plains (north-eastern). Not a Wetland. (BVG1M: 27a).

10.3.6c: [RE not in use]²: This vegetation community is now mapped as 10.3.6. *E. brownii* dominates the sparse canopy. Occurs on Cainozoic clay plains. Not a Wetland. (BVG1M: 17a).

Short description:	<i>Eucalyptus brownii</i> woodland on alluvial plains
Supplementary descriptions:	Gunn et al. (1967), Al; Lorimer (1998), Qa3, Qa4; Perry et al. (1964), Br; Thompson and Turpin (in prep), E15; Turner et al. (1978), B3, E1, E2, E4, W2, W4; Turner et al. (1993), E1, E2, E3, E5, R1, W2, W2, W4
Subregions:	2, 3, 1, (11.7), (11.3), (9.4), (9.5), (4.5)
Protected areas:	Moorrinya NP, Forest Den NP, Cudmore (Limited Depth) NP
Extent in reserves:	Low
Wetland:	Contains Palustrine
Special values:	
Comments:	10.3.6: <i>Eucalyptus brownii</i> intergrades with <i>Eucalyptus populnea</i> in some areas including near Barcaldine. Threatening processes include clearing for pasture development. This ecosystem is subject to sheet erosion and scalding. The clayey subsoils have a very low permeability are often sodic. It is suggested that ground cover be kept dense to slow the rate of water flow which helps prevent channelling of the flow and thereby minimises erosion. Overgrazing reduces competition from pasture species and tends to increase the cover of false sandalwood and current bush. 10.3.6a: Widespread but does not occur in subregion 4. 10.3.6b: An uncommon ecosystem that usually occurs as small patches in a mosaic with ecosystem 10.3.6a. <i>Heliodendron basalticum</i> is more commonly found as an occasionally to common occurring understorey tree in <i>Eucalyptus brownii</i> , <i>E. populnea</i> or <i>E. melanophloia</i> woodlands.
Estimated extent:¹	Pre-clearing 390000 ha; Remnant 2021 313000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes: Land Type Qa4 is considered to be Of concern due to extensive tree die-back, loss of ground cover and sheet erosion.

Regional ecosystem 10.3.7

Description: *Astrebla squarrosa* and *Brachyachne convergens* tussock grassland with *Desmodium muelleri* and *Aristida latifolia*. Occurs on cracking clay soils on alluvial plains. Not a Wetland. (BVG1M: 30a).

Vegetation communities in this regional ecosystem include:

10.3.7a: [RE not in use]²: This vegetation community is now mapped as 10.3.7. *Astrebla pectinata* or *Bothriochloa ewartiana* tussock grasslands on alluvium (western). The dominant graminoids vary but are usually either *Astrebla* spp. And *Iseilema* spp. Or *Dichanthium fecundum* or *Bothriochloa ewartiana*. Occurs on alluvial plains (western). Not a Wetland. (BVG1M: 30a).

10.3.7b: [RE not in use]²: This vegetation community is now mapped as 10.3.7. *Dichanthium fecundum* and *Astrebla* spp. Dominate the very sparse to sparse ground layer. *Eulalia aurea* is usually a codominant. Commonly present grasses are *Aristida latifolia*, *Brachyachne convergens*, *Iseilema vaginiflorum* and *Sporobolus actinocladius*. There also some variations within this ecosystem including an open tussock grassland where *Astrebla squarrosa* and *A. elymoides* dominate the sparse ground layer. Occurs on alluvial plains (eastern). Not a Wetland. (BVG1M: 30a).

10.3.7c: [RE not in use]²: This community is now mapped as 10.3.7. *Eremophila polyclada* dominates the very sparse shrub layer. The ground layer is usually dominated by *Astrebla* spp. Occurs on alluvial plains. Not a Wetland. (BVG1M: 31a).

10.3.7d: [RE not in use]²: This community is now mapped as 10.3.7. *Hakea leucoptera* dominates the very sparse shrub layer. The ground layer is dominated by *Astrebla* spp. Occurs on alluvial plains. Not a Wetland. (BVG1M: 30a).

Short description: *Astrebla squarrosa* and *Brachyachne convergens* grassland on alluvium

Supplementary descriptions: Gunn et al. (1967), Av, Fu; Perry et al. (1964), Gy; Turner et al. (1993), A1, A3, A4, W1, W4; Thompson and Turpin (in prep), G3b, M20, M21

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

Protected areas: Moorrinya NP, Forest Den NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.3.7: Potential habitat for NCA listed species: *Eriocaulon aloefolium*.

Comments: 10.3.7: 10.3.7d and 10.3.7c are now mapped as part of this RE. The extensive cracking clays have a major influence on plant root growth. Tussock grasses such as Mitchell grasses are well adapted by send primary roots directly below the plant to access deep moisture yet the surface roots can use any light rain. Conversely, the growing season for shallow rooted species is very short without follow-up rain. Overgrazing can alter the pasture composition to annuals resulting in severely reduced productivity. Threatening processes include weed invasion (e.g. *Parkinsonia aculeata*, *Cryptostegia grandiflora* and *Parthenium hysterophorus*).
10.3.7a: Occurs along the western edge of the bioregion, mostly in subregion 1.
10.3.7b: Variable ecosystem requiring further survey to determine floristic dynamics as effected by rainfall variations.
10.3.7c: Observed only in small patches of less than about 1ha, uncommon. Further survey required to determine full extent and comprehensive species composition. Species composition is expected to be similar to 10.3.7a.
10.3.7d: It has been observed only in small patches of less than about 1ha and is uncommon. Occurs in a mosaic with 10.3.7a and is expected to have similar floristic composition to this ecosystem.

Estimated extent:¹ Pre-clearing 16000 ha; Remnant 2021 14000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.3.8

Description: Mixed tussock grassland to open herbland, including *Dactyloctenium radulans*, *Chloris pectinata*, *Eragrostis* spp. and *Sclerolaena* spp. Occasionally emergent shrubs of *Senna artemisioides* and *Acacia victoriae* occur. This community contains substantial bare areas and cover and dominance vary with seasonal conditions. Occurs on mostly bare areas on alluvial plains. Not a Wetland. (BVG1M: 31a).

Vegetation communities in this regional ecosystem include:

10.3.8a: [RE not in use]²: This vegetation community is now mapped as 10.3.8. Mixed tussock grassland to open herbland, including a combination of the species *Dactyloctenium radulans*, *Chloris pectinata*, *Trianthema triquetra*, *Enneapogon polyphyllus*, *Evolvulus alsinoides*, *Fimbristylis dichotoma*, *Portulaca oleracea*, *Alternanthera denticulata*, *Salsola australis*, *Sporobolus actinocladus* and *Sporobolus australasicus*. This community contains substantial bare areas and cover and dominance vary with seasonal conditions. Occurs on alluvial plains. Not a Wetland. (BVG1M: 31a).

10.3.8b: [RE not in use]²: This vegetation community is now mapped as 10.3.16f. *Sclerolaena* spp. and *Tecticornia* spp. define this variable sparse forb dominated ecosystem. Occurs on alluvial plains. Not a Wetland. (BVG1M: 31a).

10.3.8c: [RE not in use]²: This vegetation community is now mapped as 10.3.8a. *Astrebula pectinata* and *Chloris pectinata* open tussock grassland. Occurs on alluvial plains. Not a Wetland. (BVG1M: 30a).

Short description: Sparse tussock grassland on alluvial plains

Supplementary descriptions: Turner et al. (1993), W2, W4

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

Protected areas: Forest Den NP, Moorrinya NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.3.8: Potential habitat for NCA listed species: *Chloris circumfontinalis*, *Eriocaulon aloefolium*, *Gunniopsis* sp. (Edgbaston R.J.Fensham 5094).

Comments: 10.3.8: Subject to extensive scalding and erosion. The clayey subsoils have a very low permeability are often sodic. Species composition is varies with seasonal conditions and management practices.
10.3.8a: Restricted to subregion 1.
10.3.8b: Widely distributed vegetation community over a broad geographic range. This community has a highly variable species composition with mostly ephemeral species often in a mosaic with bare to very sparsely vegetated ground.
10.3.8c: Only recorded near central western edge of Desert Uplands, east of Aramac. Similar to a widespread regional ecosystems that occur in the Mitchell Grass Downs bioregion (4.3.14 and 4.3.17).

Estimated extent:¹ Pre-clearing 46000 ha; Remnant 2021 41000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes: Due to extensive scalding

Regional ecosystem 10.3.9

Description: *Eucalyptus whitei* woodland. A secondary tree layer of *Eucalyptus whitei* usually occurs. A variable shrub layer usually occurs. Tussock grass ground layer. Occurs on sandy alluvial fans with yellow earth soils and some stream channels. Not a Wetland. (BVG1M: 17c).

Vegetation communities in this regional ecosystem include:

10.3.9x1: [RE not in use]²: This vegetation community is now mapped as 10.3.9. *Eucalyptus whitei* dominates the sparse tree layer with understorey of scattered shrubs and very sparse ground layer predominated by *Heteropogon contortus*, *Bothriochloa decipiens* var. *cloncurrensis*. Occurs on gently undulating terrain with loamy soil. Not a Wetland. (BVG1M: 17c).

10.3.9x2: [RE not in use]²: This vegetation community is now mapped as 10.3.9. *Eucalyptus whitei* dominates the very sparse tree layer. *Carissa lanceolata* dominates the very sparse shrub layer and *Aristida pruinosa*, *Bothriochloa ewartiana*, *Dactyloctenium radulans* and *Themeda triandra* the very sparse ground layer. Occurs on flat clay plain with sandy cover. Not a Wetland. (BVG1M: 17c).

Short description:	<i>Eucalyptus whitei</i> woodland on sandy alluvial fans
Supplementary descriptions:	Gunn et al. (1967), De; Lorimer (1998), Qa1; Perry et al. (1964), Ka; Thompson and Turpin (in prep), E14b; Turner et al. (1978), E1, E2, R1, W2; Turner et al. (1993), E6, W2
Subregions:	1, 2, 4.6, (9.5), (4.5)
Protected areas:	Moorrinya NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.3.9: Intake areas for Great Artesian Basin aquifers. Habitat for poorly known species <i>Polygala difficilis</i> .
Comments:	10.3.9: South-east of Aramac. Threatening processes include clearing for pasture development. Revegetation after loss of top soil and exposure of the clayey subsoil is expected to be difficult and very slow. Nutrient levels, particularly phosphorus are very low. Subject to widespread pasture degradation, and to clearing for pasture development.
Estimated extent: ¹	Pre-clearing 133000 ha; Remnant 2021 115000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.3.10

Description: *Corymbia dallachiana* and *C. terminalis* woodland, sometimes with *C. plena*. These *Corymbia* spp. and *Grevillea parallela* occasionally form a very sparse low tree layer. Mixed shrub layer including *Carissa lanceolata*, *Acacia sericophylla*, *A. melleodora*, *Senna artemisioides*, *Petalostigma pubescens* and *Eremophila mitchellii*. The ground layer is dominated by *Triodia pungens* and sometimes tussock grasses. Occurs on old alluvial sandplains with sandy yellow earth soils. Not a Wetland. (BVG1M: 18a).

Vegetation communities in this regional ecosystem include:

10.3.10x1: *Corymbia plena* woodland with ground layer of *Elionurus citreus* and *Aristida ingrata*. Occurs on old dunes fringing lakes with sandy soil. Contains Palustrine. (BVG1M: 18a).

10.3.10x2: [RE not in use]²: This vegetation community is now mapped as 10.3.10. *Corymbia dallachiana* woodland with *Eucalyptus brownii*. Occurs on sandy terraces along Torrens Creek. Not a Wetland. (BVG1M: 18a).

Short description: *Corymbia dallachiana* and *C. terminalis* woodland to open woodland on old alluvial plains (western)

Supplementary descriptions: Thompson and Turpin (in prep), C15c; Turner et al. (1993), A4, E6, W1

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values: 10.3.10: Habitat values for arboreal fauna possibly high. As for other riparian zones, this ecosystem has important values for stabilising stream banks and top soils, providing corridors for wildlife, and for trapping soil and maintaining water quality.

Comments: 10.3.10: Habitat values for arboreal fauna possibly high. Require further information. Occurs mostly in subregion 1 with some small areas in south-western parts of subregion 2 in the DEU. Potential for invasion by weed species.

Estimated extent:¹ Pre-clearing 800 ha; Remnant 2021 800 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.3.11

Description: *Corymbia citriodora* or *Lophostemon suaveolens* and *Angophora costata* woodland to tall open forest, commonly with *Corymbia leichhardtii* and *Eucalyptus camaldulensis*. A secondary tree layer dominated by canopy species usually occurs. A variable shrub layer usually occurs. Tussock grass ground layer, commonly dominated by *Themeda avenacea*, *Cleistochloa subjuncea* and *Eriachne pallescens*. Occurs on sandy colluvial and alluvial soils in valleys and gorges incised in sandstone ranges and plateaus. Riverine. (BVG1M: 10a).

Vegetation communities in this regional ecosystem include:

10.3.11a: [RE not in use]²: This vegetation community is now mapped as 10.3.11b. *Corymbia leichhardtii* woodland, occasionally with *Eucalyptus exilipes*, *Eucalyptus drepanophylla* and *Corymbia trachyphloia*. *Alphitonia excelsa*, *Acacia* spp., *Beyeria viscosa*, *Dodonaea viscosa* and *Petalostigma banksii* are usually present and sometimes dominant in the shrub layer. Mixed ground layer including *Triodia pungens*, *Cleistochloa subjuncea*, *Themeda avenacea* and *Cymbopogon bombycinus*. Occurs in the northern parts of subregion 2 in upper parts of stream catchments with sandstone outcropping in their headwaters. Riverine. (BVG1M: 18a).

10.3.11b: *Corymbia citriodora* tall open forest to woodland, usually with *Eucalyptus camaldulensis*. *Corymbia leichhardtii*, *Corymbia dallachiana* and *Corymbia plena* commonly occur in the canopy. A secondary tree layer usually occurs and may include *Corymbia leichhardtii*, *Corymbia citriodora*, *Eucalyptus exilipes*, *Corymbia plena* and *Eucalyptus camaldulensis*. *Acacia* spp. dominated shrub layer. Tussock grass ground layer, commonly dominated by *Themeda avenacea*. Occurs on alluvium in sandstone landscapes. Riverine. (BVG1M: 10a).

10.3.11c: *Lophostemon suaveolens* and *Angophora costata* woodland to open forest, occasionally with *Corymbia leichhardtii*. A secondary tree layer usually occurs, including *Lophostemon suaveolens*, *Acacia faucium*, *Angophora costata* and *Ficus rubiginosa*. A variable shrub layer usually occurs. *Cleistochloa subjuncea* dominated ground layer with *Eriachne pallescens* and *Triodia pungens*. Occurs on alluvium in sandstone valleys and gorges in White Mountains National Park area. Riverine. (BVG1M: 18a).

10.3.11d: [RE not in use]²: This vegetation community is now mapped as 10.3.11b. *Corymbia trachyphloia*, *Syncarpia glomulifera* subsp. *Glomulifera* and *Eucalyptus mediocris* dominate the sparse canopy. Some other *Corymbia* spp. are usually present in the canopy. The sparse shrub layer is usually dominated by *Acacia* spp., *Coelospermum reticulatum* and *Seringia lanceolata* are frequently present. *Cleistochloa subjuncea* usually dominates the very sparse to sparse ground layer. Occurs on alluvium in valleys. Riverine. (BVG1M: 18a).

10.3.11e: [RE not in use]²: This vegetation community is now mapped as 10.3.13a. *Cyathea rebecca* dominates the sparse canopy. *Lophostemon suaveolens* is present in an emergent layer. *Blechnum cartilagineum* dominates the sparse ground layer. Other ferns are present. RE is defunct. Not a Wetland. (BVG1M: 18a).

Short description: *Corymbia citriodora* or *Lophostemon suaveolens* and *Angophora costata* woodland to tall open forest in sandstone gorges and valleys

Supplementary descriptions: Bean (1992), Gg; Thompson and Turpin (in prep), C22, C31, C31a, C31c, C34

Subregions: 2, 4, (3), (11.3), (9.4)

Protected areas: White Mountains NP, Cudmore (Limited Depth) NP, White Mountains RR

Extent in reserves: High

Wetland: Riverine

Special values: 10.3.11: The White Mountains area of this ecosystem are habitat for *Hemigenia* sp. (Crooked Creek E.J.Thompson+ CHA228), known from only one record in this habitat. Poorly known species *Tephrosia* sp. (Lake Buchanan E.J.Thompson+ BUC2128) occurs in this ecosystem. Habitat for disjunct populations of *Cyathea rebecca* and *Triplarina paludosa*. *Dodonaea polyandra* occurs at its most southerly known limit in this ecosystem in the White Mountains. Habitat values for arboreal fauna is high. As for other riparian zones, this ecosystem has important values for stabilising stream banks and top soils, providing corridors for wildlife, and for trapping soil and maintaining water quality. 10.3.11d: *Eucalyptus mediocris* can reach to 25m high in this ecosystem.

Comments: 10.3.11: Occurs in northern parts of subregion 2 and in subregion 4. Subject to selective logging. Potential for invasion by weed species. 10.3.11c: Restricted to deep gorges in the White Mountains National Park. 10.3.11d: Rare and unusual ecosystem only known from the Just Range in the north east. 10.3.11e: Very rare ecosystem confined to deep narrow ravines in the White Mountains National Park.

Estimated extent:¹ Pre-clearing 9000 ha; Remnant 2021 9000 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.3.12

Description: *Corymbia plena* and/or *Corymbia terminalis* woodland usually with *Corymbia dallachiana* dominate the sparse canopy. A lower tree layer is usually very sparse and includes canopy species, *Petalostigma pubescens* and *Hakea* spp. Tussock grass ground layer of *Heteropogon contortus* and *Aristida* spp. Occurs on sandy alluvial terraces. Not a Wetland. (BVG1M: 9e).

Vegetation communities in this regional ecosystem include:

10.3.12a: *Corymbia plena* and *Corymbia dallachiana* woodland, occasionally with *Eucalyptus platyphylla*. A variable secondary tree layer is usually present. A variable shrub layer is usually present and commonly includes *Carissa lanceolata*, *Petalostigma pubescens* and *Acacia* spp. Tussock grass ground layer dominated by *Aristida* spp., *Heteropogon contortus* and *Eragrostis* spp. *Triodia pungens* is also commonly present. Occurs on sandy alluvium. Not a Wetland. (BVG1M: 18a).

10.3.12b: *Corymbia terminalis* woodland, usually with *Corymbia dallachiana*. A second tree layer of *Acacia salicina* and *C. terminalis* may occur. *Enneapogon polyphyllus* and *Bothriochloa ewartiana* are present in the ground layer. Occurs on sandy alluvium. Not a Wetland. (BVG1M: 18a).

10.3.12c: [RE not in use]²: This vegetation community is now mapped as 10.3.10x1. *Corymbia plena* woodland. *C. plena* dominates the mid-dense canopy. Occurs on old sand dunes adjacent to Webb Lake. Not a Wetland. (BVG1M: 18a).

Short description:	<i>Corymbia plena</i> and/or <i>C. terminalis</i> woodland with <i>Corymbia dallachiana</i> on sandy alluvium
Supplementary descriptions:	Cumming (1992), Ea; Gunn et al. (1967), Al, Ct; Lorimer (1998), Qa2; Perry et al. (1964), Gy; Thompson and Turpin (in prep), C15; Turner et al. (1978), E4, W2, W4; Turner et al. (1993), E1, W2
Subregions:	2, 1, 4, 4.6, 3, (9.5), (11.7), (4.5)
Protected areas:	Cudmore RR, Moorrinya NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.3.12: Habitat values for arboreal fauna is high. As for other riparian zones, this ecosystem has important values for stabilising stream banks and top soils, providing corridors for wildlife, and for trapping soil and maintaining water quality.
Comments:	10.3.12: Threatening processes include high total grazing pressure. Further information on condition required to confirm Biodiversity Status. 10.3.12b: Occurs as an outlier along the Flinders River. Naturalised species associated with this regional ecosystem include <i>*Cenchrus ciliaris</i> , which may dominate the ground layer.
Estimated extent: ¹	Pre-clearing 61000 ha; Remnant 2021 51000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.3.13

Description: *Eucalyptus camaldulensis* woodland to open forest, commonly with *Melaleuca fluviatilis* and/or *Casuarina cunninghamiana* and/or *Melaleuca leucadendra*, fringing channels of major watercourses. There is a lower tree layer commonly including *Melaleuca fluviatilis*, *Casuarina cunninghamiana* and *Corymbia tessellaris*. The shrub layer is sparse and mixed. The ground is commonly dominated by *Arundinella nepalensis*, *Heteropogon contortus*, *Imperata cylindrica*, *Ipomoea polymorpha*, *Lomandra longifolia*, *Setaria surgens* and *Themeda avenacea*. Occurs mostly as narrow bands along channels and on levees with sandy to clayey soils along larger watercourses. Riverine. (BVG1M: 22c).

Vegetation communities in this regional ecosystem include:

10.3.13a: *Eucalyptus camaldulensis* woodland to open forest, commonly with *Melaleuca fluviatilis* and *Casuarina cunninghamiana*. *Melaleuca leucadendra*, *Corymbia tessellaris*, *Lophostemon suaveolens*, *Corymbia clarksoniana*, *Corymbia leichhardtii* and *Corymbia plena* are occasionally present in the canopy. A secondary tree layer, including *Melaleuca fluviatilis*, *Casuarina cunninghamiana* and *Corymbia tessellaris*, is usually present. A variable shrub layer is usually present. Tussock grass ground layer, commonly dominated by *Arundinella nepalensis*, *Heteropogon contortus*, *Imperata cylindrica*, *Ipomoea polymorpha*, *Lomandra longifolia*, *Setaria surgens* and *Themeda avenacea*. Occurs fringing major watercourses in sandy landscapes. Riverine. (BVG1M: 16a).

10.3.13b: [RE not in use]²: This vegetation community is now mapped as 10.3.13a. *Melaleuca fluviatilis* and *Eucalyptus camaldulensis* woodland to open forest. Usually occurs in narrow strips along major streams. Riverine. (BVG1M: 22c).

10.3.13l: Waterholes in water courses. Occurs along watercourses. Riverine. (BVG1M: 16d).

Short description: *Melaleuca fluviatilis* and/or *Eucalyptus camaldulensis* woodland along watercourses

Supplementary descriptions: Thompson and Turpin (in prep), E68, M11a

Subregions: 3, 2, (4), (11.3), (1), (9.4), (11.7), (4.6), (4.5), (9.5)

Protected areas: White Mountains NP, Cudmore (Limited Depth) NP, White Mountains RR, Cudmore RR

Extent in reserves: Low

Wetland: Riverine

Special values: 10.3.13: High habitat values for nesting, seasonal nectar supplies, and faunal corridor. Predominant habitat of vulnerable species *Livistona lanuginosa*. This ecosystem has high habitat values for nesting and seasonal nectar supplies. As for other riparian zones, this ecosystem has important values for stabilising stream banks and top soils, providing corridors for wildlife, and for trapping soil and maintaining water quality.

10.3.13a: The vulnerable plant species, *Livistona lanuginosa* occasionally occurs as a dominant understorey tree along the Cape River downstream from Amelia Creek and along Amelia Creek. Undescribed endemic species *Tephrosia* sp. (Lake Buchanan E.J.Thompson+ BUC2128) has been recorded in this ecosystem.

Comments: 10.3.13: Subject to degradation by weed invasion, including **Cryptostegia grandiflora* (rubber vine), and degradation by high total grazing pressure. Pigs are attracted to these areas causing major soil disturbance, fouling of water holes, and destroying wildlife and habitat.
10.3.13a: Naturalised species associated with this regional ecosystem include *Cryptostegia grandiflora*, *Cynodon dactylon* and *Melinis repens*, which are commonly present.
10.3.13b: Mostly occurs in subregion 3 with ecosystem 10.3.13a and has similar floristic composition. Commonly infested with *Cryptostegia grandiflora*. Naturalised species associated with this regional ecosystem include **Cynodon dactylon*, which is often a dominant graminoid in the ground layer.

Estimated extent:¹ Pre-clearing 69000 ha; Remnant 2021 64000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Soil and pasture degradation and weed infestation including rubber vine.

Regional ecosystem 10.3.14

Description: Eucalyptus coolabah woodland to open forest, occasionally with Eucalyptus camaldulensis. The ground layer is dominated by mixed tussock grasses and cover is very seasonally variable. Occurs on channels, levees and flood plains with sandy to clayey soils along watercourses. Riverine. (BVG1M: 16a).

Vegetation communities in this regional ecosystem include:

10.3.14a: Eucalyptus coolabah woodland to open forest, occasionally with Eucalyptus camaldulensis. Variable shrub layer which may include: Carissa lanceolata, Eremophila bignoniiflora, Acacia stenophylla, Eremophila mitchellii, Lysiphyllum carronii and Santalum lanceolatum. The ground layer is dominated by mixed tussock grasses and cover is very seasonally variable. Occurs on stream channels and flood plains with finer textured soils. Not a Wetland. (BVG1M: 16a).

10.3.14ax1: [RE not in use]²: This regional ecosystem is now mapped as 10.3.14a. Eucalyptus coolabah open woodland, occasionally with Eucalyptus brownii. Grassy mixed ground layer including Aristida latifolia, Astrebla elymoides, Astrebla squarrosa, Astrebla pectinata, Eulalia aurea and Bothriochloa ewartiana. Occurs on flat terrain with clayey soil. Not a Wetland. (BVG1M: 16a).

10.3.14b: Eucalyptus coolabah and Eucalyptus camaldulensis woodland to open forest. Tussock grass ground layer. Occurs fringing stream channels with a mix of alluvial sand and clay. Riverine. (BVG1M: 16a).

10.3.14c: Mostly bare sand on beds of larger streams with scattered trees and shrubs. Sandy river beds. Riverine. (BVG1M: 16d).

10.3.14d: [RE not in use]²: This vegetation community is now mapped as 10.3.13a. Eucalyptus camaldulensis dominates the very sparse canopy. Corymbia leichhardtii is frequently present as a codominant. E. exilipes, C. citriodora and Lophostemon suaveolens sometimes occur as subdominants in the canopy. Acacia spp. Usually define the very sparse to sparse shrub layer. Hannafordia shanesii and Seringia corollata occur occasionally. Themeda avenacea frequently dominates the ground layer. Occurs along stream channels mostly in upper parts of catchments of eastern flowing streams. Riverine. (BVG1M: 16a).

10.3.14e: [RE not in use]²: This vegetation community is now mapped as 10.3.4. Acacia cambagei woodland. Sporobolus virginicus dominates the sparse ground layer. Occurs on saline flood plains. Not a Wetland. (BVG1M: 26a).

10.3.14f: Eleocharis spp. or Pseudoraphis spinescens dominate the ground layer. Usually surrounded by a narrow band of Eucalyptus coolabah. Swamps on flood plains. Riverine. (BVG1M: 34b).

10.3.14g: [RE not in use]²: This vegetation community is now mapped as 10.3.4. Acacia cambagei dominates the sparse to mid-dense canopy. Enchylaena tomentosa dominates the very sparse forb layer. Flood plain (eastern). Riverine. (BVG1M: 26a).

10.3.14h: Billabongs with aquatic herbaceous vegetation only around the shallow perimeters. This ecosystem is mostly water with usually some patches of Nymphaea gigantea throughout, with areas of Pseudoraphis spinescens on the edges and fringing woodland of Eucalyptus camaldulensis around the perimeter. Occurs on active Quaternary alluvial plains. Subject to channel flow and over-bank flow during wet periods. Palustrine. (BVG1M: 34d).

10.3.14hx1: [RE not in use]²: This vegetation community is now mapped as 10.3.22g. Pseudoraphis spinescens, Eleocharis sp. and Diplachne fusca dominate the ground layer in swales on perimeter of Lake Buchanan. Ephemeral lakes, billabongs or lagoons on flood plains. Palustrine. (BVG1M: 34a).

10.3.14hx2: [RE not in use]²: This vegetation community is now mapped as 10.3.14hx3. Uranthoecium truncatum dominates the ground layer on lake bed. Ephemeral lakes, billabongs or lagoons on lake bed. Palustrine. (BVG1M: 34a).

10.3.14hx3: Eragrostis australasica and Leptochloa digitata open tussock grassland, occasionally with Uranthoecium truncatum. Highly seasonally variable. Playa lakes in Edgbaston land system. Palustrine. (BVG1M: 34a).

10.3.14hx4: Eremophila bignoniiflora tall open shrubland. Playa lakes on Edgbaston land system. Palustrine. (BVG1M: 34a).

10.3.14i: [RE not in use]²: This vegetation community is now mapped as 10.3.14a. Eucalyptus coolabah dominates the very sparse canopy with Acacia harpophylla codominant. Terminalia oblongata dominates the small tree layer which is very sparse. A. harpophylla is common in a weakly defined very sparse shrub layer. Enteropogon acicularis and Paspalidium caespitosum dominant graminoids in the very sparse ground layer. Along channels. Riverine. (BVG1M: 16a).

10.3.14j: [RE not in use]²: This vegetation community is now mapped as 10.3.13a. Eucalyptus camaldulensis dominates the very sparse canopy. Corymbia plena is a subdominant in the canopy. E. camaldulensis dominates the very sparse low trees layer. Themeda avenacea dominates the mid-dense ground layer. Along watercourses. Riverine. (BVG1M: 16a).

10.3.14k: [RE not in use]²: This vegetation community is now mapped as 10.3.14a. Eucalyptus coolabah on floodplains. Occurs on floodplains. Not a Wetland. (BVG1M: 16c).

Short description:	Eucalyptus coolabah and/or Eucalyptus camaldulensis woodland to open forest along channels and on floodplains
Supplementary descriptions:	Bean (1992), Lv; Cumming (1992), Ea, Eb; Gunn et al. (1967), Al, Ct, Fu; Perry et al. (1964), E, Gy, Ka, Wa; Thompson and Turpin (in prep), E66, E68a, E72, E72a, D, w, P; Turner et al. (1978), W2, W4; Turner et al. (1993), W1, W2, W4
Subregions:	1, 3, 4, 2, (4.5), (11.3), (11.15), (11.26), (11.24), (4.4), (11.7), (4.6)
Protected areas:	Moorrinya NP, Forest Den NP, White Mountains NP
Extent in reserves:	Low
Wetland:	Riverine
Special values:	10.3.14: High habitat and faunal corridor values. Seasonal wetlands important for water bird nesting and aquatic species, and potential habitat for the endangered species <i>Eriocaulon aloefolium</i> and <i>Ammannia robertsii</i> . Habitat for vulnerable plant species, <i>Livistona lanuginosa</i> and near threatened species, <i>Acacia armitii</i> . The seasonal wetlands in this ecosystem are important for water bird nesting and aquatic species. As for other riparian zones, this ecosystem has important values for stabilising top soils, providing corridors for wildlife, and for trapping soil and maintaining water quality.
Comments:	10.3.14: Threatening processes include weed invasion, e.g. <i>Parkinsonia aculeata</i> and <i>Cryptostegia grandiflora</i> and very high total grazing pressure. Potential for invasion by weed species including * <i>Cryptostegia grandiflora</i> (rubber vine) and <i>Parkinsonia aculeata</i> , and degradation by high total grazing pressure. Pigs are attracted to these areas causing major soil disturbance, fouling of water holes, and destroying wildlife and habitat. 10.3.14a: Widespread. 10.3.14d: Wide spread ecosystem (excluding subregion 1). 10.3.14e: This ecosystem has been recorded along the channels of Cornish and Towerhill Creeks. * <i>Portulaca oleracea</i> commonly present. 10.3.14g: Only known from along channels of Dyllingo Creek. The ground layer is very sparse with * <i>Ocimum basilicum</i> . 10.3.14i: Only known from along channels of Dyllingo Creek. 10.3.14j: Very restricted ecosystem only known from along Bullock Ck in the north of subregion 2.
Estimated extent: ¹	Pre-clearing 142000 ha; Remnant 2021 120000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Soil and pasture degradation and weed infestation including <i>Parkinsonia</i> .

Regional ecosystem 10.3.15

Description: Eucalyptus camaldulensis and/or E. coolabah or E. brownii or E. cambageana or Casuarina cristata or Acacia cambagei open woodlands to woodlands or grasslands and/or seasonal lagoons vegetation. Includes ephemeral grasslands, herblands and clay pans. Includes some partially open depressions such as Webb Lake and Lake Moocha. Occurs on grey clay soils in closed depressions on sandplain or ferricrete. Palustrine. (BVG1M: 34b).

Vegetation communities in this regional ecosystem include:

10.3.15a: [RE not in use]²: This vegetation community is now mapped as 10.3.15ax1. Open grassland of *Brachyachne* spp. *Brachyachne convergens* or *B. tenella* dominate the sparse ground layer. RE is defunct. Palustrine. (BVG1M: 34b).

10.3.15ax1: Mixed tussock grassland of *Astrebla squarrosa*, *Dactyloctenium radulans*, *Aristida latifolia*, *Bothriochloa ewartiana* and *Iseilema vaginiflorum* in closed depressions. Occurs on flat terrain with clayey soil. Contains Palustrine. (BVG1M: 34b).

10.3.15b: [RE not in use]²: This vegetation community is now mapped as 10.3.15c. Ephemeral herbland, grassland or bare ground. Variable ecosystem with dominant graminoids including *Eriachne armitii* and *Fimbristylis dichotoma*. *Aristida jerichoensis*, *Chloris pectinata* and *Eragrostis* spp. Are commonly present. Occurs in closed depressions on Tertiary sandplain or ferricrete with grey clay soils. Palustrine. (BVG1M: 34b).

10.3.15c: Closed depressions usually with *Eleocharis equisetina* swamp. Variable ecosystem with dominants including *Eleocharis equisetina*, *Pseudoraphis spinescens* or *Eriachne benthamii*. Occurs in closed depressions on Tertiary sandplain or ferricrete with grey clay soils. Palustrine. (BVG1M: 34b).

10.3.15d: [RE not in use]²: This vegetation community is now mapped as 10.3.15dx1. *Acacia cambagei* dominates the very sparse canopy. *Brachyachne convergens* dominates the very sparse ground layer. Occurs in closed depressions on Tertiary sandplain or ferricrete with grey clay soils. Palustrine. (BVG1M: 26a).

10.3.15dx1: *Acacia cambagei* low woodland with seasonal ground layer of tussock grasses and forbs. Occurs on clay lenses in sand sheets. Not a Wetland. (BVG1M: 26a).

10.3.15e: *Eucalyptus camaldulensis* woodland, occasionally with *Corymbia dallachiana* and *Corymbia plena*. A second tree layer commonly occurs and may include *Acacia stenophylla*, *Acacia salicina* and *Melaleuca nervosa*. The mixed ground layer includes *Diplachne fusca*, *Cyperus* spp., *Eleocharis pallens*, *Aristida jerichoensis* and *Eragrostis speciosa*. Occurs in closed depressions on sandy plains. Palustrine. (BVG1M: 34b).

10.3.15ex1: [RE not in use]²: This vegetation community is now mapped as 10.3.15e. *Eucalyptus camaldulensis* open woodland dominates the very sparse canopy. The ground layer is dominated by tussock grasses including *Eragrostis speciosa*, *Schizachyrium fragile* and *Elionurus citreus*. Occurs on sand over hard pan on alluvial plain. Contains Palustrine. (BVG1M: 34b).

10.3.15f: *Eucalyptus coolabah* woodland, commonly with *Acacia cambagei*. *Duma florulenta* shrub layer may be present. The ground layer is typically tussock grasses and sedges including *Diplachne fusca*, *Eulalia aurea*, *Paspalidium jubiflorum* and *Cyperus* spp. Occurs on closed to partially open depressions. Palustrine. (BVG1M: 34b).

10.3.15g: *Eucalyptus brownii* woodland with tussock grass ground layer dominated by *Eulalia aurea*. Occurs in closed depressions. Palustrine. (BVG1M: 34b).

10.3.15h: [RE not in use]²: This vegetation community is now mapped as 10.3.15hx1. *Eucalyptus coolabah* dominates the very sparse canopy. *Eremophila bignoniiflora* dominates the very sparse shrub layer. *Brachyachne convergens* and *Eragrostis setifolia* dominate the very sparse ground layer. *Chloris pectinata*, *Cyperus scariosus*, *Desmodium campylocaulon*, *Iseilema vaginiflorum*, *Neptunia gracilis* and *Sida trichopoda* are commonly occurring forbs and grasses. Occurs in closed depressions on Tertiary sandplain or ferricrete with grey clay soils in the west. Palustrine. (BVG1M: 34b).

10.3.15hx1: *Eucalyptus coolabah* low woodland to woodland with tussock grass ground layer. Occurs in closed depressions in sand plains. Palustrine. (BVG1M: 34b).

10.3.15i: [RE not in use]²: This vegetation community is now mapped as 10.3.15hx1. *Eucalyptus coolabah* dominates the very sparse canopy. The very sparse ground layer is frequently dominated by *Pseudoraphis spinescens*. Occurs in closed depressions on Tertiary sandplain in the east. Palustrine. (BVG1M: 34b).

10.3.15j: [RE not in use]²: This vegetation community is now mapped as 10.3.15c. The very sparse to sparse ground layer is dominated by *Eleocharis* spp. Usually with *Pseudoraphis spinescens*. In wet times there will be open water which gives way as the country dries out to an annual forbland which may have a mix of native and exotic species. During drier periods most of this community will be completely bare. RE is defunct. Not a Wetland. (BVG1M: 34b).

10.3.15k: [RE not in use]²: This vegetation community is now mapped as 10.3.15g. *Eucalyptus brownii* dominates the very sparse canopy. *E. brownii* also occurs as scattered trees or forms a low tree layer. The ground layer is dominated by *Eulalia aurea*. RE is defunct. Palustrine. (BVG1M: 17a).

10.3.15l: [RE not in use]²: This vegetation community is now mapped as 10.3.30. *Casuarina cristata* dominates the very sparse canopy as well as the low tree layer. *Eucalyptus coolabah* is occasionally present in the canopy. *Paspalidium jubiflorum*, *P. caespitosum* and *Neptunia gracilis* in a weakly developed very sparse ground layer. RE is defunct. Palustrine. (BVG1M: 25a).

10.3.15m: *Eucalyptus coolabah* and/or *Eucalyptus cambageana* woodland with tussock grass ground layer. Occurs on the perimeter of Lake Galilee on the margins of lunettes. Not a Wetland. (BVG1M: 16c).

10.3.15n: [RE not in use]²: This vegetation community is now mapped as 10.3.15c. *Diplachne fusca* dominates the very sparse to mid-dense ground layer. RE is defunct. Palustrine. (BVG1M: 34b).

10.3.15o: [RE not in use]²: This vegetation community is now mapped as 10.3.15f. *Eucalyptus coolabah* dominates the very sparse to sparse canopy. *Sporobolus mitchellii* and *Cyperus* spp. dominate the very sparse ground layer. Occurs on the inside edge of the lake adjacent to old sand dunes. Palustrine. (BVG1M: 34a).

Short description:	<i>Eucalyptus camaldulensis</i> and/or <i>E. coolabah</i> woodland in closed depressions
Supplementary descriptions:	Gunn et al. (1967), Rn; Lorimer (1998), Q1, Q3; Perry et al. (1964), E, Br; Thompson and Turpin (in prep), E73, E73a, E73b, G9, Wa, Da; Turner et al. (1993), E3, E6, L1
Subregions:	1, 2, (3), (4)
Protected areas:	White Mountains NP
Extent in reserves:	Low
Wetland:	Palustrine
Special values:	10.3.15: Seasonal wetland values for water bird nesting and feeding. Habitat for newly discovered species <i>Goodenia</i> sp. (Torrens Creek E.J.Thompson+ HUG754). The only recorded locations of <i>Calostemma luteum</i> and <i>Hypoxis hygrometrica</i> in the DEU occur in 10.3.15. The seasonal wetlands are in this ecosystem are important for water bird nesting and feeding, and aquatic species and potential habitat for the endangered species, <i>Eriocaulon aloefolium</i> , <i>Eriocaulon giganteum</i> , and <i>Ammannia robertsii</i> . As for other riparian zones, this ecosystem has important values for stabilising top soils, providing corridors for wildlife, and for trapping soil and maintaining water quality. 10.3.15d: Potential habitat for vulnerable species <i>Acacia crombiei</i> .

Comments:	<p>10.3.15: Subject to soil and pasture degradation. Potential for invasion by weed species including *Cryptostegia grandiflora (rubber vine) and Parkinsonia aculeata, and degradation by high total grazing pressure. Pigs are attracted to these areas causing major soil disturbance, fouling of water holes, and destroying wildlife and habitat.</p> <p>10.3.15b: Relatively uncommon ecosystem only found in the driest parts of the bioregion in subregion 1 represented by small sandy closed depressions and edges of some larger lakes.</p> <p>10.3.15c: Widespread but does not occupy extensive areas.</p> <p>10.3.15d: Uncommon ecosystem only known from subregion 1 near Ludgate Hill.</p> <p>10.3.15e: An uncommon ecosystem occurring in northern parts of subregion 2. It has been recorded at Lake Moocha, Webb Lake, The Dry Swamp and Thirlestone.</p> <p>10.3.15f: Occurs mostly on the perimeter of Lake Galilee and also at Lake Barcoorah.</p> <p>10.3.15g: Uncommon ecosystem occurring mostly in northern parts of subregion 2.</p> <p>10.3.15h: Uncommon ecosystem only known from subregion 1.</p> <p>10.3.15i: A rare ecosystem occurring mostly near Barcaldine.</p> <p>10.3.15j: Uncommon ecosystem known from near Webb Lake, Lake Moocha and the Dry Swamp. Further survey required for comprehensive floristic composition.</p> <p>10.3.15l: Very rare ecosystem only known from the perimeter of Lake Galilee. *Vachellia farnesiana is present as scattered shrubs.</p> <p>10.3.15m: Very rare ecosystem only known from Lake Galilee. Naturalised species associated with this regional ecosystem include *Echinochloa colona, *Cenchrus ciliaris and *Chloris virgata, which may dominate the ground layer.</p> <p>10.3.15n: Very rare ecosystem only known from near Lake Buchanan.</p> <p>10.3.15o: Very rare ecosystem only known from Lake Galilee.</p>
Estimated extent: ¹	Pre-clearing 30000 ha; Remnant 2021 29000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Soil and pasture degradation.

Regional ecosystem 10.3.16

Description: Triodia longiceps dominates the sparse ground layer, ephemeral open herblands, Melaleuca bracteata low woodland and sparsely vegetated saline clay plains. Occurs on saline alluvial complexes below Tertiary plateaus on alluvial sandsheets and sparsely vegetated saline clay plains. Contains Palustrine. (BVG1M: 33b).

Vegetation communities in this regional ecosystem include:

10.3.16a: Triodia longiceps hummock grassland. Occurs on clay soils with thin sand cover adjacent to lateritic surfaces on the western margin of the bioregion. Not a Wetland. (BVG1M: 33b).

10.3.16b: Calocephalus spp. and Sclerolaena tricuspidis sparse herbland with emergent Acacia stenophylla and/or Myoporum acuminatum. This community is bare ground for much of the year. Occurs on saline and sodic plains adjoining the western edge of lateritic plateaus in the Alice Tableland subregion. Palustrine. (BVG1M: 31a).

10.3.16c: Melaleuca bracteata low woodland with mixed ground layer including Triodia longiceps, Sclerolaena tricuspidis and Trianthema triquetra. Occurs on clay soils with thin sand cover adjacent to lateritic surfaces on the western edge of subregion 2. Palustrine. (BVG1M: 22b).

10.3.16d: [RE not in use]²: This vegetation community is now mapped as 10.3.8. Open herbland of mixed tussock grasses, Sclerolaena spp. and diverse forbs. This community is highly seasonally variable and is largely bare in dry times. Occurs on infrequently flooded alluvial plains or fringing sandy closed depressions. Palustrine. (BVG1M: 34b).

10.3.16e: [RE not in use]²: This vegetation community is now mapped as 10.3.16b. Bare clay pan or occasionally with scattered Acacia stenophylla. Occurs on fresh to hypo-saline clay plains. Palustrine. (BVG1M: 34b).

10.3.16f: Tecticornia spp. and Sclerolaena tricuspidis open succulent shrubland, commonly with Diplachne fusca. Occurs on alluvial plains subject to saline discharge. Palustrine. (BVG1M: 34g).

10.3.16g: Sporobolus partimpatens open tussock grassland. Associated with artesian springs. Palustrine. (BVG1M: 34e).

Short description:	Triodia longiceps hummock grassland, ephemeral open herblands, and Melaleuca bracteata low woodland on alluvial plains
Supplementary descriptions:	Thompson and Turpin (in prep), Da3, G5, G7, M10a, M14b, M22, M25, P3; Turner et al. (1978), L1; Turner et al. (1993), A2, G4, S1
Subregions:	2, 4, (1), (4.5)
Protected areas:	

Extent in reserves:	No representation
Wetland:	Contains Palustrine
Special values:	<p>10.3.16: This ecosystem is habitat for endangered species, <i>Myriophyllum artesium</i>, <i>Sporobolus pamelae</i>, and the vulnerable species <i>Atriplex morrisii</i>. It is habitat for the DEU endemic species, <i>Dissocarpus paradoxus</i> and <i>Gomphrena</i> sp. (Doongmabulla E.J.Thompson+ GAL137).</p> <p>10.3.16c: Habitat for endangered species <i>Myriophyllum artesium</i> and vulnerable species <i>Hydrocotyle dippleura</i>. Potential habitat for the threatened species: <i>Atriplex morrisii</i>, <i>Chloris circumfontinalis</i>, <i>Eriocaulon aloefolium</i>, <i>Eriocaulon carsonii</i> subsp. <i>carsonii</i>, <i>Eriocaulon carsonii</i> subsp. <i>orientale</i>, <i>Eriocaulon giganteum</i>, <i>Eryngium fontanum</i>, <i>Gunniopsis</i> sp. (Edgbaston R.J.Fensham 5094), and <i>Sporobolus pamelae</i>.</p> <p>10.3.16g: The endangered species, <i>Dissocarpus paradoxus</i> and <i>Gomphrena</i> sp. (Doongmabulla E.J.Thompson+ GAL137) are only known from this regional ecosystem. Potential habitat for threatened species including <i>Atriplex morrisii</i>, <i>Chloris circumfontinalis</i>, <i>Eriocaulon aloefolium</i>, <i>Eriocaulon carsonii</i> subsp. <i>carsonii</i>, <i>Eriocaulon carsonii</i> subsp. <i>orientale</i>, <i>Eriocaulon giganteum</i>, <i>Eryngium fontanum</i>, <i>Gunniopsis</i> sp. (Edgbaston R.J.Fensham 5094), <i>Hydrocotyle dippleura</i>, <i>Myriophyllum artesium</i>, and <i>Sporobolus pamelae</i>. Provides wetland habitat for a flora and fauna.</p>
Comments:	<p>10.3.16: This ecosystem is usually associated with artesian springs, regional ecosystem 10.3.31. Subject to scalding and wind erosion due to salinity and high total grazing pressures. Widespread soil and pasture degradation.</p> <p>10.3.16a: Mostly occurring along the western boundary of subregion 2 except for an area about 50km south east of Barcaldine. Greater than >70% severely degraded by trampling and wind erosion.</p> <p>10.3.16b: Clay soils commonly overlain by sand. Restricted to the Lake Huffer area. Soil and pasture degradation.</p> <p>10.3.16c: Mostly along the western boundary of subregion 2 below tertiary plateaus and often associated with springs. Soil and pasture degradation.</p> <p>10.3.16d: Soil and pasture degradation.</p> <p>10.3.16e: Rare ecosystem restricted to near Lake Huffer and Lake Mueller. Soil and pasture degradation.</p> <p>10.3.16f: Restricted distribution on western margin of Desert Uplands near Aramac and an outlier area near Maynard. Soil and pasture degradation.</p> <p>10.3.16g: Extremely rare ecosystem associated only known from one location near Doongmabulla. Soil and pasture degradation.</p>
Estimated extent:¹	Pre-clearing 14000 ha; Remnant 2021 14000 ha
VM class:	Least concern
Biodiversity status:	Endangered
Biodiversity status notes:	Soil and pasture degradation. Greater than >70% severely degraded by trampling and wind erosion

Regional ecosystem 10.3.17

Description: *Acacia excelsa* and *Grevillea striata* low open woodland on lake fringing dunes over a calcrete hardpan adjacent to Lake Galilee and *Acacia salicina* and *Grevillea striata* with *A. excelsa* low open woodland on fringing dunes of Lake Buchanan. Occurs on lake fringing dunes over a calcrete hardpan adjacent to Lake Galilee. Contains Palustrine. (BVG1M: 27c).

Vegetation communities in this regional ecosystem include:

10.3.17a: Mixed woodland with a combination of the species: *Acacia excelsa*, *Alectryon oleifolius*, *Grevillea striata*, *Geijera parviflora*, *Ventilago viminalis*, *Acacia salicina*, *Atalaya hemiglauca*, *Eucalyptus brownii* and *Eucalyptus coolabah*. Occurs on dunes fringing Lake Galilee. Occurs on lake fringing dunes over a calcrete hardpan. Not a Wetland. (BVG1M: 27c).

10.3.17b: *Acacia salicina* and *Grevillea striata* woodland, commonly with *Acacia excelsa* and *Atalaya hemiglauca*. Short mixed ground layer including *Tripogon loliiformis*, *Perotis rara* and *Fimbristylis dichotoma*. Occurs on lake-fringing dunes over a calcrete hardpan. Not a Wetland. (BVG1M: 27c).

10.3.17x1: *Acacia stenophylla* low woodland with *Diplachne fusca* dominated ground layer. Occurs on clay plains on bed of Lake Galilee. Palustrine. (BVG1M: 27c).

Short description: *Acacia excelsa* and *Grevillea striata* low open woodland on lake-fringing dunes

Supplementary descriptions: Gunn et al. (1967), G; Lorimer (1998), Qd1; Thompson and Turpin (in prep), A2c, A2d

Subregions: 2, (1)

Protected areas:

Extent in reserves: No representation

Wetland: Contains Palustrine

Special values: 10.3.17: Dunes are specific indicators of past climates and have significant scientific values. Sedgeland are seasonally significant feeding and breeding areas for waterfowl. This ecosystem is habitat for *Fimbristylis b Buchananensis*, a DEU endemic species.
10.3.17x1: s.

Comments: 10.3.17: Threatening processes include very high total grazing pressure. Widespread soil and pasture degradation. The deep fine sandy topsoil's have very low fertility and are extremely susceptible to wind erosion.

10.3.17a: Largely restricted to on lake-fringing dunes adjacent to Lake Galilee. One other unconfirmed location occurs at Lake Barcoorah.

10.3.17b: Endemic to Lake Buchanan; occurs on lake-fringing dunes.

Estimated extent:¹ Pre-clearing 12000 ha; Remnant 2021 9000 ha

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Soil and pasture degradation.

Regional ecosystem 10.3.19

Description: *Acacia cambagei* open forest, commonly with a second tree layer of *Eremophila mitchellii*. Shrub layer of *Eremophila mitchellii* and *Carissa lanceolata* and sparse mixed ground layer. Occurs on calcareous duplex soils on old dunes and degraded dune material fringing Lake Galilee. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia cambagei* woodland on lakeside dunes

Supplementary descriptions: Gunn et al. (1967), G; Lorimer (1998), Qd2; Thompson and Turpin (in prep), A13f

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values: 10.3.19: This ecosystem is an unusual occurrence, having significant geomorphic values indicative of past climates. It is endemic to Lake Galilee.

Comments: 10.3.19: Fringing Lake Galilee. The deep fine sandy topsoils have very low fertility and are extremely susceptible to wind erosion. It is largely cleared for pasture development. Remnants have heavy infested with Buffel grass.

Estimated extent:¹ Pre-clearing 5000 ha; Remnant 2021 1000 ha

VM class: Endangered

Biodiversity status: Endangered

Biodiversity status notes:

Regional ecosystem 10.3.20

Description: [RE not in use]²: This vegetation community is now mapped as 10.3.28a. *Eucalyptus melanophloia* dominates the very sparse canopy. *Eucalyptus brownii* is occasionally present in the canopy. *Acacia sericophylla* and *Grevillea parallela* are usually present in a very sparse small tree layer. *Acacia melleodora* dominates the very sparse shrub layer. *Aristida ingrata* dominates the very sparse ground layer. Occurs on older lake-fringing sand dunes. Not a Wetland. (BVG1M: 17b).

Short description: *Eucalyptus melanophloia* open woodland on older lake-fringing dunes

Supplementary descriptions: Lorimer (1998), Qd4; Thompson and Turpin (in prep), E15A2

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values: 10.3.20: This ecosystem represents the highest shoreline of ancestral lake systems and is extremely restricted being associated with Lake Galilee and Cauckinburra Swamp.

Comments: 10.3.20: Extremely restricted ecosystem associated with Lake Galilee and Cauckinburra Swamp. The deep sandy topsoil's have very low fertility, are highly prone to drying out and are prone to wind erosion. These factors greatly limit the duration, quality and quantity of native annual pasture.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.3.21

Description: [RE not in use]²: This vegetation community is now mapped as 10.3.17b. *Acacia salicina* and *Grevillea striata* dominate the very sparse canopy. *Corymbia plena* present on deeper sands. *Acacia salicina* and *Grevillea striata* dominate the very sparse canopy. The ground layer is dominated by species including *Eriachne mucronata*, *Fimbristylis dichotoma* and *Sphaeromorphaea australis*. Occurs on sandy alluvial deposits overlying old lake bed clays. Not a Wetland. (BVG1M: 27c).

Short description: *Acacia salicina* and *Grevillea striata* low open woodland on sandy alluvial plains

Supplementary descriptions: Lorimer (1998), Q17; Thompson and Turpin (in prep), A2

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values: 10.3.21: Part of habitat complex associated with Lake Buchanan, seasonally significant for water bird nesting and feeding. Habitat for threatened flora species including *Lawrencia buchananensis*. *Fimbristylis buchananensis* which is a DEU endemic has been recorded in this ecosystem. Habitat for *Calotis* sp. (Lake Buchanan J.Kemp+ 3384H). Also habitat for poorly known species *Pterocaulon intermedium*.

Comments: 10.3.21: Endemic to Lake Buchanan. Subject to very high total grazing pressure. Widespread soil and pasture degradation. The deep sandy topsoil's have very low fertility and are highly prone to drying out. These factors greatly limit the duration, quality and quantity of native annual pasture.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Soil and pasture degradation.

Regional ecosystem 10.3.22

Description: Clay pan, herbfield and low shrublands composed of *Fimbristylis buchananensis*, *Lawrencia buchananensis*, *Sporobolus virginicus*, *Tecticornia pergranulata*, *Eragrostis pergracilis*, and other salt-tolerant species. Occurs on low sandplains adjacent to Lake Buchanan. The shallow sand surfaces overlie sodic clays and a calcrete hardpan. Palustrine. (BVG1M: 34a).

Vegetation communities in this regional ecosystem include:

10.3.22a: Mixed herbland to succulent shrubland including *Fimbristylis buchananensis*, *Tecticornia pergranulata*, *Sporobolus virginicus* and *Eragrostis* spp. Occurs in treeless saline areas surrounding Lake Buchanan. Palustrine. (BVG1M: 34a).

10.3.22b: Mixed herbland including *Fimbristylis dichotoma*, *Dactyloctenium buchananensis* and *Eragrostis speciosa*. This community is highly seasonably variable and may be mostly bare in dry periods. Occurs in dune swales on the margins of Lake Buchanan. Palustrine. (BVG1M: 34g).

10.3.22c: Seasonally bare short grassland including *Eragrostis elongata*, *Eragrostis pergracilis*, *Dactyloctenium* spp. and *Cynodon dactylon*. Grassland to bare clay pan around the margins of Lake Buchanan. Palustrine. (BVG1M: 34b).

10.3.22d: [RE not in use]²: This vegetation community is now mapped as 10.3.22a. *Tecticornia pergranulata* dominates the very sparse dwarf shrub layer *Sporobolus virginicus* and *Sphaeromorphaea australis* are usually present in the ground the layer. RE is defunct. Palustrine. (BVG1M: 34b).

10.3.22e: *Lawrencia buchananensis* dwarf shrubland adjoining Lake Buchanan. Occurs on low dunes on the western edge of Lake buchanan. Palustrine. (BVG1M: 34b).

10.3.22f: *Acacia salicina* low woodland with *Sporobolus virginicus* dominated ground layer. Occurs on low dunes along the eastern edge of Lake Buchanan. Palustrine. (BVG1M: 34b).

10.3.22g: *Eleocharis atropurpurea*, *Diplachne fusca*, *Marsilea* spp. and *Pseudoraphis spinescens* open herbland with *Eucalyptus camaldulensis* fringe in swales on perimeter of Lake Buchanan. Closed depressions in swales of dunes surrounding Lake Buchanan. Palustrine. (BVG1M: 34a).

10.3.22h: *Diplachne fusca* tussock grassland with *Eragrostis elongata*, *Nymphoides* sp. and *Cyperus victoriensis* in closed depressions. Occurs in swales of low dunes on the western margin of Lake Buchanan. Palustrine. (BVG1M: 34a).

Short description: Clay pans, *Fimbristylis buchananensis* open sedgeland and spare-tussock grasslands on shallow alluvial plains (Lake Buchanan)

Supplementary descriptions:	Lorimer (1998), QI8; Thompson and Turpin (in prep), G13, M13, M14, M16, P1
Subregions:	2
Protected areas:	
Extent in reserves:	No representation
Wetland:	Palustrine
Special values:	<p>10.3.22: Seasonal feeding and breeding areas for waders and other wetland fauna. This ecosystem is habitat for vulnerable plant species <i>Lawrencia buchananensis</i> (endemic to Lake Buchanan). Other species of biogeographic interest include the recently discovered <i>Dactyloctenium buchananensis</i>. Seasonal feeding and breeding areas for waders and other wetland fauna (Timms 1987).</p> <p>10.3.22c: Habitat for the vulnerable plant species <i>Lawrencia buchananensis</i>.</p> <p>10.3.22h: Seasonal feeding and breeding areas for waders and other wetland fauna. This ecosystem is habitat for vulnerable plant species <i>Lawrencia buchananensis</i> (endemic to Lake Buchanan). Other species of biogeographic interest include the recently discovered <i>Dactyloctenium buchananensis</i>. Seasonal feeding and breeding areas for waders and other wetland fauna (Timms 1987).</p>
Comments:	<p>10.3.22: Endemic to Lake Buchanan. Threatening processes include high total grazing pressure. Widespread soil and pasture degradation. The shallow calcrete hardpan limits drainage and water storage capacity and with the sodic nature of the soil profile restrict plant diversity to those that are tolerant of high subsoil pH and high salt levels. Naturalised species associated with this regional ecosystem include <i>Cynodon dactylon</i>.</p> <p>10.3.22a: Rare vegetation community surrounding Lake Buchanan.</p> <p>10.3.22b: Rare vegetation community only known from the western side of Lake Buchanan.</p> <p>10.3.22c: Fringing Lake Buchanan. Mostly bare clay pan but can include a mosaic of areas of vegetation composed of the other map units described in regional ecosystem 10.3.22. *Generally <i>Cynodon dactylon</i> dominates the very sparse ground layer.</p> <p>10.3.22d: Rare vegetation community surrounding Lake Buchanan.</p> <p>10.3.22e: Rare vegetation community occurring as a band on the shores of Lake Buchanan.</p> <p>10.3.22f: Endemic to Lake Buchanan. Occurs as a narrow band on the edge of the high water level of the lake.</p> <p>10.3.22g: Rare vegetation community surrounding Lake Buchanan.</p> <p>10.3.22h: Endemic to Lake Buchanan.</p>
Estimated extent: ¹	Pre-clearing 12000 ha; Remnant 2021 12000 ha
VM class:	Least concern
Biodiversity status:	Endangered
Biodiversity status notes:	Pasture degradation and wind erosion.

Regional ecosystem 10.3.23

Description: *Tecticornia* spp. open succulent shrubland and/or *Eragrostis australasica* sparse tussock grassland and/or *Acacia stenophylla* woodland on the bed of Lake Galilee. Areas of *Diplachne fusca* and bare ground may be present. Occurs on clay plains on bed of Lake Galilee. Palustrine. (BVG1M: 34a).

Vegetation communities in this regional ecosystem include:

10.3.23a: *Tecticornia* spp. and *Sclerolaena* spp. open succulent shrubland. Occurs on clay plains on bed of Lake Galilee. Palustrine. (BVG1M: 34a).

10.3.23b: *Diplachne fusca* tussock grassland often with *Eragrostis pergracilis*, *Tecticornia* spp. and *Sclerolaena* spp. Occurs on clay plains on bed of Lake Galilee. Palustrine. (BVG1M: 34a).

10.3.23c: [RE not in use]²: This vegetation community is now mapped as 10.3.23b. Sparsely vegetated to bare clay pan. In the less saline northern areas of the lake *Diplachne fusca* occurs as scattered tussocks. Sparsely vegetated to bare clay pan (Lake Galilee). Palustrine. (BVG1M: 34a).

10.3.23d: [RE not in use]²: This vegetation community is now mapped as 10.3.17x1. *Acacia stenophylla* low woodland with *Diplachne fusca* dominated ground layer. Occurs on clay plains on bed of Lake Galilee. Palustrine. (BVG1M: 34a).

10.3.23e: *Eragrostis australasica* sparse tussock grassland with *Diplachne fusca*. *Tecticornia pergranulata* shrubs occur throughout this community and are lower than the grasses. Occurs on clay plains on bed of Lake Galilee. Palustrine. (BVG1M: 34a).

Short description: *Tecticornia* spp. open succulent shrubland and/or *Eragrostis australasica* sparse tussock grassland and/or *Acacia stenophylla* woodland on lake bed (Lake Galilee)

Supplementary descriptions: Gunn et al. (1967), G; Lorimer (1998), QL6; Lorimer (2005), LG7

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Palustrine

Special values: 10.3.23: Seasonal wetlands of national significance for periodic water bird nesting and feeding.
10.3.23e: Seasonal wetlands of national significance for periodic water bird nesting and feeding.

Comments: 10.3.23: Endemic to Lake Galilee. Threatening processes include very high total grazing pressure. *Parkinsonia* is a weed pest on the wetter less saline areas. The sodic heavy clay soils restrict plant diversity to those that are tolerant of high subsoil pH, high salt levels and poor drainage.
10.3.23d: *Parkinsonia aculeata* is present throughout this community.

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 10.3.24

Description: Ephemeral lake with algal turf of *Chara* sp. Part of this map unit is algal turf of *Chara* sp. while covered with water otherwise it is bare clay pan with salt deposits in some areas. Occurs over bare saline or brackish clays. Lacustrine. (BVG1M: 34a).

Vegetation communities in this regional ecosystem include:

10.3.24x1: Lakes with permanent or near permanent water. A wooded fringe usually occurs, including *Eucalyptus coolabah* and *Eucalyptus camaldulensis*. Occurs on level to undulating plains of various origins. Lacustrine. (BVG1M: 34a).

Short description: Ephemeral lake bed (Lake Buchanan)

Supplementary descriptions: Gunn et al. (1967), G; Lorimer (1998), QI9; Thompson and Turpin (in prep), S; Turner et al. (1993), L1

Subregions: 2, 1, (9.5), (3)

Protected areas:

Extent in reserves: No representation

Wetland: Lacustrine

Special values: 10.3.24: Seasonal wetlands of national significance for periodic water bird nesting and feeding. Unique geomorphic and geochemical characteristics associated with Lake Buchanan (Chivar et al., 1986). Lake Buchanan is considered by Timms (1987) to have a relatively high diversity of endemic fauna in its mud and water, which ranges from brackish to hypersaline each year. He identified 28 species of insect, one rotifer species, 21 species of crustacean, two species of water mite, and one snail species in a comprehensive study of the lake complex. He also explained why many halobiont and halophilic species are missing, and why the lake fauna of Lake Buchanan differs from those in the salt lakes of southern Australia.

10.3.24x1: Key habitat for water birds.

Comments: 10.3.24: Water bird breeding values for some species are being compromised by degradation of adjacent habitats.

10.3.24x1: Margins usually degraded by overgrazing.

Estimated extent:¹ Pre-clearing 21000 ha; Remnant 2021 21000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.3.25

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Eremophila mitchellii* with or without *Lysiphyllum carronii* dominates the sparse shrub to small tree layer. *Senna artemisioides* sometimes forming a shrub stratum. *Eremophila mitchellii* dominates the very sparse canopy. *Lysiphyllum carronii*, *Atalaya hemiglauc*a and *Psydrax oleifolia* are usually present in the canopy. *Flindersia maculosa* is commonly present in western areas. *Carissa lanceolata* often dominates the very sparse shrub layer. *Sporobolus actinocladius* is usually present and sometimes dominant in the very sparse ground layer. Occurs on flood plains with sandy clay to clay soil. Not a Wetland. (BVG1M: 27c).

Vegetation communities in this regional ecosystem include:

10.3.25x1: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Eremophila mitchellii* and/or *Lysiphyllum carronii* dominate the very sparse tree layer with variable species composition very sparse ground layer. Occurs on flat to gently undulating terrain with clayey soil usually with some stone cover. Not a Wetland. (BVG1M: 27c).

10.3.25x2: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Eremophila mitchellii* defines the emergent or very sparse tree or shrub layer with scattered ground layer. Occurs on sloping terrain with sandy clay soil. Not a Wetland. (BVG1M: 27c).

10.3.25x5: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Eremophila mitchellii* defines the very sparse tree or shrub layer with very sparse to mid-dense ground layer. Occurs on flat terrain with sandy soil. Not a Wetland. (BVG1M: 27c).

10.3.25x9: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Senna artemisioides* dominates the sparse shrub layer. *Chloris pectinata* and *Polymeria marginata* dominate the ground layer. Occurs on clay on gently undulating plains on Cretaceous sediments. Not a Wetland. (BVG1M: 27c).

Short description: *Eremophila mitchellii* tall open shrubland on alluvial plains

Supplementary descriptions: Thompson and Turpin (in prep), M17

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.3.25: Subject to high total grazing pressure; >70% severely degraded; A horizon largely removed; surface sealing/scalding. Subject to widespread pasture degradation, and to clearing for pasture development. The surface soils are susceptible to compaction, sheet erosion and salting even with light stocking. The very sparse native pasture is mostly annuals and should be maintained to assist infiltration and minimise evaporation and soil compaction. Transpiration from the tree and shrub cover needs to be sustained to can keep the water table low and encourage surface moisture to infiltrate and leach salts below the root zone of the ground layer species.

Estimated extent:¹

VM class: Least concern

Biodiversity status: Endangered

Biodiversity status notes: Subject to high total grazing pressure - > 70% severely degraded with A horizon removed and soil surface sealing and scalding.

Regional ecosystem 10.3.26

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Lysiphyllum carronii* dominates the very sparse canopy. *Eremophila mitchellii* is usually present or dominates the very sparse tall shrub to low tree layer. *Enneapogon* spp. sometimes dominate the very sparse ground layer. Occurs on flat terrain with sandy clay to clay soil on sandplain (Qs) or alluvial plains (Qa). Not a Wetland. (BVG1M: 27c).

Short description: *Lysiphyllum carronii* low open woodland on alluvial plains

Supplementary descriptions: Thompson and Turpin (in prep), M18

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.3.26: Occurs mostly along the western edge of the bioregion. Frequently occurs in small patches. Further survey desirable to study botanical variations over its range. Rare ecosystem with >70% pastures degraded; subject to high total grazing. The surface soils are susceptible to compaction, sheet erosion and salting even with light stocking. The very sparse native pasture is mostly annuals and should be maintained to assist infiltration and minimise evaporation and soil compaction. Transpiration from the tree and shrub cover needs to be sustained to can keep the water table low and encourage surface moisture to infiltrate and leach salts below the root zone of the ground layer species. Subject to widespread pasture degradation, and to clearing for pasture development. Naturalised species associated with this regional ecosystem include **Cenchrus ciliaris*, which may dominate the ground layer.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Greater than 70% severely degraded

Regional ecosystem 10.3.27

Description: *Eucalyptus populnea* dominates the very sparse tree layer occasionally with understorey of *Heliodendron basalticum*. Occurs on alluvial plains with sandy duplex soils and sometimes clayey soils. Not a Wetland. (BVG1M: 17a).

Vegetation communities in this regional ecosystem include:

10.3.27a: *Eucalyptus populnea* woodland, occasionally with *Acacia harpophylla* and *Lysiphyllum carronii*. Mixed tussock grass ground layer. Occurs on alluvial plains. Contains Palustrine. (BVG1M: 17a).

10.3.27b: [RE not in use]²: This vegetation community is now mapped as 10.3.27a. *Heliodendron basalticum* dominates the very sparse canopy. *Eucalyptus populnea* may be present as an emergent or in the canopy. *Eremophila mitchellii* is occasionally present in the tall shrub layer. *Carissa ovata* usually dominates the shrub layer when present. The ground layer varies from very sparse to sparse. Occurs on alluvial plains (southern). Not a Wetland. (BVG1M: 27a).

10.3.27c: *Eucalyptus populnea* open woodland. Occurs on closed depressions on or adjacent to floodplains. Palustrine. (BVG1M: 17a).

Short description: *Eucalyptus populnea* woodland to open woodland on alluvial plains

Supplementary descriptions: Thompson and Turpin (in prep), E17B

Subregions: 4, (2), (11.26), (1), (11.15), (11.24), (11.7), (11.8), (4.4), (4.5)

Protected areas: Cudmore RR, Cudmore (Limited Depth) NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.3.27a: Only known record for the new species *Eragrostis jerichoensis* is from this regional ecosystem.

Comments: 10.3.27: *Eucalyptus brownii* intergrades with *E. populnea* in some areas including near Barcaldine. Further investigation is required to determine the extent of the vegetation communities on clays and texture contrast soils and to provide comprehensive species lists for these communities. Threatening processes include increase in salinity due to clearing of recharge areas, clearing for pasture development, and woody weed invasion due to high total grazing pressures and absence of fire. This ecosystem is subject to sheet erosion and scalding. The clayey subsoils have a very low permeability are often sodic. It is suggested that ground cover be kept dense to slow the rate of water flow which helps prevent channelling of the flow and thereby minimises erosion. Overgrazing reduces competition from pasture species and tends to increase the cover of false sandalwood and current bush. 10.3.27b: This ecosystem is only known from a few locations south of Barcaldine. It mostly occurs as small patches in a mosaic with 10.3.27a. Many of these patches are unmappable at 1:100 000 scale mapping.

Estimated extent:¹ Pre-clearing 159000 ha; Remnant 2021 64000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Approximately 50% of the RE has been cleared, with 40% of the remaining ground stratum being subject to moderate degradation.

Regional ecosystem 10.3.28

Description: Eucalyptus melanophloia woodland, usually with Corymbia dallachiana and commonly with Eucalyptus brownii. Shrub layer of Acacia spp., Carissa lanceolata and Eremophila spp. Tussock grass ground layer, occasionally with Triodia pungens. Occurs on sandy alluvial fans with yellow earth and duplex soils formed from outwash from sandstone hills. Contains Palustrine. (BVG1M: 17b).

Vegetation communities in this regional ecosystem include:

10.3.28a: Eucalyptus melanophloia woodland, usually with Corymbia dallachiana and commonly with Eucalyptus brownii. Shrub layer of Acacia spp., Carissa lanceolata and Eremophila spp. Tussock grass ground layer, occasionally with Triodia pungens. Occurs on sandy alluvial fans. Contains Palustrine. (BVG1M: 17b).

10.3.28b: [RE not in use]²: This vegetation community is now mapped as 10.5.4. Eucalyptus crebra woodland, commonly with Corymbia plena. Tussock grass ground layer. Occurs on sandy alluvial fans. Not a Wetland. (BVG1M: 18b).

Short description:	Eucalyptus melanophloia or E. crebra woodland to open woodland on sandy alluvial fans
Supplementary descriptions:	Thompson and Turpin (in prep), E15Ay, E2b
Subregions:	2, 3, 4, (9.4), (11.15), (11.7), (11.24)
Protected areas:	Cudmore (Limited Depth) NP, Cudmore RR
Extent in reserves:	Low
Wetland:	Contains Palustrine
Special values:	10.3.28: Habitat for relatively uncommon species Velleia macrocalyx known from only seven Herbarium records in the DEU (total of 14 records for Queensland).
Comments:	10.3.28: The top soils on the upper slopes are susceptible to sheet erosion while on the lower slopes the top soils are deeper and have better water-holding capacity but are subject to flooding and salting. Revegetation after loss of top soil and exposure of the clayey subsoil is expected to be difficult and very slow. Nutrient levels, particularly phosphorus are very low. Subject to widespread pasture degradation, and to clearing for pasture development. 10.3.28b: Restricted to the northern parts of the bioregion.
Estimated extent: ¹	Pre-clearing 278000 ha; Remnant 2021 213000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.3.29

Description: *Acacia torulosa* dominates the very sparse canopy layer or *Triodia longiceps* dominates the very sparse ground layer. Occurs on weathered sand dunes. Not a Wetland. (BVG1M: 27c).

Vegetation communities in this regional ecosystem include:

10.3.29a: [RE not in use]²: This vegetation community is now mapped as 10.5.7. *Acacia torulosa* dominates the sparse shrub layer. Occurs on weathered lake dunes. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia torulosa* shrubland or *Triodia longiceps* hummock grassland on weathered lake dunes

Supplementary descriptions: Thompson and Turpin (in prep), A2b, G1

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.3.29: Occurs in the vicinity of Lake Buchanan.
10.3.29a: Restricted to near Lake Buchanan and lakes near Lake Huffer. Further survey required for comprehensive floristic description.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Greater than >70% severely degraded by trampling and wind erosion

Regional ecosystem 10.3.30

Description: *Casuarina cristata* woodland with *Eucalyptus coolabah* and tussock grass ground layer. Occurs on lacustrine plains with heavy black clay soil. Palustrine. (BVG1M: 34d).

Short description: *Casuarina cristata* woodland on lacustrine plains

Supplementary descriptions: Thompson and Turpin (in prep), M9a

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Palustrine

Special values:

Comments: 10.3.30: Occurs in salinity discharge area. Potential threats to this rare ecosystem include clearing for pasture development and pasture degradation. There is also potential for *Parthenium* invasion on these heavy clay soils. The cracking clays cause major physical problems for plant roots and annual plants have only a short growing season.

Estimated extent:¹ Pre-clearing 300 ha; Remnant 2021 300 ha

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: A rare regional ecosystem with potential to be affected by salinity as a discharge area.

Regional ecosystem 10.3.31

Description: Spring-fed *Sporobolus pamelae* dominates the sparse ground layer. *Melaleuca leucadendra* in some patches dominates the canopy. Occurs on springs fed by the Great Artesian Basin. Palustrine. (BVG1M: 34e).

Vegetation communities in this regional ecosystem include:

10.3.31a: *Sporobolus pamelae* dominates the sparse to mid-dense ground layer. Occurs adjacent to springs fed from the Great Artesian Basin. Palustrine. (BVG1M: 34e).

10.3.31b: *Melaleuca leucadendra* dominates the sparse canopy. The ground layer is dominated by *Machaerina rubiginosa* and *Cyperus* spp. Occurs adjacent to springs fed from the Great Artesian Basin. Palustrine. (BVG1M: 22b).

10.3.31c: *Paspalum distichum*, *Cyperus* spp., *Marsilea hirsuta*, *Diplachne fusca* and *Melaleuca bracteata* are commonly present. Occurs adjacent to springs fed from the Great Artesian Basin. Palustrine. (BVG1M: 34e).

Short description: Artesian springs emerging on alluvial plains

Supplementary descriptions: Habermehl (1982); Turner et al. (1993) (Land system: A2); Fairfax and Fensham (2002), Fensham and Fairfax (2002), Fensham et al. (2004)

Subregions: 2

Protected areas:

Extent in reserves: No representation

Wetland: Palustrine

Special values: 10.3.31: Habitat of threatened species associated with Great Artesian Basin discharge springs including the plant species *Eriocaulon aloefolium*, *E. carsonii*, *E. giganteum*, *Eryngium fontanum*, *Myriophyllum artesium*, and *Sporobolus pamelae*. It is habitat for spring endemic and restricted species, *Lobelia fenshamii* and *Peplidium* sp. (Edgbaston R.J.Fensham 3341); the endangered red-finned blue-eye (*Scaturiginichthys vermeilipinnis*) and Edgbaston goby (*Chlamydogobius squamigenus*); and numerous endemic invertebrates. 10.3.31 is known at 114 locations in the DEU.

10.3.31a: Provides wetland habitat for a flora and fauna.

10.3.31c: Habitat for poorly known species *Peplidium* sp. (Edgbaston R.J.Fensham 3341).

Comments: 10.3.31: All the springs in this regional ecosystem are within Great Artesian Basin discharge areas. Threatening processes include excavation for dams, pig rooting, trampling by domestic stock and the introduction of ponded pastures. Grazing should be excluded from these areas.
10.3.31b: Rare ecosystem only known from one location near Doongmabulla. Further survey required for comprehensive floristic description.
10.3.31c: This vegetation community is not mappable at 1:100 000 scale although its distribution is mapped by the known point locations (Fensham and Fairfax, 2002). Naturalised species associated with this regional ecosystem include *Cynodon dactylon*, which is commonly present.

Estimated extent:¹ Pre-clearing 40 ha; Remnant 2021 40 ha

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: Rare ecosystem < 1000ha pre-clearing extent and subject to high grazing pressure as well as threat of extinction due to extraction of water from the source aquifer for mining development.

Regional ecosystem 10.4.1

Description: *Acacia argyrodendron* woodland to open forest, occasionally with *Acacia cambagei*. There may be a second tree layer of species including *A. argyrodendron*, *Terminalia oblongata*, *Lysiphyllum carronii*, *Atalaya hemiglaucula*, *Casuarina cristata* and *Acacia cambagei*. Tussock grass ground layer of *Dichanthium sericeum*, *Panicum decompositum* and *Aristida latifolia*. Occurs on plains and gently undulating downs with deep cracking grey clay soils on Cainozoic lake beds. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.4.1x1: [RE not in use]²: This regional ecosystem is now mapped as 10.4.1. *Acacia argyrodendron* dominates the very sparse tree layer. *Carissa ovata* or *C. lanceolata* dominates the very sparse shrub layer and *Paspalidium caespitosum* and *Sporobolus caroli* codominate the very sparse ground layer. Occurs on flat to gently undulating clay plain. Contains Palustrine. (BVG1M: 26a).

10.4.1x2: [RE not in use]²: This regional ecosystem is now mapped as 10.4.1. *Acacia argyrodendron* dominates the very sparse tree layer and *Paspalidium caespitosum* and *Brachyachne convergens* codominate the very sparse ground layer. Occurs on flat to gently undulating clay plain. Contains Palustrine. (BVG1M: 26a).

10.4.1x3: [RE not in use]²: This regional ecosystem is now mapped as 10.4.1. *Acacia argyrodendron* dominates the very sparse low tree layer. *Eremophila mitchellii* often dominates the very small shrub layer and *Dactyloctenium radulans* and *Iseilema vaginiflorum* usually dominate the very sparse ground layer. Occurs on flat to gently undulating clay plain. Contains Palustrine. (BVG1M: 26a).

Short description:	<i>Acacia argyrodendron</i> woodland on Cainozoic lake beds
Supplementary descriptions:	Thompson and Turpin (in prep), A10a
Subregions:	1, 3, (2), (4.5), (11.3)
Protected areas:	Moorrinya NP, Forest Den NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.4.1x1: Associated with gilgais that may support ephemeral wetlands. 10.4.1x2: Associated with gilgais that may support ephemeral wetlands. 10.4.1x3: Associated with gilgais that may support ephemeral wetlands.
Comments:	10.4.1: 10.9.1e is now mapped as part of this RE. Endemic to clay lake bed deposits in Natal Downs, Victoria Downs and Lake Dunn areas. Subject to clearing for pasture development and has undergone significant pasture degradation. There is potential for <i>Parthenium</i> invasion on the heavy clay soils.
Estimated extent: ¹	Pre-clearing 192000 ha; Remnant 2021 114000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Pasture degradation.

Regional ecosystem 10.4.2

Description: Acacia harpophylla woodland to open forest. Other trees commonly occur and may include Lysiphyllum carronii, Eucalyptus brownii, Flindersia dissosperma, Terminalia oblongata and Geijera salicifolia. Tussock grass ground layer of Bothriochloa ewartiana, Aristida latifolia, Aristida jerichoensis and Paspalidium caespitosum. Occurs on cracking clay soils, on plains and undulating downs, on Cainozoic lake deposits. Areas of texture contrast soils. Not a Wetland. (BVG1M: 25a).

Short description: Acacia harpophylla low woodland on Cainozoic lake beds (subregion 3)

Supplementary descriptions: Gunn et al. (1967), Du, Hu; Thompson and Turpin (in prep), A11c

Subregions: 2, 4, 3, (11.7)

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values:

Comments: 10.4.2: Restricted to subregion 3 at Natal Downs and Victoria Downs. Subject to clearing for pasture development. Relatively poor pastures which are moderately degraded. This ecosystem is subject to clearing for pasture development. Occurrences on texture contrast soils are subject to scalding. There is potential for Parthenium invasion on the heavy clay soils.

Estimated extent:¹ Pre-clearing 20000 ha; Remnant 2021 6000 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.4.3

Description: *Acacia harpophylla* and/or *Eucalyptus cambageana* woodlands. Occurs on clay and texture contrast soils. Gently undulating downs and plains on Cainozoic lake deposits. Contains Palustrine. (BVG1M: 25a).

Vegetation communities in this regional ecosystem include:

10.4.3a: [RE not in use]²: This vegetation community is now mapped as 10.4.2. *Acacia harpophylla* dominates the very sparse tree layer with *Eucalyptus cambageana* emergents or *Eucalyptus cambageana*. *Acacia harpophylla* dominates the very sparse to sparse canopy. *Eucalyptus cambageana* is occasionally an emergent. *Lysiphyllum carronii* and *Eucalyptus brownii* occur occasionally in the canopy. *Eremophila mitchellii* occurs as scattered large shrubs or small trees. *Carissa lanceolata* or *C. ovata* usually dominate the very sparse shrub layer. *Eremophila deserti* is often present and sometimes a dominant shrub. *Sporobolus actinocladius*, *Paspalidium caespitosum*, *Bothriochloa ewartiana* and/or *Eragrostis lacunaria* may occur as dominant graminoids in the ground layer. Occurs on Cainozoic lake beds. Not a Wetland. (BVG1M: 25a).

10.4.3b: [RE not in use]²: This vegetation community is now mapped as 10.4.3. *Eucalyptus cambageana* woodland, occasionally with *Acacia harpophylla*. A second tree layer dominated by *Acacia harpophylla* commonly occurs. Tussock grass dominated ground layer. Occurs on Cainozoic clay plains. Not a Wetland. (BVG1M: 25a).

Short description:	<i>Acacia harpophylla</i> and/or <i>Eucalyptus cambageana</i> woodland on Cainozoic lake beds
Supplementary descriptions:	Gunn et al. (1967), Bl, D, Du, Hu, Mo, So; Thompson and Turpin (in prep), A11a, E65g
Subregions:	3, 2
Protected areas:	
Extent in reserves:	No representation
Wetland:	Contains Palustrine
Special values:	10.4.3: Associated with gilgais that may support ephemeral wetlands.
Comments:	10.4.3: This ecosystem is subject to clearing for pasture development. There is potential for <i>Parthenium</i> invasion on the heavy clay soils. 10.4.3a: Occurs mostly central parts of subregion 2 in the vicinity of Lake Galilee and further south.
Estimated extent: ¹	Pre-clearing 2000 ha; Remnant 2021 1000 ha
VM class:	Of concern
Biodiversity status:	Of concern
Biodiversity status notes:	Under review

Regional ecosystem 10.4.4

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.4.5. *Acacia cambagei* open forest. The very sparse sub-canopy is dominated by *A. cambagei*. Small trees frequently present include *Lysiphyllum carronii* and *Terminalia oblongata*. *A. cambagei*, *Alectryon diversifolius*, *Erythroxylon australe*, *Atalaya hemiglauc*, *Santalum lanceolatum*, *Carissa* spp. And *Capparis lasiantha* are usually present in the very sparse shrub layer. The ground layer is usually very sparse. Occurs on plains and gently undulating downs with cracking grey clay soils on Cainozoic lake beds. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia cambagei* woodland on Cainozoic lake beds (subregion 3)

Supplementary descriptions: Cumming (1992), Ce; Gunn et al. (1967), I, My; Thompson and Turpin (in prep), A13g

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.4.4: Largely restricted to the vicinity of Natal Downs and Victoria Downs. This ecosystem is subject to clearing for pasture development. There is potential for *Parthenium* invasion on the heavy clay soils.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.4.5

Description: *Acacia cambagei* woodland to open forest, occasionally with *Acacia harpophylla*, *Acacia argyrodendron*, *Terminalia oblongata* and *Flindersia dissosperma*. A second tree layer of *Acacia cambagei*, *Lysiphyllum carronii* and *Eremophila mitchellii* usually occurs. Mixed shrub layer including *Acacia cambagei*, *Eremophila mitchellii* and *Carissa lanceolata*. Sparse tussock grass ground layer. Occurs on Cainozoic clay plains. Cracking clay soils, usually with a weak gilgai microrelief and minor areas of texture contrast soils. Contains Palustrine. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.4.5a: [RE not in use]²: This vegetation community is now mapped as 10.4.5. *Acacia cambagei* dominates the small tree layer sometimes with *A. harpophylla*. Occurs on plains and gently undulating downs on Cainozoic lake deposits in sub-region 1. Contains Palustrine. (BVG1M: 26a).

10.4.5x1: [RE not in use]²: This regional ecosystem is now mapped as 10.4.5. *Acacia cambagei* or rarely *Acacia crombiei* woodland. Occurs on flat to gently undulating clay plain. Contains Palustrine. (BVG1M: 26a).

10.4.5x2: [RE not in use]²: This regional ecosystem is now mapped as 10.4.5. *Acacia cambagei* woodland with tussock grass ground layer. Occurs on sloping terrain with clay soil. Not a Wetland. (BVG1M: 26a).

10.4.5x3: *Acacia tephрина* woodland, commonly with *Eucalyptus coolabah* or *Acacia cambagei*. Tussock grass ground layer including *Astrebla* spp. Occurs on cracking clay soils. Contains Palustrine. (BVG1M: 26a).

Short description: *Acacia cambagei* woodland on Cainozoic clay plains

Supplementary descriptions: Gunn et al.(1967), My, Bl, Ct, I; Lorimer (1998), QI2, QI4; Thompson and Turpin (in prep), A13a

Subregions: 1, 3, 2, (4), (4.4), (4.5), (11.26)

Protected areas: Moorrinya NP

Extent in reserves: Low

Wetland: Contains Palustrine

Special values: 10.4.5: Larger gilgai may provide ephemeral wetland habitat.
10.4.5a: Larger gilgai may provide ephemeral wetland habitat.
10.4.5x1: Larger gilgai may provide ephemeral wetland habitat.

Comments: 10.4.5: Subject to clearing for pasture development. Moderate pasture degradation. There is potential for *Parthenium* invasion on the heavy clay soils.
10.4.5x3: Occurs in Subregion 1 on the edge of landzone 4 grasslands.

Estimated extent:¹ Pre-clearing 109000 ha; Remnant 2021 53000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Under review

Regional ecosystem 10.4.6

Description: *Lysiphyllum carronii* low open woodland with a mix of other species including: *Acacia harpophylla*, *Corymbia erythrophloia*, *Flindersia maculosa*, *Terminalia oblongata* and *Ventilago viminalis*. Tussock grass ground layer. Occurs on plains and undulating downs with black or grey cracking clay soils on Cainozoic lake beds. Not a Wetland. (BVG1M: 27c).

Vegetation communities in this regional ecosystem include:

10.4.6a: [RE not in use]²: This vegetation community is now mapped as 10.4.6. *Lysiphyllum carronii* low open woodland with a mix of other species including: *Acacia harpophylla*, *Corymbia erythrophloia*, *Flindersia maculosa*, *Terminalia oblongata* and *Ventilago viminalis*. Tussock grass ground layer. Occurs on the margins of clay plains. Not a Wetland. (BVG1M: 27a).

10.4.6b: [RE not in use]²: This vegetation community is now mapped as 10.4.8. *Dichanthium fecundum*, *Eulalia aurea* and *D. sericeum* dominate a sparse to mid-dense ground layer. *Aristida latifolia* is present as a sub-dominant species. *Lysiphyllum carronii* is present as an emergent tree species and *Carissa lanceolata* and *Scaevola spinescens* are present as emergent shrubs. Occurs on Cainozoic lake beds. Not a Wetland. (BVG1M: 30b).

Short description: *Lysiphyllum carronii* dominated low open woodland on Cainozoic lake beds

Supplementary descriptions: Gunn et al. (1967), My; Thompson and Turpin (in prep), M12

Subregions: 3

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values:

Comments: 10.4.6: Occurs in small patches within grasslands or vegetation communities dominated by *Acacia* spp. More information on current extent is required. This ecosystem is subject to clearing for pasture development especially where associated with *Acacia* communities.

10.4.6a: Naturalised species associated with this regional ecosystem include **Cenchrus ciliaris*.

10.4.6b: Rare vegetation community known from one location near Corea Plains.

Estimated extent:¹ Pre-clearing 1000 ha; Remnant 2021 1000 ha

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: A rare ecosystem and subject to pasture degradation.

Regional ecosystem 10.4.7

Description: *Casuarina cristata* woodland. *Diplachne fusca* and *Eulalia aurea* dominated ground layer. Occurs on gilgai microrelief plains of Cainozoic lake deposits. Cracking clay soils. Palustrine. (BVG1M: 25a).

Short description: *Casuarina cristata* woodland on Cainozoic lake beds

Supplementary descriptions: Lorimer (1998), Ql4a; Thompson and Turpin (in prep), M9

Subregions: 2, 3

Protected areas:

Extent in reserves: No representation

Wetland: Palustrine

Special values: 10.4.7: Wetlands associated with gilgais.

Comments: 10.4.7: Mainly subregion 2, in Lake Galilee area. This ecosystem is subject to clearing for pasture development. There is potential for *Parthenium* invasion on the heavy clay soils.

Estimated extent:¹ Pre-clearing 1000 ha; Remnant 2021 1000 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.4.8

Description: Mixed perennial tussock grassland including combinations of the *Astrebula* spp., *Iseilema vaginiflorum*, *Dichanthium fecundum*, *Dichanthium sericeum* and *Bothriochloa ewartiana* with many species of other grasses and forbs. Species dominance varies widely with seasonal conditions. Occurs on clay plains. Not a Wetland. (BVG1M: 30b).

Vegetation communities in this regional ecosystem include:

10.4.8a: [RE not in use]²: This community is now mapped as 10.4.8. *Dichanthium sericeum* and/or *Astrebula* spp. Dominate the sparse ground layer. Occurs on undulating downs and plains on Cainozoic lake deposits in subregion 1. Not a Wetland. (BVG1M: 30b).

10.4.8x1: [RE not in use]²: This vegetation community is now mapped as 10.4.8. *Brachyachne convergens*, *Iseilema vaginiflorum* and/or *Aristida latifolia* frequently dominate the very sparse to mid-dense grassland. Occurs on flat to gently undulating clay plain. Contains Palustrine. (BVG1M: 30b).

10.4.8x2: [RE not in use]²: This vegetation community is now mapped as 10.4.8. *Dichanthium fecundum* frequently dominates with *Eulalia aurea*, *Iseilema vaginiflorum* and *Brachyachne tenella* codominant, and *Aristida latifolia* present, the very sparse to sparse ground layer. Occurs on flat to gently undulating clay plain. Not a Wetland. (BVG1M: 30b).

10.4.8x3: [RE not in use]²: This vegetation community is now mapped as 10.4.8. *Dactyloctenium radulans* and/or *Streptoglossa adscendens* usually dominate the very sparse grassland. Occurs on the edges of flat to gently undulating plain with shallow clayey soil with stone cover. Not a Wetland. (BVG1M: 30b).

Short description: Mixed perennial tussock grassland on clay plains

Supplementary descriptions: Gunn et al. (1967), Av, My; Lorimer (1998), Q15; Thompson and Turpin (in prep), G2

Subregions: 1, 3, (4), (4.5), (2), (4.6)

Protected areas: Moorrinya NP, Forest Den NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.4.8x1: Associated with gilgais that may support ephemeral wetlands.

Comments: 10.4.8: Detailed survey required to confirm condition. 10.4.8a is now mapped as part of this RE. Occurs in the vicinity of Natal Downs, Victoria Downs and Broadleigh Downs. Some areas subject to periodic high total grazing pressures. Subject to *Parthenium* invasion. Overgrazing can alter the pasture composition to annuals resulting in severely reduced productivity. Species dominance fluctuates depending on various factors including effects of grazing and seasonal conditions.

Estimated extent:¹ Pre-clearing 199000 ha; Remnant 2021 186000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.4.9

Description: [RE not in use]²: This regional ecosystem is now mapped as 11.11.10. *Corymbia terminalis* woodland. *Carissa lanceolata* dominated shrub layer. *Heteropogon contortus* and *Enneapogon polyphyllus* tussock grass ground layer. Occurs on clay soils with dolomite. Not a Wetland. (BVG1M: 18a).

Short description: *Corymbia terminalis* woodland on clay soils with dolomite.

Supplementary descriptions: Thompson and Turpin (in prep), C32

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.4.9: A rare regional ecosystem only known from Broadleigh Downs and Natal Downs in subregion 3.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: A rare regional ecosystem subject to degradation and buffel grass invasion.

Regional ecosystem 10.5.1

Description: *Eucalyptus similis* and/or *Corymbia brachycarpa* woodland usually with a mix of other species including *Corymbia dallachiana*, *Corymbia setosa* and *Brachychiton populneus*. A secondary tree layer is usually present and includes *Acacia sericophylla*, *Corymbia setosa*, *Eucalyptus similis* and *Corymbia brachycarpa*. Variable shrub layer dominated by *Acacia* spp., *Petalostigma* spp. and *Carissa lanceolata*. Ground layer dominated by *Triodia pungens* and perennial tussock grasses. Occurs on Tertiary and Quaternary sand sheets in subregions 2 and 4. Not a Wetland. (BVG1M: 17c).

Vegetation communities in this regional ecosystem include:

10.5.1a: *Eucalyptus similis* woodland, commonly with *Corymbia brachycarpa*. and occasionally with *Corymbia setosa*, *Corymbia dallachiana*, *Brachychiton populneus* and/or *Eucalyptus drepanophylla*. A secondary tree layer commonly occurs, including canopy species and *Acacia sericophylla*. A variable shrub layer usually occurs. *Triodia pungens* dominated ground layer with tussock grasses. Occurs on Tertiary and Quaternary sand sheets in subregions 2 and 4. Not a Wetland. (BVG1M: 17c).

10.5.1b: *Corymbia brachycarpa* woodland occasionally with *Corymbia dallachiana*, *Acacia shirleyi*, *Eucalyptus whitei* and *Eucalyptus similis*. A secondary tree layer usually occurs including *Acacia sericophylla*, *Petalostigma pubescens* and *Corymbia setosa*. A variable shrub layer occurs. The ground layer is usually dominated by *Triodia pungens* and perennial tussock grasses. Occurs on Tertiary and Quaternary sand sheets in subregions 2 and 4. Not a Wetland. (BVG1M: 18a).

10.5.1c: [RE not in use]²: This vegetation community is now mapped as 10.5.1a. *Eucalyptus similis* and *Corymbia setosa* dominate the very sparse canopy. The shrub layer is usually very sparse with *Lithomyrtus microphylla*, *Carissa lanceolata*, *Gastrolobium grandiflorum* and *Jacksonia ramosissima* often present. *Triodia pungens* usually dominates the very sparse to sparse ground layer. Occurs on sandplains. Not a Wetland. (BVG1M: 17c).

10.5.1d: [RE not in use]²: This vegetation community is now mapped as 10.5.8. *Corymbia setosa* dominates the very sparse canopy. *Melaleuca nervosa*, *Acacia sericophylla*, *A. elachantha*, *Bursaria incana*, *Grevillea glauca* and *Petalostigma pubescens* are frequently present in the very sparse low trees layer or occur as scattered small trees. *Acacia* spp. and *Carissa lanceolata* dominate the very sparse shrub layer. The ground layer is usually dominated by *Triodia pungens*. Occurs on sandplains. Not a Wetland. (BVG1M: 17c).

10.5.1e: [RE not in use]²: This vegetation community is now mapped as 10.5.10. *Eucalyptus chartaboma* and *Corymbia leichhardtii* dominate the very sparse canopy. *Corymbia brachycarpa* and *E. similis* are often present in the canopy. *Corymbia setosa* and *Grevillea glauca* are commonly occurring small trees. *Acacia* spp., *Jacksonia ramosissima* and *Comesperma pallidum* are frequently present in the small shrub layer. *Triodia* spp., *Sarga plumosum* and *Alloternopsis semialata* occur as dominant graminoids. Occurs on sandplains. Not a Wetland. (BVG1M: 14b).

10.5.1f: [RE not in use]²: This vegetation community is now mapped as 10.5.4e. *Eucalyptus tetradonta* dominates the very sparse canopy. *Acacia* spp., *Dodonaea dodecandra*, *Denhamia cunninghamii* and *Petalostigma pubescens* are present in the shrub layer. *Grewia savannicola* is a commonly occurring small shrub. *Triodia mitchellii* usually dominates the very sparse to sparse ground layer. Occurs on sandplains. Not a Wetland. (BVG1M: 14a).

10.5.1g: [RE not in use]²: This vegetation community is now mapped as 10.7.7a. *Eucalyptus ammophila* dominates the very sparse canopy. *Melaleuca tamariscina* and *Grevillea pteridifolia* are frequently present small trees. *Thryptomene parviflora* is commonly present in the very sparse shrub layer. *Triodia* spp. Dominate the very sparse to sparse ground layer. Occurs on sand plains. Not a Wetland. (BVG1M: 18a).

10.5.1h: [RE not in use]²: This vegetation community is now mapped as 10.5.4g. *Eucalyptus drepanophylla* and *E. mediocris* dominate the very sparse canopy. *E. similis* is often present in the canopy. *Persoonia falcata*, *Petalostigma pubescens*, *Acacia longispicata* and *Petalostigma banksii* are usually present in the shrub layer. *Hakea lorea* occurs occasionally. *Triodia pungens* dominates the sparse ground layer. Occurs on sandplains. Not a Wetland. (BVG1M: 18b).

10.5.1i: [RE not in use]²: This vegetation community is now mapped as 10.5.10. *Lysicarpus angustifolius* dominates the very sparse canopy. *Petalostigma banksii* is common in the very sparse tall shrub layer. *Lithomyrtus obtusa* and *Jacksonia ramosissima* are usually present in the very sparse small shrub layer. The very sparse ground layer is frequently dominated *Triodia pungens*. Occurs on sandplains. Not a Wetland. (BVG1M: 18a).

10.5.1j: [RE not in use]²: This vegetation community is now mapped as 10.5.10. *Eucalyptus chartaboma* and *E. tetradonta* dominate the very sparse canopy. *Alphitonia excelsa* is an occasionally occurring small tree. A very sparse small shrub layer sometimes occurs or there may be scattered small shrubs. *Dodonaea dodecandra* and *Petalostigma banksii* are often present. *Triodia pungens* and *Sarga plumosum* dominate the sparse ground layer. Occurs on sandplains. Not a Wetland. (BVG1M: 14b).

10.5.1x1: *Acacia shirleyi* open forest, often with *Corymbia brachycarpa* and *Eucalyptus similis*. Sparse ground layer of *Triodia pungens* and *Thyridolepis xerophila*. Occurs on deep red earths on Tertiary sandplain. Not a Wetland. (BVG1M: 24a).

Short description:	Eucalyptus similis and/or Corymbia brachycarpa woodland on sand plains
Supplementary descriptions:	Bean (1992), Pr; Cumming (1992), Cb; Gunn et al. (1967), Rn, Ti; Lorimer (1998), Ms1, Ms2, Ms3; Perry et al. (1964), Br, E, Wa; Turner et al. (1978), E6, E7; Turner et al. (1993)
Subregions:	2, 4, (1), (3), (11.3), (11.7), (11.26), (11.15), (9.5), (9.4), (4.5), (11.24)
Protected areas:	White Mountains NP, White Mountains RR, Cudmore RR, Cudmore (Limited Depth) NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.5.1: High faunal values as extensive areas have historically been only lightly grazed, due to presence of poison heartleaf <i>Gastrolobium grandiflorum</i> and absence of surface water. Habitat for <i>Calytrix microcoma</i> and <i>Solanum crassitomentosum</i> , endemic to the Desert Uplands. Habitat for <i>Goodenia splendida</i> known from ten Herbarium records. <i>Eucalyptus tetrodonta</i> and <i>E. chartaboma</i> occur at or near their most southerly known limits in this ecosystem. Poorly known species <i>Polygala difficilis</i> occurs in this ecosystem. <i>Hakea purpurea</i> occurs near its most northerly known location in this ecosystem. The ecosystem is an intake area for Great Artesian Basin aquifers. 10.5.1f: Most southerly known location of <i>E. tetrodonta</i> near White Mountains National Park.
Comments:	10.5.1: Intake for Great Artesian Basin aquifers. The soils in this ecosystem have exceptionally low nutrient status and excessive permeability. The loose sandy top soils are highly susceptible to erosion. Extensive areas have historically been only lightly grazed due to presence of poison heartleaf <i>Gastrolobium grandiflorum</i> and absence of surface water. Cover of pasture species is often very sparse and usually confined to beneath the tree canopy. Potential threats include wildfires, inappropriate burning regimes and clearing for pasture development. 10.5.1d: Widespread ecosystem occurring mostly in subregion 2. 10.5.1e: Restricted vegetation community only found near White Mountains National Park. 10.5.1f: Very restricted vegetation community. 10.5.1g: <i>Eucalyptus ammophila</i> has close affinity to <i>Eucalyptus exserta</i> but <i>E. exserta</i> mostly occurs as scattered trees on skeletal soils. Rare vegetation community only found in the north of subregion 2. Usually occurs as small patches and consequently may occur as unmappable areas elsewhere in a mosaic with 10.5.1a especially near Jericho where a number of botanical specimens have been collected. 10.5.1h: Rare vegetation community only known from the White Mountains National Park. 10.5.1i: Rare vegetation community only known from the White Mountains National Park. Usually occurs in small patches in a mosaic with other map units. Patches often too small to map at 1:100 000 scale mapping. 10.5.1j: Rare vegetation community only known from the White Mountains National Park.
Estimated extent: ¹	Pre-clearing 869000 ha; Remnant 2021 843000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.5.2

Description: *Corymbia dallachiana* and/or *Corymbia plena* woodland, commonly with *Corymbia terminalis*. A prominent secondary tree layer of *Callitris glaucophylla* occasionally occurs. A variable shrub layer usually occurs. *Triodia pungens* dominated ground layer with tussock grasses. Occurs on sandy soils throughout the bioregion. Not a Wetland. (BVG1M: 18a).

Vegetation communities in this regional ecosystem include:

10.5.2a: *Corymbia dallachiana* and/or *Corymbia plena* woodland, commonly with *Corymbia terminalis*. A secondary tree layer usually occurs, including canopy species and *Acacia sericophylla*. A variable shrub layer usually occurs. *Triodia pungens* dominated ground layer with tussock grasses. Occurs on sandy soils throughout the bioregion. Not a Wetland. (BVG1M: 18a).

10.5.2ax1: [RE not in use]²: This regional ecosystem is now mapped as 10.5.11. *Eucalyptus whitei* usually dominates the very sparse tree layer with *Corymbia terminalis* often co-dominant and *C. dallachiana* commonly present. *Carissa lanceolata* occurs as scattered shrubs or is present in a very sparse shrub layer. The very sparse ground layer is usually dominated by *Aristida pruinosa*, *Heteropogon contortus* or *Enneapogon polyphyllus*. Occurs on sandy traces on the Prairie/Torrens Creeks Cainozoic clay plains. Not a Wetland. (BVG1M: 18a).

10.5.2b: [RE not in use]²: This vegetation community is now mapped as 10.5.2a. *Corymbia dallachiana* dominates the very sparse canopy. *Melaleuca nervosa* is present in the canopy and the shrub layer. There are usually scattered plants or clumps of *Acacia cowleana* present in a weakly defined very sparse small tree layer and in a very sparse shrub layer. *Aristida ingrata* dominates the very sparse ground layer with *Heteropogon contortus* and *Chrysopogon fallax* usually present and sometimes subdominant. Occurs sandplains (north western). Not a Wetland. (BVG1M: 18a).

10.5.2c: *Corymbia plena* woodland, commonly with *Callitris glaucophylla*. Prominent secondary tree layer of *Callitris glaucophylla*. A variable shrub layer usually occurs. Tussock grass ground layer, occasionally with *Triodia* spp. And *Fimbristylis dichotoma*. Occurs on patches of deeper sand. Not a Wetland. (BVG1M: 18a).

Short description:	<i>Corymbia dallachiana</i> and/or <i>Corymbia plena</i> woodland on sandy soils
Supplementary descriptions:	Gunn et al. (1967), De, Le, Mo; Turner et al. (1978), E1, E2, E6, E7; Turner et al. (1993), E5
Subregions:	2, 4, 1, (3), (4.4), (11.26), (4.5), (11.7), (11.3), (4.6), (11.8)
Protected areas:	Moorrinya NP, Cudmore (Limited Depth) NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.5.2: Potential habitat for NCA listed species: <i>Ptilotus brachyanthus</i> . 10.5.2a: Population of <i>Acacia tetragonophylla</i> known from only one record in the Desert Uplands is from this vegetation community near Barcaldine.
Comments:	10.5.2: Threatening processes include clearing for pasture development. 10.5.2a: Widespread common ecosystem. 10.5.2b: Restricted ecosystem known from north western parts of subregion 2. 10.5.2c: Rare community.
Estimated extent: ¹	Pre-clearing 182000 ha; Remnant 2021 157000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.5.4

Description: *Eucalyptus crebra* or *Eucalyptus drepanophylla* woodland, commonly with *Corymbia brachycarpa* and *Corymbia dallachiana*. *Corymbia plena* and *Corymbia leichhardtii* occasionally occur in the canopy. A secondary tree layer, dominated by canopy species and *Acacia* spp., usually occurs. A variable shrub layer usually occurs. Tussock grass ground layer, commonly with *Triodia pungens*. Occurs on sandy red and yellow earths on sand plains. Not a Wetland. (BVG1M: 18b).

Vegetation communities in this regional ecosystem include:

10.5.4a: [RE not in use]²: This vegetation community is now mapped as 10.5.4. *Eucalyptus crebra* usually dominates often with *Corymbia dallachiana* in the very sparse canopy. *Denhamia cunninghamii* and *Carissa lanceolata* are often in the very sparse shrub layer. *Chrysopogon fallax* and *Heteropogon contortus* often dominate the very sparse to sparse ground layer. Occurs on sandplain. Not a Wetland. (BVG1M: 18b).

10.5.4b: [RE not in use]²: This vegetation community is now mapped as 10.5.4. *Eucalyptus crebra* dominates the very sparse canopy. *Corymbia dallachiana* is commonly present in the canopy. *Petalostigma pubescens*, *Bursaria incana* and *Grevillea parallela* are frequently present as small trees. *Denhamia cunninghamii* is present in the very sparse shrub layer. *Chrysopogon fallax*, *Eriachne mucronata*, *Heteropogon contortus* and *Themeda triandra* are commonly present and sometimes dominate the very sparse to mid-dense ground layer. Occurs on sandplain. Not a Wetland. (BVG1M: 18b).

10.5.4c: [RE not in use]²: This vegetation community is now mapped as 10.5.4. *Eucalyptus crebra* and *Corymbia brachycarpa* dominate the very sparse canopy. *Corymbia dallachiana* is occasionally present in the canopy. *Grevillea parallela*, *Petalostigma pubescens* and *Acacia sericophylla* frequently occur as scattered small trees. *Acacia* spp. And *Jacksonia ramosissima* dominate the very sparse to mid-dense shrub layer. *Grewia savannicola* is often present. *Triodia pungens* usually dominates the very sparse to dense ground layer. *Eriachne mucronata*, *Themeda triandra* and *Aristida* spp. Sometimes occur as dominants or codominants. Occurs on sandplain. Not a Wetland. (BVG1M: 17c).

10.5.4d: *Eucalyptus crebra* woodland, commonly with *Corymbia plena* and *Corymbia dallachiana*. A secondary tree layer usually occurs, including canopy species and *Acacia excelsa*. A variable shrub layer usually occurs. Tussock grass ground layer including *Heteropogon contortus*, *Chrysopogon fallax* and *Aristida* spp. Occurs on sandy plains. Not a Wetland. (BVG1M: 18b).

10.5.4e: *Eucalyptus crebra* and *Corymbia brachycarpa* woodland, commonly with *Corymbia dallachiana* and/or *Corymbia leichhardtii*. A secondary tree layer commonly occurs, including *Corymbia brachycarpa*, *Acacia excelsa*, *Petalostigma pubescens* and *Brachychiton populneus*. A variable shrub layer usually occurs. Ground layer of *Triodia pungens* and tussock grasses including *Themeda triandra*, *Chrysopogon fallax* and *Aristida* spp. Occurs on sandy red and yellow earths. Not a Wetland. (BVG1M: 18b).

10.5.4f: *Eucalyptus drepanophylla* woodland, commonly with *Corymbia dallachiana*. Variable secondary tree and shrub layers usually occur. Tussock grass ground layer, commonly with *Triodia pungens*. Occurs on sandy red and yellow earths. Not a Wetland. (BVG1M: 18b).

10.5.4g: *Eucalyptus drepanophylla* woodland, commonly with *Corymbia brachycarpa* and/or *Corymbia leichhardtii*. Variable secondary tree and shrub layers usually occur. Ground layer of *Triodia pungens* and/or tussock grasses. Occurs on sandy red and yellow earths. Not a Wetland. (BVG1M: 18b).

Short description:	<i>Eucalyptus crebra</i> or <i>Eucalyptus drepanophylla</i> woodland on sand plains
Supplementary descriptions:	Cumming (1992), Ca; Gunn et al. (1967), D, Du; Perry et al. (1964), E25;
Subregions:	3, 2, 9.5, (9.4), (4), (11.3), (11.7), (4.6)
Protected areas:	White Mountains NP, White Mountains RR, Cudmore (Limited Depth) NP, Cudmore RR, Great Basalt Wall NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.5.4: <i>Eucalyptus tetradonta</i> occurs in this ecosystem near its southern limit in Queensland.
Comments:	10.5.4: Mainly subregion 3. Threatening processes include clearing for pasture development. Further survey is required to verify original and current extent of the component ecosystems of this regional ecosystem. 10.5.4a: Widespread common ecosystem. 10.5.4b: Two major areas in the north east of subregions 2 and 3. 10.5.4c: Only known from northern parts of the Desert Uplands.
Estimated extent: ¹	Pre-clearing 138000 ha; Remnant 2021 113000 ha
VM class:	Least concern
Biodiversity status:	No concern at present

Regional ecosystem 10.5.5

Description: Eucalyptus melanophloia woodland, commonly with Corymbia dallachiana. Corymbia plena, Corymbia terminalis, Eucalyptus brownii and/or Eucalyptus populnea occasionally occur in the canopy. There is usually a second tree layer which includes Eucalyptus melanophloia, Acacia sericophylla, Acacia excelsa and Brachychiton populneus. A variable shrub layer is usually present. The ground layer is dominated by perennial tussock grasses and/or Triodia pungens. Occurs on plains in the south and east of the bioregion. Not a Wetland. (BVG1M: 17b).

Vegetation communities in this regional ecosystem include:

10.5.5a: Eucalyptus melanophloia woodland occasionally with Corymbia dallachiana. Eucalyptus populnea and Corymbia plena may also occur. The shrub layer is usually dominated by Carissa lanceolata and Acacia spp. and commonly includes Petalostigma pubescens and Denhamia cunninghamii. The ground layer is dominated by Triodia pungens and/or tussock grasses including Aristida spp., Bothriochloa ewartiana, Eriachne mucronata, Eragrostis lacunaria and Heteropogon contortus. Occurs on broad sandy outwash plains. Not a Wetland. (BVG1M: 17b).

10.5.5b: Acacia sericophylla dominates the very sparse canopy. Triodia pungens, Amphipogon caricinus and Aristida holathera var. holathera are dominant or codominant graminoids in the very sparse to sparse ground layer. Occurs on sandplain. Not a Wetland. (BVG1M: 27a).

10.5.5c: [RE not in use]²: This vegetation community is now mapped as 10.5.2c. Callitris glaucophylla dominates the sparse sub-canopy. Corymbia plena occurs as emergent tree. Petalostigma pubescens and Olearia subspicata are usually present as scattered shrubs. Triodia pungens dominates the very sparse ground layer. Occurs on sandplain. Not a Wetland. (BVG1M: 20a).

10.5.5d: Eucalyptus melanophloia and Corymbia dallachiana woodland with a second tree layer of Corymbia setosa, Acacia sericophylla and Eucalyptus melanophloia. Mixed tussock grass ground layer, commonly with Triodia pungens. Occurs on plains of old alluvial fan material in the east of the bioregion. Not a Wetland. (BVG1M: 17b).

10.5.5x1: Eucalyptus cambageana woodland, occasionally with Acacia harpophylla, Eucalyptus thozetiana and Acacia argyrodendron. A second tree layer dominated by canopy species usually occurs. The shrub layer is variable. The ground layer is dominated by tussock grasses. Occurs on sandy clay soils. Not a Wetland. (BVG1M: 26a).

10.5.5x2: Eucalyptus brownii woodland. A secondary tree layer dominated by Eucalyptus brownii or Eremophila mitchellii usually occurs. Variable shrub layer dominated by Carissa lanceolata. Tussock grass ground layer. Occurs on loamy red and yellow earths. Not a Wetland. (BVG1M: 17b).

Short description:	Eucalyptus melanophloia woodland on plains
Supplementary descriptions:	Gunn et al. (1967), Le, Mo, Rn, Ti; Lorimer (1998), Ms6, Ms7; Turner et al. (1978), B1, E3, E4; Turner et al. (1993), E1, E2, E3, E5, R1
Subregions:	2, 3, 4, (11.26), (1), (11.7), (11.3), (9.4), (11.15), (4.4), (4.5), (11.8), (9.5)
Protected areas:	Cudmore (Limited Depth) NP, Cudmore RR, White Mountains NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	10.5.5: Habitat for near threatened plant species Cerbera dumicola.
Comments:	10.5.5: Threatening processes include clearing for pasture development. 10.5.5a: Widespread common ecosystem. 10.5.5b: Widespread vegetation community usually occurring in small patches often unmappable at 1:000 000 scale. 10.5.5c: Uncommon ecosystem known from near Lennox and Glenstar. 10.5.5d: Threatening processes include clearing for pasture development. 10.5.5x1: Soils usually have a lateritic influence and includes clay soils derived from deep weathering. Threatening processes include clearing for pasture development. 10.5.5x2: Threatening processes include clearing for pasture development.
Estimated extent:¹	Pre-clearing 1416000 ha; Remnant 2021 1063000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.5.6

Description: [RE not in use]²: History of this RE is unknown. Shrublands on shallow earths, with species including *Melaleuca tamariscina* and *Acacia leptostachya*. Shallow earths. Not a Wetland. (BVG1M: 22b).

Short description: Shrublands on shallow earths, with species including *Melaleuca tamariscina* and *Acacia leptostachya*

Supplementary descriptions: Bean (1992), Mt; Gunn et al. (1967), Ti; Turner et al. (1978), E6; Turner et al. (1993), E4

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values: 10.5.6: Habitat for rare and threatened flora species including *Leptosema* sp. (Burra Range F.D. Hockings 30).

Comments:

Estimated extent:¹

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.5.7

Description: Mixed low open woodland, including combinations of the species: *Grevillea striata*, *Atalaya hemiglauc*, *Acacia excelsa*, *Lysiphyllum carronii*, *Flindersia maculosa*, *Alectryon oleifolius* and *Acacia cambagei*. Variable shrub layer dominated by *Eremophila mitchellii* and *Carissa lanceolata*. Tussock grass dominated ground layer, occasionally with *Fimbristylis dichotoma* and *Triodia pungens*. Occurs on sandsheets overlying clay, mostly adjacent to the Mitchell Grass Downs bioregion. Not a Wetland. (BVG1M: 27c).

Vegetation communities in this regional ecosystem include:

10.5.7a: [RE not in use]²: This vegetation community is now mapped as 10.5.7. *Grevillea striata*, *Grevillea parallela* and *Acacia excelsa* usually dominate the very sparse canopy. *Grevillea parallela*, *Acacia sericophylla* and *A. excelsa* are often codominants in the canopy. *Owenia acidula* and *Melaleuca nervosa* are often present. *Eremophila deserti*, *Carissa lanceolata*, *Pittosporum angustifolium* and *Psydrax oleifolia* are often present as scattered shrubs or in the very sparse shrub layer. *Triodia pungens* usually dominates the very sparse ground layer. *Eriachne mucronata* is occasionally dominant. Occurs on relict sandplains. Not a Wetland. (BVG1M: 27c).

10.5.7ax1: Variable sparse herbland including: *Dactyloctenium radulans*, *Portulaca* spp., *Sclerolaena* spp., *Aristida* spp., *Sporobolus actinocladus* *Enneapogon polyphyllus* and *Salsola australis*. Emergent trees and shrubs, including *Atalaya hemiglauc*, *Acacia* spp. and *Eremophila* spp., commonly occur. This community contains substantial bare areas and cover and dominance varies with seasonal conditions. Occurs on saline discharge areas adjacent to lateritic surfaces. Not a Wetland. (BVG1M: 27c).

10.5.7b: [RE not in use]²: This vegetation community is now mapped as 10.5.7. *Corymbia terminalis* open woodland. *Corymbia terminalis* dominates the very sparse canopy. *Eremophila mitchellii* dominates the very sparse low tree layer. *Carissa lanceolata* dominates the very sparse shrub layer. *Eriachne mucronata* and *Tripogon loliiformis* can be dominants in the very sparse ground layer. Occurs on relict sandplains. Not a Wetland. (BVG1M: 18a).

10.5.7c: [RE not in use]²: This vegetation community is now mapped as 11.5.3. *Acacia excelsa* and *A. salicina* dominate the very sparse canopy. *Lysiphyllum carronii*, *Ventilago viminalis* and *Atalaya hemiglauc* are frequently present. *Carissa lanceolata* is present as scattered shrubs. *Bothriochloa ewartiana* can dominate the ground layer. Occurs on relict sandplains. Not a Wetland. (BVG1M: 27a).

10.5.7x2: *Acacia cambagei* low woodland to woodland. There is commonly a secondary tree layer dominated *Acacia cambagei*, *Eremophila mitchellii* and *Atalaya hemiglauc*. Variable shrub layer dominated by *Eremophila mitchellii*. Tussock grass ground layer. Occurs on finer-textured red soils. Not a Wetland. (BVG1M: 26a).

10.5.7x3: *Acacia harpophylla* woodland, occasionally with *Acacia argyrodendron* and *Eucalyptus brownii*. A secondary tree layer of *Acacia harpophylla* and *Eremophila mitchellii* commonly occurs. Shrub layer of *Carissa lanceolata* and *Eremophila mitchellii*. Tussock grass ground layer. Occurs on sandy clay soils. Not a Wetland. (BVG1M: 25a).

10.5.7x4: Mixed low open forest including *Acacia cambagei*, *Flindersia maculosa*, *Ventilago viminalis*, *Acacia harpophylla* and *Atalaya hemiglauc*. *Acacia argyrodendron*, *Lysiphyllum carronii* and *Eucalyptus brownii* may also be present in the canopy. A second mixed tree layer of canopy species with *Heliodendron basalticum*, *Geijera parviflora* and *Eremophila mitchellii* is usually present. A variable shrub layer usually occurs. The ground layer is a mix of forbs and tussock grasses. Occurs on shallow red sandy earths. Not a Wetland. (BVG1M: 27c).

10.5.7x5: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Atalaya hemiglauc* low open woodland often with *Acacia excelsa*, *Flindersia maculosa* and/or *Acacia cambagei*. Very sparse mixed ground layer of mostly short annual species. Occurs on hard setting soils derived from outwash of Tertiary plateaus. Not a Wetland. (BVG1M: 27c).

10.5.7x6: *Acacia argyrodendron* woodland, occasionally with *Atalaya hemiglauc*. Secondary tree layer of *Acacia argyrodendron*, occasionally with *Eremophila mitchellii*. A variable shrub layer dominated by *Acacia argyrodendron* usually occurs. Ground layer of tussock grasses and forbs. Occurs on reddish fine textured soils derived from deep weathering. Not a Wetland. (BVG1M: 27c).

Short description: Mixed low open woodland on sandy soils near clay plains

Supplementary descriptions: Turner et al. (1993), A2, E6, G4, G5, S1

Subregions: 1, 2, 4, (3), (4.5), (4.6), (4.4), (9.5), (11.7), (11.26), (9.4)

Protected areas: Moorrinya NP, Forest Den NP, Cudmore (Limited Depth) NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.5.7: Potential habitat for NCA listed species: *Ptilotus brachyanthus*, *Solanum adoxum*.
10.5.7x5: Potential habitat for NCA listed species: *Solanum adoxum*.

Comments:	<p>10.5.7: Related regional ecosystems occur in the Mitchell Grass Downs bioregion. Threatening processes include clearing for pasture development, soil erosion, and possible dry land salinity. Generally scalded with little organic matter; moderate degradation - condition requires monitoring.</p> <p>10.5.7a: Uncommon vegetation community only known from the west of the Desert Uplands.</p> <p>10.5.7ax1: Occurs mainly in the west of the bioregion between the plateau escarpment and clay plains of the Mitchell Grass Downs with isolated occurrences through the rest of the bioregion.</p> <p>10.5.7b: Restricted vegetation community known from north east of Muttaborra.</p> <p>10.5.7c: Rare vegetation community only found in the east as an outlier.</p> <p>10.5.7x2: Threatening processes include clearing for pasture development, soil erosion, and possible dry land salinity. Generally scalded with little organic matter; moderate degradation - condition requires monitoring.</p> <p>10.5.7x4: Threatening processes include clearing for pasture development, soil erosion, and possible dry land salinity.</p> <p>10.5.7x5: Related regional ecosystems occur in the Mitchell Grass Downs bioregion. Generally scalded with low biomass and little organic matter in soil.</p> <p>10.5.7x6: Threatening processes include clearing for pasture development, soil erosion, and possible dry land salinity.</p>
Estimated extent: ¹	Pre-clearing 297000 ha; Remnant 2021 154000 ha
VM class:	Least concern
Biodiversity status:	Of concern
Biodiversity status notes:	Under review

Regional ecosystem 10.5.8

Description: *Corymbia setosa* low open woodland to low woodland, occasionally with *Acacia sericophylla*, *Melaleuca nervosa* and *Grevillea pteridifolia*. Shrub layer is variable in density and species composition depending on fire history. Temporarily dominant species include *Acacia* spp., *Petalostigma pubescens*, *Calytrix microcoma* and *Melaleuca nervosa*. *Triodia pungens* dominated ground layer, with tussock grasses. Occurs on pale sandy soils. Not a Wetland. (BVG1M: 18a).

Vegetation communities in this regional ecosystem include:

10.5.8a: [RE not in use]²: This vegetation community is now mapped as 10.5.8. *Corymbia setosa* dominate the very sparse canopy. *Melaleuca nervosa* and *Grevillea pteridifolia* are usually present but occasionally either can be codominants in the canopy. *Comesperma pallidum* and *Jacksonia ramosissima* are often present as scattered shrubs. *Triodia pungens* usually dominates the very sparse ground layer. Occurs on pale sandy soils. Not a Wetland. (BVG1M: 18a).

10.5.8b: [RE not in use]²: This vegetation community is now mapped as 10.5.8. *Melaleuca nervosa* dominates the very sparse canopy. *Corymbia setosa* is frequently present in the canopy. *Acacia* spp. are often present as scattered shrubs. *Triodia pungens* is often present and sometimes dominates the very sparse to sparse ground layer. Occurs on sandplain. Not a Wetland. (BVG1M: 21a).

Short description: *Corymbia setosa* low open woodland to low woodland with variable shrub layer

Supplementary descriptions:

Subregions: 2, 4, (3), (1), (11.7)

Protected areas: White Mountains NP, White Mountains RR

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 10.5.8: The density and floristics of this community are extremely variable over time and depend on fire history. At some stages of the fire cycle the shrub layer can be more prominent than the tree layer. Threatened by inappropriate fire regimes.

10.5.8a: *Grevillea juncifolia* replaces *G. pteridifolia* as a dominant canopy species in some areas to the west of Lake Galilee. Widespread vegetation community usually occurring in small patches.

10.5.8b: Uncommon vegetation community and usually occurs in small patches.

Estimated extent:¹ Pre-clearing 63000 ha; Remnant 2021 61000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.5.9

Description: *Eucalyptus quadricostata* and *Corymbia brachycarpa* and/or *Corymbia leichhardtii* woodland to open forest and *Corymbia brachycarpa* open forest. A secondary tree layer usually occurs and is composed largely of canopy species. A variable shrub layer usually occurs. Tussock grass ground layer, commonly with *Triodia bitextura*. Occurs on red sandy soils on plateau surfaces in the White Mountains area mostly above 500m altitude. Not a Wetland. (BVG1M: 18a).

Vegetation communities in this regional ecosystem include:

10.5.9a: [RE not in use]²: This vegetation community is now mapped as 10.5.9. *Eucalyptus quadricostata* usually with *Corymbia brachycarpa* and *C. leichhardtii* dominate the very sparse canopy. *Corymbia brachycarpa* and *C. leichhardtii* are usually present and occasionally codominant in the canopy. *Acacia longispicata*, *E. quadricostata*, *Alphitonia excelsa*, *Petalostigma* spp. And *Persoonia falcata* are usually present and sometimes dominant in the very sparse shrub layer. *Chrysopogon fallax*, *Triodia bitextura*, *Themeda triandra* and *Cymbopogon bombycinus* are frequently present and sometimes dominant graminoids in the sparse to dense ground layer. Occurs on sandy plateau. Not a Wetland. (BVG1M: 18a).

10.5.9b: [RE not in use]²: This vegetation community is now mapped as 10.5.9. *Eucalyptus quadricostata* and *Corymbia erythrophloia* dominate the very sparse canopy. *C. dallachiana* is occasionally present in the canopy. *Bursaria incana* often occurs as scattered small trees. *Carissa lanceolata*, *Denhamia cunninghamii* and *Grewia savannicola* are commonly present in the very sparse shrub layer. *Bothriochloa ewartiana*, *Heteropogon contortus* and *Triodia pungens* are frequently present and sometimes dominant graminoids in the very sparse to sparse ground layer. Occurs on sandy plateau. Not a Wetland. (BVG1M: 18a).

10.5.9c: *Eucalyptus quadricostata* and *Corymbia brachycarpa* woodland to open forest. A secondary tree layer is usually present and is composed of canopy species with *Acacia* spp., *Bursaria incana* and *Lysicarpus angustifolius*. A variable shrub layer usually occurs. Tussock grass ground layer, commonly with *Triodia bitextura*. Occurs on red sandy soils on plateau surfaces in the White Mountains area mostly above 500m altitude. Not a Wetland. (BVG1M: 18a).

10.5.9d: *Eucalyptus quadricostata* and *Corymbia leichhardtii* woodland to open forest. A secondary tree layer dominated by *Corymbia setosa* and *Eucalyptus quadricostata* is commonly present. A variable shrub layer usually occurs. Tussock grass ground layer, commonly with *Triodia bitextura*. Occurs on red sandy soils on plateau surfaces in the White Mountains area mostly above 500m altitude. Not a Wetland. (BVG1M: 18a).

Short description: *Eucalyptus quadricostata* and *Corymbia brachycarpa* and/or *Corymbia leichhardtii* woodland on sandy plateaus

Supplementary descriptions:

Subregions: 2

Protected areas: White Mountains NP

Extent in reserves: High

Wetland: Not a Wetland

Special values:

Comments: 10.5.9: Occurs near the White Mountains. Threatened by inappropriate fire regimes and grazing pressure.
10.5.9a: A rare vegetation community only found in the far north of subregion 2.
10.5.9b: Rare vegetation community only known from the White Mountains National Park or nearby.
10.5.9c: Occurs near the White Mountains. Threatened by inappropriate fire regimes and grazing pressure.
10.5.9d: Occurs near the White Mountains. Threatened by inappropriate fire regimes and grazing pressure.

Estimated extent:¹ Pre-clearing 2000 ha; Remnant 2021 2000 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.5.10

Description: *Corymbia leichhardtii* woodland, commonly with *Corymbia brachycarpa*. *Eucalyptus chartaboma*, *Eucalyptus shirleyi*, *Lysicarpus angustifolius* and *Callitris glaucophylla* all occasionally occur in the canopy. A secondary tree layer, composed mostly of canopy species, is usually present. A variable shrub layer usually occurs. Tussock grass ground layer, commonly with *Triodia pungens*. Occurs on flat to gently sloping terrain usually on perimeter of sandplain plateaus often with shallow duplex soils. Not a Wetland. (BVG1M: 18a).

Vegetation communities in this regional ecosystem include:

10.5.10x1: *Corymbia lamprophylla* low woodland with second tree layer of *C. lamprophylla* and *Lysicarpus angustifolius*. Prominent shrub layer including *Acacia leptostachya*, *Calytrix microcoma*, *Jacksonia rhadinoclona*, *Grevillea sessilis* and *Labichea rupestris*. Ground layer dominated by *Triodia pungens*. Occurs on small red sand plateaus adjoining dissected sandstone ranges. Not a Wetland. (BVG1M: 18a).

Short description: *Corymbia leichhardtii* woodland on sand plains

Supplementary descriptions:

Subregions: 2, 4, (1), (11.15), (9.5), (9.4), (3), (11.26)

Protected areas: White Mountains NP, Cudmore (Limited Depth) NP, White Mountains RR, Cudmore RR

Extent in reserves: Medium

Wetland: Not a Wetland

Special values: 10.5.10: Habitat for near threatened plant species *Acacia spania*.

Comments: 10.5.10: Widespread. Threatened by inappropriate fire regimes.
10.5.10x1: Only known from White Mountains NP.

Estimated extent:¹ Pre-clearing 46000 ha; Remnant 2021 42000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.5.11

Description: *Eucalyptus whitei* woodland, occasionally with *Corymbia dallachiana*, *Corymbia terminalis* and *Corymbia plena*. A secondary tree layer including *Eucalyptus whitei*, *Acacia sericophylla* and *Grevillea parallela*. A variable shrub layer usually occurs and *Carissa lanceolata* is the most common species. Tussock grass ground layer, commonly with *Triodia pungens*. Occurs on sandy soils in the west of the bioregion. Not a Wetland. (BVG1M: 17c).

Vegetation communities in this regional ecosystem include:

10.5.11a: [RE not in use]²: This vegetation community is now mapped as 10.5.11. *Eucalyptus whitei* woodland, occasionally with *Corymbia dallachiana*, *Corymbia plena* and *Corymbia terminalis*. Mixed shrub layer usually dominated by *Carissa lanceolata*. Mixed ground layer of tussock grasses and *Triodia pungens*. Occurs on sandplain with red soil. Not a Wetland. (BVG1M: 17c).

10.5.11b: [RE not in use]²: This vegetation community is now mapped as 10.5.5a. *Eucalyptus melanophloia* dominates the very sparse tree layer on sandplain with red soil. *Eucalyptus melanophloia* dominates the very sparse canopy. *Corymbia dallachiana* and *C. plena* occur as scattered trees in the canopy. There are usually scattered *E. melanophloia* in a very sparse small tree layer. *Bursaria incana* occasionally occurs in a weakly defined sparse tall shrub layer. *Acacia* spp. are usually present in an occasionally occurring very sparse small shrub layer. *Triodia pungens* dominates the sparse ground layer. Occurs on red sand plateaus. Not a Wetland. (BVG1M: 17b).

10.5.11c: [RE not in use]²: This vegetation community is now mapped as 10.5.11. *Eucalyptus whitei* dominates the very sparse canopy. *Petalostigma pubescens* can occasionally form a very sparse small tree layer with *Acacia sericophylla* present. *Carissa lanceolata* and *Acacia melleodora* are commonly present in a very sparse shrub layer. *Triodia pungens* and *Aristida* spp. Dominate the very sparse to sparse ground layer. Occurs on beige sandy soil on sandplain. Not a Wetland. (BVG1M: 17c).

Short description: *Eucalyptus whitei* woodland on sandy soils

Supplementary descriptions:

Subregions: 1, 2, (4.6), (4), (4.5)

Protected areas: Moorrinya NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 10.5.11b: The leaf morphology of *Eucalyptus melanophloia* is at its closest similarity to *E. whitei* in this regional ecosystem. Occurs on the higher tablelands mostly above about 300m elevation on the eastern side of the Alice Tableland.
10.5.11c: Only known from the northern parts of subregion 2.

Estimated extent:¹ Pre-clearing 504000 ha; Remnant 2021 461000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.5.12

Description: Eucalyptus populnea woodland, commonly with Corymbia dallachiana. Corymbia plena, Corymbia plena, Corymbia terminalis, Atalaya hemiglaucula and Eucalyptus melanophloia occasionally occur in the canopy. A secondary tree layer is usually present and commonly contains Acacia excelsa, Acacia sericophylla and Eucalyptus populnea. A variable shrub layer dominated by Eremophila mitchellii is usually present. Ground layer of Triodia pungens and tussock grasses. Occurs widely on sandy soils in the south of the bioregion. Not a Wetland. (BVG1M: 17a).

Short description: Eucalyptus populnea open woodland on sand plains

Supplementary descriptions:

Subregions: 4, (4.4), (2), (11.26), (4.5), (11.15), (11.8), (11.7)

Protected areas: Cudmore RR, Cudmore (Limited Depth) NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.5.12: Potential habitat for NCA listed species: Cerbera dumicola.

Comments: 10.5.12: Threatened by inappropriate fire regimes. Naturalised species associated with this regional ecosystem include *Cenchrus ciliaris, which may dominate the ground layer.

Estimated extent:¹ Pre-clearing 237000 ha; Remnant 2021 139000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.1

Description: Eucalyptus whitei and/or Corymbia dallachiana low open woodland to woodland, occasionally with Corymbia terminalis. A secondary tree layer, dominated by canopy species, commonly occurs. A variable shrub layer usually occurs, including Carissa lanceolata, Acacia spp., Denhamia cunninghamii, Senna artemisioides and Eucalyptus whitei. The ground layer is dominated Triodia pungens and tussock grasses. Occurs on shallow soils with silcrete or ferricrete hardpan. Not a Wetland. (BVG1M: 17c).

Vegetation communities in this regional ecosystem include:

10.7.1a: Eucalyptus whitei low open woodland to woodland, occasionally with Corymbia dallachiana and Acacia sericophylla. A secondary tree layer, dominated by Eucalyptus whitei, commonly occurs. A variable shrub layer, dominated by Carissa lanceolata and Acacia tenuissima, usually occurs. The ground layer is dominated Triodia pungens and tussock grasses. Occurs on shallow soils with silcrete or ferricrete hardpan. Not a Wetland. (BVG1M: 17c).

10.7.1b: Corymbia dallachiana open woodland, commonly with Eucalyptus whitei and Corymbia terminalis. A variable secondary tree layer commonly occurs, including Acacia sericophylla, Grevillea parallela, Hakea lorea and Petalostigma pubescens. A variable shrub layer usually occurs. Tussock grass ground layer, commonly with Triodia pungens. Occurs on shallow soils with silcrete or ferricrete hardpan. Not a Wetland. (BVG1M: 19d).

10.7.1bx1: [RE not in use]²: This vegetation community is now mapped as 10.7.1a. Acacia acradenia dominates the sparse shrub layer. Occurs on undulating terrain on silcrete. Not a Wetland. (BVG1M: 31b).

10.7.1c: [RE not in use]²: This vegetation community is now mapped as 10.7.13x1. Triodia pungens dominates the sparse ground layer. Acacia spp. occur as scattered emergent shrubs. Occurs on silcrete. Not a Wetland. (BVG1M: 33b).

10.7.1d: [RE not in use]²: This vegetation community is now mapped as 10.7.10. Corymbia setosa dominates the very sparse canopy. Acacia spp. are usually present in a very sparse tall shrub layer. Acacia tenuissima and Jacksonia ramosissima are frequently present in the very sparse small shrub layer. Triodia pungens dominates the sparse ground layer. Occurs on Tertiary silcretes. Not a Wetland. (BVG1M: 12a).

10.7.1e: [RE not in use]²: This vegetation community is now mapped as 10.7.4a. Eucalyptus persiensis dominates the very sparse canopy. Triodia pungens dominates the sparse ground layer. Occurs on low stony rises on silcrete. Not a Wetland. (BVG1M: 19d).

10.7.1f: Mostly bare rock occasionally with scattered emergent shrubs, trees or graminoids on undulating terrain on silcrete. Occurs mostly on the perimeters of silcrete plains. Not a Wetland. (BVG1M: 31b).

10.7.1x1: Corymbia blakei low open woodland. A second tree layer of Corymbia blakei may occur. Acacia umbellata sparse shrub layer. Ground layer of Triodia pungens. Occurs on lateritised plateaus and Mesa tops in Subregion 2. Not a Wetland. (BVG1M: 19d).

Short description:	Eucalyptus whitei and Corymbia dallachiana low open woodland to woodland on shallow soils with hardpan
Supplementary descriptions:	Perry et al. (1964), Wa; Turner et al. (1993), E2
Subregions:	1, 2, (4.5), (4), (4.6), (3), (11.3)
Protected areas:	Moorrinya NP, Forest Den NP
Extent in reserves:	Low
Wetland:	Not a Wetland
Special values:	
Comments:	<p>10.7.1: Mainly subregion 1. The soils are shallow with low water holding capacity and low fertility. The topsoil's are susceptible to compaction and sheet erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes.</p> <p>10.7.1b: Uncommon vegetation community requiring further botanical survey.</p> <p>10.7.1d: Rare vegetation community requiring further survey.</p> <p>10.7.1e: Restricted distribution in central part of subregion 1. Further survey required for comprehensive floristic description.</p> <p>10.7.1x1: Occurs in the southern half of Subregion 2. Mostly good condition due to low grazing potential.</p>
Estimated extent: ¹	Pre-clearing 294000 ha; Remnant 2021 287000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.7.2

Description: [RE not in use]²: Refer to vegetation communities for new mapping. *Eucalyptus persistens* or *Corymbia dallachiana* or *E. socialis* subsp. *Eucentrica* low open woodland of usually with open hummock grassland understorey of *Triodia* spp. Or open grassland of *Triodia pungens* and/or *Eriachne mucronata* or *Amphipogon carcinus*. Occurs on gently sloping terrain with shallow to skeletal soils usually near margins of lateritised plateaus above scarps. Not a Wetland. (BVG1M: 19d).

Vegetation communities in this regional ecosystem include:

10.7.2a: [RE not in use]²: This vegetation community is now mapped as 10.7.4a. *Eucalyptus persistens* dominates the very sparse tree layer. *Melaleuca tamariscina* is occasionally present as scattered small trees. *Triodia pungens* usually dominates the very sparse to sparse ground layer. Occurs on ferricrete above scarps. Not a Wetland. (BVG1M: 19d).

10.7.2b: [RE not in use]²: This vegetation community is now mapped as 10.7.13x1. *Triodia pungens* and/or *Eriachne mucronata* or *Eriachne ciliata* dominate the very sparse to sparse ground layer. *Corymbia dallachiana* or sometimes *C. lamprophylla* or *Eucalyptus whitei* occasionally occur as emergent trees and *Acacia tenuissima*, *A. laccata*, and *A. cowleana* are the most commonly occurring emergent shrubs. *Triodia pungens* with or without *Eriachne mucronata* or *Amphipogon sericeus* dominate the sparse ground layer. Occurs on ferricrete above scarps. Not a Wetland. (BVG1M: 33b).

10.7.2c: [RE not in use]²: This vegetation community is now mapped as 10.7.1b. *Corymbia dallachiana* dominates the very sparse canopy. *Acacia sericophylla* is occasionally present as scattered trees. *Triodia pungens* usually dominates the very sparse to mid-dense ground layer. Occurs on ferricrete above scarps. Not a Wetland. (BVG1M: 12a).

10.7.2d: [RE not in use]²: This vegetation community is now mapped as 10.7.4a. *Eucalyptus persistens* dominates the very sparse canopy. *Eremophila mitchellii* usually occurs as scattered small trees. *Carissa lanceolata* dominates very sparse shrub layer. *Chrysopogon fallax* frequently dominates the very sparse to sparse ground layer. Occurs on laterite. Not a Wetland. (BVG1M: 19d).

10.7.2e: [RE not in use]²: This vegetation community is now mapped as 10.7.4b. *Eucalyptus socialis* subsp. *Eucentrica* dominates the sparse canopy. *E. persistens* is occasionally present in the canopy. *Acacia decora*, *Eremophila deserti*, and *Dodonaea lanceolata* are present as scattered shrubs. *Triodia longiceps* dominates the sparse ground layer. Occurs near margins of lateritised tertiary plateaus. Not a Wetland. (BVG1M: 19d).

Short description: *Eucalyptus persistens* or *Corymbia dallachiana* low open woodland or *Triodia pungens* hummock grassland on ferricrete above scarps

Supplementary descriptions: Bean (1992), Ep; Lorimer (1998), Ms5; Thompson and Turpin (in prep), E22a, C2a, E22, E26, G12; Turner et al. (1993), E2

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values: 10.7.2: *Polygala longifolia* occurs at its most southerly known location in this ecosystem.
10.7.2e: *Eucalyptus socialis* subsp. *eucentrica* most easterly outlier population occurs in this ecosystem. The subspecies is a common species in central Australia, some hundreds of kilometres to the west, occurring in Northern Territory, South Australia and Western Australia.

Comments: 10.7.2: The soils are shallow with low water holding capacity and low fertility. The topsoils are susceptible to compaction and sheet erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes.

10.7.2a: Widespread and common ecosystem in eastern parts of the Desert Uplands.

10.7.2d: 10.7.2d has tussock grasses dominant in the ground layer whereas map unit 10.7.2a has *Triodia pungens* dominant.

10.7.2e: Very rare vegetation community.

Estimated extent:¹

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.3

Description: *Acacia shirleyi* and/or *Acacia catenulata* open forest, occasionally with *Acacia microcybe*. A secondary tree layer, dominated by canopy species, is commonly present. A variable shrub layer is usually present. The ground layer is dominated by tussock grasses and/or *Triodia pungens*. Occurs on lateritic surfaces throughout the bioregion. Not a Wetland. (BVG1M: 24a).

Vegetation communities in this regional ecosystem include:

10.7.3a: *Acacia catenulata* open forest, commonly with *Acacia shirleyi*. A variable secondary tree layer, dominated by *Acacia catenulata* and *Eremophila mitchellii*, is commonly present. A variable shrub layer is usually present. The ground layer is dominated by tussock grasses and/or *Triodia pungens*. Occurs on laterite. Not a Wetland. (BVG1M: 24a).

10.7.3b: *Acacia shirleyi* open forest, commonly with *Eucalyptus exilipes*, *Corymbia leichhardtii*, *Eucalyptus crebra*, *Eucalyptus thozetiana* and *Acacia catenulata*. A secondary tree layer, dominated by canopy species, is commonly present. A variable shrub layer is usually present. The ground layer is dominated by tussock grasses and/or *Triodia pungens*. Occurs on laterite. Not a Wetland. (BVG1M: 24a).

10.7.3c: [RE not in use]²: This vegetation community is now mapped as 10.7.9. *Corymbia lamprophylla* and/or *C. leichhardtii* dominate the sparse canopy. *Jacksonia ramosissima*, *Lithomyrtus microphylla*, *Grevillea decora*, *Hemigenia cuneifolia*, *Persoonia falcata* and *Petalostigma banksii* are frequently present in the very sparse to sparse shrub layer. *Triodia* spp. And *Schizachyrium fragile* dominate the very sparse to sparse ground layer. Mostly found on the margins of sandplains near ranges, above scarps with skeletal soils usually on ferricrete at the margins of Tertiary plateaus. Not a Wetland. (BVG1M: 12a).

10.7.3d: [RE not in use]²: This vegetation community is now mapped as 10.7.3b. *Acacia shirleyi* dominates the sparse tree layer. *Corymbia leichhardtii* is usually present and in the north so is *Eucalyptus exilipes*. *Alphitonia excelsa* is often present as scattered small tree. *Cleistochloa subjuncea*, *Aristida caput-medusae*, *Eragrostis spartinoides*, *Schizachyrium fragile* and *Thyridolepis xerophila* are frequently present and occasionally dominant or codominant. Occurs on laterite. Not a Wetland. (BVG1M: 24a).

10.7.3e: *Acacia microcybe* low open woodland. Tussock grass ground layer with forbs. Occurs on ferricrete on the margins of low plateaus. Not a Wetland. (BVG1M: 24a).

10.7.3ex1: [RE not in use]²: This vegetation community is now mapped as 10.7.3e. *Acacia microcybe* dominates the sparse small tree layer. The shrub layer and the ground layer have scattered plants. Occurs on undulating terrain on silcrete. Not a Wetland. (BVG1M: 24a).

10.7.3f: [RE not in use]²: This vegetation community is now mapped as 10.7.3b. *Corymbia blakei* dominates the very sparse low tree layer. *Acacia shirleyi* is sometimes present as a codominant in the canopy. Scattered shrubs are sometimes present. *Triodia pungens* is usually present and frequently dominant in the very sparse ground layer. Occurs on skeletal soils on the exposed mottled zone on scarps at the margins of Tertiary plateaus. Not a Wetland. (BVG1M: 12a).

10.7.3g: [RE not in use]²: This vegetation community is now mapped as 10.7.3b. *Acacia burdekinsii* dominates the very sparse to sparse canopy. *A. shirleyi*, *Corymbia trachyphloia* and *Eucalyptus exilipes* are sometimes present in the canopy. There can be scattered shrubs including *Olearia xerophila* and *Synostemon elachophyllus*. *Triodia bitextura* dominates the very sparse ground layer. Occurs at the margins of plateaus. Not a Wetland. (BVG1M: 24a).

10.7.3x1: *Acacia argyrodendron* woodland with an *Eremophila mitchellii* dominated shrub layer. Occurs on lateritised surfaces usually at the margins of low plateaus. Not a Wetland. (BVG1M: 24a).

10.7.3x2: *Acacia cambagei* woodland with an *Eremophila mitchellii* dominated shrub layer. Occurs on lateritised surfaces usually at the margins of low plateaus. Not a Wetland. (BVG1M: 24a).

10.7.3x2a: *Acacia cambagei* woodland with an *Eremophila mitchellii* dominated shrub layer. Occurs on lateritised surfaces usually at the margins of low plateaus. Not a Wetland. (BVG1M: 24a).

10.7.3x2b: *Acacia cambagei* and *Eucalyptus thozetiana* woodland. Occurs on lateritised surfaces usually at the margins of low plateaus. Not a Wetland. (BVG1M: 24a).

Short description: *Acacia shirleyi* and/or *Acacia catenulata* open forest on laterite

Supplementary descriptions: Cumming (1992), Cd; Gunn et al. (1967), Du, Mo; Lorimer (1998), Ms; Perry et al. (1964), Br, E, Wa; Turner et al. (1978), E7, R1; Turner et al. (1993), E4, R1, R4

Subregions: 2, 4, 3, (4.5), (1), (11.24), (9.4), (11.26)

Protected areas: White Mountains NP, Cudmore (Limited Depth) NP, Cudmore RR, Moorrinya NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values:	<p>10.7.3: Habitat for vulnerable plant species, <i>Micromyrtus rotundifolia</i> and near threatened species including <i>Cerber dunicola</i>. Habita for <i>Solanum crassitomentosum</i> that is endemic to the White Mountains and occurs in this ecosystem. Recently discovered grass species <i>Dimorphochloa</i> sp. (Charters Towers E.J.Thompson+ CHA554) is known from only two locations in this ecosystem near Charters Towers. <i>Eucalyptus bakeri</i> occurs at its most northerly known location in this ecosystem in the White Mountains. A disjunct population of <i>Triodia triaristata</i> occurs in this ecosystem in the White Mountains.</p> <p>10.7.3f: <i>Indigofera haemata</i> has been recorded in this ecosystem and is of biogeographical significance with restricted distribution (known from only 14 herbarium records in Queensland).</p>
Comments:	<p>10.7.3: The dominant regional ecosystems, on skeletal soils, are of no concern at present. Types on red earths are restricted in extent and subject to clearing. The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. It is recommended that grazing be controlled by fencing out these areas. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover and the sensitivity to burning of species such as lancewood.</p> <p>10.7.3d: Ground flora is considerable more diverse than map unit 10.7.3b. In a typical profile, 10.7.3d occurs on gently sloping terrain on plateau margins while map unit 10.7.3b occurs on the slopes of jump-ups below. Uncommon vegetation community with greatest extent in the north of subregion 3.</p> <p>10.7.3e: Uncommon vegetation community.</p> <p>10.7.3f: Only known from western edges of the subregion 2, east to south-east of Aramac.</p> <p>10.7.3g: Rare vegetation community only found in the White Mountains National Park.</p>
Estimated extent: ¹	Pre-clearing 131000 ha; Remnant 2021 119000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.7.4

Description: *Eucalyptus persistens* low woodland, occasionally with *Acacia shirleyi*. A variable shrub layer commonly occurs. The ground layer is dominated by *Triodia pungens* and tussock grasses. Small areas of *Eucalyptus socialis* subsp. *eucentrica* shrubland with *Triodia longiceps* ground layer also occur in this regional ecosystem. Occurs on laterite. Not a Wetland. (BVG1M: 19d).

Vegetation communities in this regional ecosystem include:

10.7.4a: *Eucalyptus persistens* low woodland, occasionally with *Acacia shirleyi*. A variable shrub layer commonly occurs. The ground layer is dominated by *Triodia pungens* and tussock grasses. Occurs on laterite. Not a Wetland. (BVG1M: 19d).

10.7.4b: *Eucalyptus socialis* subsp. *eucentrica* tall shrubland. The ground layer is dominated by *Triodia longiceps*. Occurs on laterite. Not a Wetland. (BVG1M: 19d).

Short description: *Eucalyptus persistens* low woodland on laterite

Supplementary descriptions: Gunn et al. (1967), Ca, D, Mo, Ti;

Subregions: 2, 3, 1, (4), (11.3), (4.5), (9.4), (9.5)

Protected areas: White Mountains NP, Moorrinya NP, Great Basalt Wall NP

Extent in reserves: Medium

Wetland: Not a Wetland

Special values: 10.7.4: *Eucalyptus bakeri* occurs near its most northerly known location in this ecosystem in the White Mountains. A disjunct population of *Triodia triaristata* occurs in this ecosystem in the White Mountains.
10.7.4a: *Eucalyptus bakeri* occurs near its most northerly known location in this ecosystem in the White Mountains. A disjunct population of *Triodia triaristata* occurs in this ecosystem in the White Mountains.

Comments: 10.7.4: A rare variant occurs in the White Mountains NP where *Eucalyptus bakeri* dominates the canopy. Mainly subregion 2. Subject to scalding due to high total grazing pressures and high salinities; >70% moderately to severely degraded with loss of ground cover and top-soil; uncertain of original condition. The soils are shallow with low water holding capacity, low fertility and high salinity. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse.
10.7.4a: A rare variant occurs in the White Mountains NP where *Eucalyptus bakeri* dominates the canopy. Mainly subregion 2. Subject to scalding due to high total grazing pressures and high salinities; >70% moderately to severely degraded with loss of ground cover and top-soil; uncertain of original condition. The soils are shallow with low water holding capacity, low fertility and high salinity. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse.

Estimated extent:¹ Pre-clearing 70000 ha; Remnant 2021 65000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.5

Description: Eucalyptus thozetiana woodland to open forest, occasionally with Eucalyptus cambageana. A secondary tree layer dominated by Eucalyptus thozetiana is usually present. A shrub layer, dominated by Eremophila mitchellii, Eremophila deserti and Carissa lanceolata, is usually present. The ground layer is dominated by tussock grasses and/or Triodia pungens. Occurs on laterite. Not a Wetland. (BVG1M: 12a).

Short description: Eucalyptus thozetiana woodland on laterite

Supplementary descriptions: Gunn et al. (1967), Ti; Lorimer (1998), Qa5; Thompson and Turpin (in prep), E24

Subregions: 2, 4, (1), (3), (11.24), (4.5)

Protected areas: Cudmore (Limited Depth) NP, Cudmore RR, Moorrinya NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 10.7.5: Mainly subregion 2. Subject to scalding due to high total grazing pressures and high salinities with >70% moderately to severely degraded resulting in loss of ground cover and top-soil. The soils are shallow with low water holding capacity, low fertility and high salinity. The nature of the soils, often steep slopes and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse.

Estimated extent:¹ Pre-clearing 30000 ha; Remnant 2021 26000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Scalding, pasture degradation and high salinity.

Regional ecosystem 10.7.6

Description: *Acacia aneura* low woodland. A variable shrub layer is usually present. The ground layer is dominated by *Triodia pungens* and/or tussock grasses. Occurs on flat to gently undulating terrain with shallow to usually skeletal soils mostly near the margins of lateritised plateaus. Not a Wetland. (BVG1M: 23b).

Vegetation communities in this regional ecosystem include:

10.7.6x1: [RE not in use]²: This regional ecosystem is now mapped as 10.7.6. *Acacia aneura* dominates the very sparse tree layer. *Triodia pungens* dominates the very sparse ground layer. Occurs on undulating terrain with skeletal soil on silcrete. Not a Wetland. (BVG1M: 23b).

10.7.6x2: [RE not in use]²: This regional ecosystem is now mapped as 10.7.6. *Acacia aneura* dominates the very sparse tree layer. *Dactyloctenium radulans* dominates the sparse ground layer. Occurs on flat to gently undulating terrain with shallow to usually skeletal soils mostly near the margins of lateritised plateaus. Not a Wetland. (BVG1M: 23b).

10.7.6x3: [RE not in use]²: This regional ecosystem is now mapped as 10.7.6. *Acacia aneura* dominates the very sparse low tree layer. Occurs on flat to gently undulating terrain with shallow to usually skeletal soils mostly near the margins of lateritised plateaus. Not a Wetland. (BVG1M: 23b).

Short description: *Acacia aneura* low woodland on laterite

Supplementary descriptions:

Subregions: 1, 2, 4

Protected areas:

Extent in reserves: No representation

Wetland: Not a Wetland

Special values: 10.7.6: Includes the only known occurrence of mulga *Acacia aneura* on the eastern side of the Great Dividing Range.

Comments: 10.7.6: Occurs mostly along the western perimeter of the bioregion. Outliers occur at Moonoomoo and Kyong near Lake Buchanan. Threatening processes: inappropriate fire regimes which has led to increase woody biomass and cattle grazing. The soils are shallow with low water holding capacity, low fertility and high salinity. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse.

Estimated extent:¹ Pre-clearing 7000 ha; Remnant 2021 6000 ha

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.7.7

Description: *Melaleuca tamariscina* open shrubland to low woodland. A mix of other species also occur in the canopy including: *Corymbia setosa*, *Petalostigma banksii*, *Eucalyptus ammophila*, *Acacia leptostachya*, *Melaleuca uncinata* and *Calytrix microcoma*. The ground layer is dominated by *Triodia* spp. Small areas of *Eucalyptus bakeri* low open forest with *Cleistochloa subjuncea* and *Triodia* spp. also occur in this regional ecosystem. Occurs on stripped lateritic soils often on margins of Tertiary plateaus. Not a Wetland. (BVG1M: 21b).

Vegetation communities in this regional ecosystem include:

10.7.7a: *Melaleuca tamariscina* open shrubland to low woodland. A mix of other species also occur in the canopy including: *Corymbia setosa*, *Petalostigma banksii*, *Eucalyptus ammophila*, *Acacia leptostachya*, *Melaleuca uncinata* and *Calytrix microcoma*. The ground layer is dominated by *Triodia* spp. Occurs on stripped lateritic soils often on margins of Tertiary plateaus. Not a Wetland. (BVG1M: 21b).

10.7.7b: [RE not in use]²: This vegetation community is now mapped as 10.7.7a. *Melaleuca tamariscina* dominates the very sparse canopy. *Petalostigma banksii* is often present in the canopy and sometimes codominant and rarely dominant. *Triodia* spp. Usually dominate the very sparse to sparse ground layer. Occurs on stripped lateritic soils often on margins of Tertiary plateaus. Not a Wetland. (BVG1M: 21b).

10.7.7c: [RE not in use]²: This vegetation community is now mapped as 10.7.7a. *Acacia julifera* dominates the sparse mid-dense shrubby canopy. *Corymbia lamprophylla* or *C. leichhardtii* are occasionally present as emergent trees. *Triodia* spp. Or *Cleistochloa subjuncea* are often present and sometimes dominant in the very sparse to sparse ground layer. Occurs on ferricrete. Not a Wetland. (BVG1M: 24a).

10.7.7d: *Eucalyptus bakeri* open scrub to low open forest. The ground layer is dominated by *Cleistochloa subjuncea* and *Triodia* spp. Occurs on lateritised plateau margins. Not a Wetland. (BVG1M: 12a).

Short description: *Melaleuca tamariscina* open shrubland to low woodland on stripped lateritic soils

Supplementary descriptions:

Subregions: 2, 4, (1), (3), (11.26)

Protected areas: White Mountains NP, Cudmore RR, Cudmore (Limited Depth) NP, White Mountains RR

Extent in reserves: High

Wetland: Not a Wetland

Special values: 10.7.7: Habitat for vulnerable plant species *Micromyrtus rotundifolia*. *Hakea purpurea* occurs near its northern limit in Queensland in this ecosystem. Desert Uplands endemic species *Calytrix microcoma* occurs in this ecosystem.

Comments: 10.7.7: This regional ecosystem was listed in Sattler and Williams (1999) as 10.5.6. Threatening processes include inappropriate fire regimes, cattle grazing, clearing. The soils are shallow with low water holding capacity, low fertility and high salinity. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes, cattle grazing and clearing.
10.7.7b: An uncommon minor component of this regional ecosystem is dominated by *M. pallescens* which has similarities to sub-unit 2 of 10.7.8b. One of the main habitats for *Leptosema chapmanii*. Widespread vegetation community in subregion 2.
10.7.7c: Uncommon vegetation community found mostly in the north of subregion 2 and also some in the east of subregion 3. Sometimes occurs as small unmappable areas at 1:100 000 scale, for example in the White Mountains National Park.
10.7.7d: Rare vegetation community known from only a few locations in the Desert Uplands. Of biogeographical interest is the disjunct and most northerly known population of *Eucalyptus bakeri* which occurs in the White Mountains National Park.

Estimated extent:¹ Pre-clearing 36000 ha; Remnant 2021 35000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.8

Description: *Melaleuca pallescens* shrubland, commonly with *Melaleuca uncinata*, *Carissa lanceolata* and *Calytrix microcoma*. The ground layer is dominated by *Triodia* spp. and tussock grasses. Occurs on flat to gently undulating terrain on stripped sandplains with shallow to usually skeletal soils in the west. Not a Wetland. (BVG1M: 21b).

Vegetation communities in this regional ecosystem include:

10.7.8a: [RE not in use]²: This vegetation community is now mapped as 10.7.8. *Melaleuca nervosa* dominates the very sparse low tree layer. *Acacia tenuissima*, *Denhamia cunninghamii* and *Psydrax oleifolia* are present in the very sparse shrub layer. *Triodia pungens* dominates the very sparse ground layer. Occurs on ferricrete. Not a Wetland. (BVG1M: 21a).

10.7.8b: [RE not in use]²: This vegetation community is now mapped as 10.7.8. *Melaleuca pallescens* or *Acacia adsurgens* or *A. tenuissima* or *A. aprepta* the very sparse shrub layer on ferricrete (western). Different variants of this regional ecosystem are described below. *Melaleuca pallescens* open shrubland or *Acacia tenuissima* open shrubland on ferricrete or *Acacia aprepta* open shrubland or *Acacia adsurgens* open shrubland. *Acacia tenuissima* dominates the very sparse canopy. *Triodia pungens* dominates the very sparse ground layer. *Acacia aprepta* dominates the very sparse ground layer. *Triodia pungens* dominates the very sparse ground layer. *Acacia adsurgens* dominates the very sparse canopy. *Calytrix microcoma* sometimes dominates the shrub layer. *Triodia pungens* and *Amphipogon sericeus* dominate the very sparse ground layer. Occurs on flat to gently undulating terrain on stripped sandplains with shallow to usually skeletal soils in the west. Not a Wetland. (BVG1M: 21a).

Short description: *Melaleuca* spp. and/or *Acacia* spp. open shrubland on ferricrete (western)

Supplementary descriptions: Thompson and Turpin (in prep), M5a, M8c

Subregions: 1, (2)

Protected areas: Moorrinya NP, White Mountains NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 10.7.8: The soils are shallow with low water holding capacity, low fertility and high salinity. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes and cattle grazing.

10.7.8a: Uncommon vegetation community occurring mostly in southern parts of subregion 1.

10.7.8b: There are occasional occurrences of a similar ecosystem in eastern parts of the bioregion recorded in 10.7.7b.

Estimated extent:¹ Pre-clearing 12000 ha; Remnant 2021 12000 ha

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Under review

Regional ecosystem 10.7.9

Description: *Corymbia leichhardtii* and/or *Corymbia lamprophylla* and/or *Eucalyptus exilipes* woodland, occasionally with *Eucalyptus xanthoclada* and *Eucalyptus similis*. A variable mixed shrub layer usually occurs. The ground layer is dominated by *Triodia* spp. and tussock grasses. Occurs on flat to undulating terrain on the perimeter of sand plateau with shallow duplex soil on stripped part of Cainozoic sandplain. Not a Wetland. (BVG1M: 18a).

Short description: *Corymbia leichhardtii* and/or *Corymbia lamprophylla* and/or *Eucalyptus exilipes* woodland on the perimeter of sandy plateaus

Supplementary descriptions:

Subregions: 2, 11.3, 3, (4)

Protected areas: White Mountains NP, White Mountains RR

Extent in reserves: High

Wetland: Not a Wetland

Special values:

Comments: 10.7.9: Potential threat to this ecosystem is mainly from inappropriate fire regimes. The soils are shallow with low water holding capacity and low fertility. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is sparse.

Estimated extent:¹ Pre-clearing 18000 ha; Remnant 2021 18000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes: Under review

Regional ecosystem 10.7.10

Description: *Corymbia setosa* low open woodland to low woodland, occasionally with *Petalostigma* spp. Other species may be present in the canopy including: *Corymbia dallachiana*, *Corymbia blakei*, *Eucalyptus whitei*, *Acacia sericophylla*, *Melaleuca nervosa* and *Grevillea striata*. The shrub layer is extremely variable in density and species composition, depending on fire history. *Acacia* spp., particularly *Acacia acradenia* and *Acacia leptostachya*, usually predominate and at the peak of the cycle may briefly form the ecologically dominant layer. The ground layer is dominated by *Triodia pungens* and includes tussock grasses. Occurs on gently undulating terrain with shallow sandy soil on ferricrete on Tertiary plateaus. Not a Wetland. (BVG1M: 18a).

Vegetation communities in this regional ecosystem include:

10.7.10a: [RE not in use]²: This vegetation community is now mapped as 10.7.1a. *Eucalyptus whitei* dominates the very sparse tree layer. *Acacia sericophylla* is occasionally present as a scattered small tree. *Carissa lanceolata* and *Acacia tenuissima* are often present as scattered shrubs or in the very sparse shrub layer. *Triodia pungens* is present and often dominates the very sparse ground layer. Occurs on ferricrete. Not a Wetland. (BVG1M: 17c).

10.7.10b: [RE not in use]²: This vegetation community is now mapped as 10.7.10. *Corymbia setosa* dominates the very sparse low tree layer. *Petalostigma pubescens*, *Melaleuca nervosa*, *Persoonia falcata* and *Petalostigma banksii* are often present in the tall shrub layer. *Carissa lanceolata* and *Denhamia cunninghamii* are often present as scattered shrubs or in the very sparse small shrub layer. *Triodia pungens* usually dominates the very sparse to sparse ground layer. Occurs on ferricrete. Not a Wetland. (BVG1M: 12a).

10.7.10c: [RE not in use]²: This vegetation community is now mapped as 10.7.10. *Corymbia setosa* dominates the very sparse low tree layer. *Acacia acradenia* is usually present in the very sparse shrub layer. *Amphipogon sericeus* dominates the very sparse to sparse ground layer. Occurs on gravelly ferricrete slopes. Not a Wetland. (BVG1M: 12a).

Short description: *Corymbia setosa* low open woodland with variable shrub layer on ferricrete

Supplementary descriptions:

Subregions: 2, 1, (4)

Protected areas: White Mountains NP, Cudmore RR, Moorrinya NP

Extent in reserves: Medium

Wetland: Not a Wetland

Special values: 10.7.10: Potential habitat for NCA listed species: *Myriophyllum artesium*.

Comments: 10.7.10: In good condition. The soils are shallow with low water holding capacity and low fertility. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes and cattle grazing.

10.7.10a: Common vegetation community in subregion 1.

10.7.10b: Common vegetation community in northern parts of subregion 1.

10.7.10c: Rare vegetation community only found in the south of subregion 1.

Estimated extent:¹ Pre-clearing 13000 ha; Remnant 2021 13000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.11

Description: Eucalyptus melanophloia low open woodland. A shrub layer, dominated by Acacia spp., is usually present. Triodia pungens dominated ground layer with tussock grasses. Occurs on gently undulating terrain with shallow yellow earths on ferricrete. Not a Wetland. (BVG1M: 17b).

Vegetation communities in this regional ecosystem include:

10.7.11a: [RE not in use]²: This vegetation community is now mapped as 10.7.11. Eucalyptus melanophloia dominates the very sparse low tree layer. Corymbia dallachiana is often present in the canopy. Acacia sericophylla is present in the small tree layer. Acacia tenuissima is often present as scattered shrubs or in the very sparse shrub layer. Triodia pungens usually dominates the very sparse to mid-dense ground layer. Occurs on ferricrete. Not a Wetland. (BVG1M: 17b).

10.7.11b: [RE not in use]²: This vegetation community is now mapped as 10.5.7ax1. Austrochloris dichanthioides dominates the sparse ground layer. Eucalyptus melanophloia and Corymbia terminalis occur as emergent trees. Occurs on gently undulating terrain with shallow yellow earths on ferricrete. Not a Wetland. (BVG1M: 31b).

Short description: Eucalyptus melanophloia low open woodland on ferricrete

Supplementary descriptions:

Subregions: 2, 3, (4), (11.3), (1)

Protected areas: Cudmore (Limited Depth) NP, Cudmore RR

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 10.7.11: Widespread in eastern parts of the bioregion. The soils are shallow with low water holding capacity and low fertility. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes and cattle grazing.
10.7.11b: Occurs in mosaic with scalds. Rare regional ecosystem only known from near Dunrobin, north of Jericho.

Estimated extent:¹ Pre-clearing 104000 ha; Remnant 2021 86000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.12

Description: Eucalyptus drepanophylla or Eucalyptus crebra open woodland to woodland. A variable secondary tree layer is usually present. An Acacia spp. dominated shrub layer is usually present. The ground layer is dominated by Triodia pungens. Occurs on undulating terrain with shallow, often gravelly, yellow earths on lateritic surfaces. Not a Wetland. (BVG1M: 12a).

Vegetation communities in this regional ecosystem include:

10.7.12a: Eucalyptus drepanophylla open woodland to woodland, commonly with Corymbia leichhardtii. A variable secondary tree layer is usually present. An Acacia spp. dominated shrub layer is usually present. The ground layer is dominated by Triodia pungens. Occurs on lateritic surfaces. Not a Wetland. (BVG1M: 12a).

10.7.12b: Eucalyptus crebra woodland, commonly with Eucalyptus melanophloia. A secondary tree layer, including Corymbia setosa and Eucalyptus crebra is usually present. An Acacia spp. dominated shrub layer is usually present. The ground layer is dominated by Triodia pungens. Occurs on lateritic surfaces. Not a Wetland. (BVG1M: 12b).

Short description: Eucalyptus drepanophylla or Eucalyptus crebra woodland on laterite

Supplementary descriptions:

Subregions: 4, 2, 9.4, (3), (11.24), (11.26)

Protected areas: White Mountains NP, White Mountains RR, Cudmore (Limited Depth) NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values: 10.7.12: Hakea purpurea occurs near its most northerly known location in this habitat near Jericho.

Comments: 10.7.12: The soils are shallow with low water holding capacity and low fertility. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is sparse. Potential threats to this ecosystem are mainly from inappropriate fire regimes and cattle grazing.
10.7.12a: Occurs in parts of subregions 2 and 4.

Estimated extent:¹ Pre-clearing 33000 ha; Remnant 2021 30000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.7.13

Description: Ephemeral sparse ground layer with chenopods to bare ground with occasional emergent shrubs or small trees such as blackwood (*Acacia argyrodendron*) and /or false sandalwood (*Eremophila mitchellii*). *Sclerolaena* spp. and *Enchylaena tomentosa* usually dominate the very sparse small shrub layer. There are occasional emergent shrubs or small trees such as *Acacia argyrodendron* and/or *Eremophila mitchellii*. The ground layer is very sparse. Occurs on largely bare areas on stripped lateritic surfaces. Not a Wetland. (BVG1M: 31b).

Vegetation communities in this regional ecosystem include:

10.7.13x1: *Triodia pungens* hummock grassland. Emergent trees and shrubs commonly occur and include: *Corymbia dallachiana*, *Eucalyptus whitei*, *Eucalyptus persistens* and *Acacia* spp. Occurs on undulating terrain with skeletal soil on laterite. Not a Wetland. (BVG1M: 31b).

Short description: Ephemeral sparse tussock grassland ground below scarps

Supplementary descriptions: Thompson and Turpin (in prep), G10

Subregions: 1, 2, (3), (4), (4.5), (11.3)

Protected areas: Moorrinya NP, White Mountains NP

Extent in reserves: Low

Wetland: Not a Wetland

Special values:

Comments: 10.7.13: Rare ecosystem with restricted distribution on the western edge of the bioregion, east of Muttaborra. The soils are shallow with low water holding capacity and low fertility. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is sparse. Potential threat to this ecosystem is mainly from cattle and sheep grazing.

Estimated extent:¹ Pre-clearing 58000 ha; Remnant 2021 57000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.9.1

Description: [RE not in use]²: Refer to vegetation communities for new mapping. *Acacia argyrodendron* dominates the very sparse low tree layer or sparse chenopod dwarf open shrubland or very open grassland. Occurs on flat to undulating terrain. Mostly clay soils with stone cover or sometimes deep texture contrast soils overlying deeply weathered fine textured Cretaceous sediments. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.9.1a: [RE not in use]²: This vegetation community is now mapped as 10.4.1. *Acacia argyrodendron* dominates the very sparse canopy and including sometimes scattered small trees with *Eremophila mitchellii* present. The ground layer can have variable species composition but is usually very sparse with *Sporobolus actinocladus* as a codominant. *Dactyloctenium radulans* can be a dominant graminoid. Occurs on flat plains with cracking grey clay soil with partial gravel cover and gilgai. Not a Wetland. (BVG1M: 26a).

10.9.1b: [RE not in use]²: This vegetation community is now mapped as 10.5.7ax1. Chenopods dominate the canopy or it can be a bare scald. *Sclerolaena* spp. With *Dysphania rhadinostachya* usually dominate the very sparse ground layer (0.1-0.3m tall). *Brachyachne ciliaris* can be a codominant graminoid. Occurs on flat terrain with grey silty clay soil. Not a Wetland. (BVG1M: 31b).

10.9.1c: [RE not in use]²: This vegetation community is now mapped as 10.5.7x6. *Acacia argyrodendron* dominates the very sparse tree layer. *Eremophila mitchellii* dominates the very sparse tall shrub layer. There can be scattered small shrubs of *Sclerolaena* spp. And *Enchylaena tomentosa*. *Paspalidium caespitosum* and *Triopogon loliiformis* can be dominants in the very sparse to sparse ground layer. Other graminoids present are *Enneapogon polyphyllus*, *Enteropogon ramosus*, *Sporobolus caroli* and *S. scabridus*. Forbs present include *Solanum ellipticum*, *Salsola australis* and *Trianthema triquetra*. Occurs on undulating terrain with coarse gravel to rock cover on brown clay soil. Not a Wetland. (BVG1M: 26a).

10.9.1d: [RE not in use]²: This vegetation community is now mapped as 10.5.7ax1. *Sclerolaena tricuspidis* usually dominates the very sparse ground layer. *Enneapogon polyphyllus* can be a dominant graminoid. Occurs on undulating terrain with stony cover. Not a Wetland. (BVG1M: 27a).

10.9.1e: [RE not in use]²: This community is now mapped as 10.4.1. *Acacia argyrodendron* dominates the very sparse to sparse tree layer. *Eremophila mitchellii* can be present as scattered small trees. *Eremophila latrobei* and *Senna artemisioides* are occasionally occurring shrubs. *Enneapogon polyphyllus* and *Fimbristylis dichotoma* can be codominant graminoids in the very sparse ground layer. Occurs on flat terrain with brown sandy clay duplex soil. Not a Wetland. (BVG1M: 26a).

10.9.1f: [RE not in use]²: This vegetation community is now mapped as 10.4.8. The usually sparse ground layer has variable species composition and dominant graminoids include *Astrebla pectinata*, *Dactyloctenium radulans* and *Iseilema vaginiflorum*. Other commonly present graminoids include *Brachyachne convergens* and *Aristida latifolia*. Forbs commonly present include *Trianthema triquetra* and *Neptunia gracilis*. Occurs on flat plains with grey clay soil with partial stone cover. Not a Wetland. (BVG1M: 30b).

Short description: *Acacia argyrodendron* low open woodland or dwarf open shrubland of chenopods or scald on Cretaceous sediments

Supplementary descriptions: Thompson and Turpin (in prep)A10d, G3x; Turner et al. (1993), G5

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.9.1: Survey required to verify original and current extent. Restricted to southern part of bioregion. Subject to clearing for pasture development. Surface sealing/scalding widespread; grass cover largely removed/reduced over extensive areas due to stock grazing. Survey required to confirm condition. Prone to scalding. The soils are highly dispersible and susceptible to sheet and rill erosion. Bare soil tends crust readily after rain leading to reduced infiltration and increased runoff. Also, evaporation is greater from bare soil resulting in salt concentration at the surface. Potential threats to this ecosystem are mainly from tree clearing, high susceptibility to salinity, weed infestation particularly *Parthenium*, over grazing and soil erosion. It is recommended that grazing be restricted to very short periods after the wet-season. The native pasture under the tree canopy in this regional ecosystem tends to have reasonable nutritive value but low bulk.

10.9.1a: Restricted to east to north-east of Muttaborra.

10.9.1b: Restricted to north-east of Muttaborra.

10.9.1c: Restricted to the east to north-east of Muttaborra.

10.9.1e: Restricted to east to north-east of Muttaborra.

Estimated extent:¹

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Biodiversity loss in cleared areas and pasture degradation in most of the remainder.

Regional ecosystem 10.9.2

Description: [RE not in use]²: Refer to vegetation communities for new mapping. *Acacia cambagei* dominates the sparse low tree layer. Also *Eucalyptus thozetiana* with or without understorey of *Acacia cambagei* open woodland and open tussock grasslands on flat to undulating terrain with reddish brown soil. Occurs on gentle slopes with brown clay soils with or without stone cover formed on calcareous sandstones. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.9.2a: [RE not in use]²: This vegetation community is now partly mapped as 10.5.7x2 and partly mapped as 10.7.3x2b. *Acacia cambagei* dominates the very sparse low tree layer. Sometimes there is a very sparse sub-canopy dominated by *A. cambagei*. *Carissa lanceolata* usually dominates the very sparse shrub layer. *Eremophila mitchellii* and *Eremophila deserti* are present. *Enteropogon ramosus*, *Bothriochloa ewartiana* and *Eriochloa crebra* are often present and sometimes dominant in the very sparse to sparse ground layer. Occurs with mostly reddish brown clay soil on flat to undulating terrain. Not a Wetland. (BVG1M: 26a).

10.9.2ax1: [RE not in use]²: This regional ecosystem is now mapped as 10.4.5. *Acacia microcybe* dominates the very sparse low tree layer. Other trees present include *Flindersia maculosa* and *Eremophila mitchellii*.

Enneapogon polyphyllus and *Sclerolaena anisacanthoides* dominate the ground layer. Occurs on clay on gently undulating plains on Cretaceous sediments. Not a Wetland. (BVG1M: 26a).

10.9.2b: [RE not in use]²: This vegetation community is now partly mapped as 10.7.5 and partly mapped as 10.7.3x2b. *Eucalyptus thozetiana* dominates the sparse tree layer with *Acacia cambagei* in the understorey. *Eucalyptus thozetiana* dominates the usually very sparse canopy. *Acacia cambagei* dominates the sparse sub-canopy and *E. thozetiana* is usually present. *Carissa lanceolata* and *Eremophila deserti* dominate the very sparse shrub layer. *Paspalidium constrictum* and/or *P. caespitosum* dominate the weakly developed very sparse ground layer. Occurs on flat to gently undulating terrain with reddish brown clayey soil. Not a Wetland. (BVG1M: 26a).

10.9.2c: [RE not in use]²: This vegetation community is now partly mapped as 10.7.5 and partly mapped as 10.7.3x2b. *Eucalyptus thozetiana* dominates the very sparse canopy and the very sparse small tree layer. A scattered very sparse shrub layer is usually present with *Carissa lanceolata* commonly occurring and sometimes *Eremophila deserti* or *Eremophila mitchellii* dominant. *Sporobolus actinocladus* or *S. scabridus* usually dominate the very sparse ground layer. Usually found on flat to gently undulating terrain with reddish brown clay soil adjacent to pediments where map unit 10.7.5 occurs. Not a Wetland. (BVG1M: 12a).

10.9.2d: [RE not in use]²: This vegetation community is now mapped as 10.5.7ax1. *Bothriochloa ewartiana* or *Brachyachne convergens* dominate the usually sparse ground layer and *Sporobolus disjunctus* or *Enneapogon polyphyllus* are sometimes a codominant. Occurs on grey clays on flat to gently undulating terrain. Not a Wetland. (BVG1M: 31b).

10.9.2dx1: [RE not in use]²: This regional ecosystem is now mapped as 10.4.8. *Astrebula pectinata*, *Astrebula squarrosa* and *Iseilema vaginiflorum* usually dominate the very sparse ground layer. Occurs on flat to undulating clay plain. Not a Wetland. (BVG1M: 31b).

10.9.2dx2: [RE not in use]²: This regional ecosystem is now partly mapped as 10.5.7ax1 and partly mapped as 10.3.8. *Dactyloctenium radulans* dominates the very sparse ground layer. Occurs on undulating terrain with shallow clayey soil. Not a Wetland. (BVG1M: 31b).

10.9.2e: [RE not in use]²: This vegetation community is now partly mapped as 10.3.16a and partly mapped as 10.5.7ax1. *Triodia longiceps* dominates the sparse ground layer. *Sporobolus actinocladus* and *S. australasicus* are graminoids usually present. Occurs on gently sloping terrain with reddish brown sandy soil. Not a Wetland. (BVG1M: 33b).

10.9.2f: [RE not in use]²: This vegetation community is now mapped as 10.5.7ax1. Ephemeral grasses or herbs dominate the sparse ground layer. Variable species composition. RE is defunct. Not a Wetland. (BVG1M: 31b).

Short description: *Acacia cambagei* and/or *Eucalyptus thozetiana* low woodland to open woodland on calcareous sandstones

Supplementary descriptions: Gunn et al. (1967), U; Lorimer (1998), Mc2; Thompson and Turpin (in prep), A10dd, A13dd, E65dd

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:**Comments:**

10.9.2: Subject to clearing and dry land salinity. Moderately degraded; stock attracted to salty areas and grazing pressure increases to the detriment of the country. The soils are highly dispersible and susceptible to sheet and rill erosion. Bare soil tends crust readily after rain leading to reduced infiltration and increased runoff. Also, evaporation is greater from bare soil resulting in salt concentration at the surface. Potential threats to this ecosystem are mainly from tree clearing, high susceptibility to salinity, weed infestation particularly *Parthenium*, over grazing and soil erosion. It is recommended that grazing be restricted to very short periods after the wet-season. The native pasture under the tree canopy in this regional ecosystem tends to have reasonable nutritive value but low bulk.

10.9.2a: Uncommon vegetation community.

10.9.2b: At one site *Acacia harpophylla* was present in the subcanopy replacing *A. cambagei* possibly reflecting the association with some other ecosystems such as 10.9.3a. Uncommon and restricted vegetation community associated with 10.9.2a.

10.9.2c: Uncommon and restricted vegetation community associated with 10.9.2a.

10.9.2d: 10.9.2f is now mapped as part of this community. Uncommon and restricted vegetation community associated with 10.9.2a.

10.9.2e: Very rare and restricted vegetation community associated with map unit 10.9.2c.

Estimated extent:¹**VM class:**

Least concern

Biodiversity status: Of concern

Biodiversity status notes: Under review

Regional ecosystem 10.9.3

Description: [RE not in use]²: Refer to vegetation communities for new mapping. *Acacia harpophylla* or *Eucalyptus cambageana* dominate the very sparse to sparse tree layer with or without *Acacia harpophylla* understorey or open tussock grassland. Occurs on flat to undulating terrain with shallow clay soils overlying fine-grained Mesozoic sediments. Not a Wetland. (BVG1M: 25a).

Vegetation communities in this regional ecosystem include:

10.9.3a: [RE not in use]²: This vegetation community is now mapped as 10.5.5x1. *Eucalyptus cambageana* dominates the very sparse tree layer. *Acacia harpophylla* is usually present as scattered trees in a very sparse small tree layer. *Eremophila mitchellii* is usually present as scattered plants in a very sparse large shrub layer. *Carissa lanceolata* usually dominates the very sparse small shrub layer. *Capparis canescens* is occasionally present. *Enteropogon acicularis* or *E. ramosus* can be dominant graminoids in the very sparse ground layer. Occurs on sandy clay soils. Not a Wetland. (BVG1M: 25a).

10.9.3b: [RE not in use]²: This vegetation community is now partly mapped as 10.5.7x3 and partly mapped as 10.7.3x2b. *Acacia harpophylla* dominates the sparse tree layer. *Eremophila mitchellii* is usually present as scattered large shrubs to small trees. *Carissa lanceolata* usually dominates the very sparse shrub layer. *Enteropogon acicularis* and/or *Paspalidium caespitosum* usually dominate the very sparse to sparse ground layer. *Sporobolus actinocladus* can sometimes be a codominant. Occurs on sandy clay soils. Not a Wetland. (BVG1M: 25a).

10.9.3c: [RE not in use]²: This vegetation community is now mapped as 10.5.7ax1. *Tripogon loliiformis* and *Sporobolus actinocladus* are commonly present or sometimes dominant in the usually very sparse ground layer. Scattered trees and shrubs may be present and include *Acacia harpophylla*, *Eremophila mitchellii*, *Carissa lanceolata* and *Atalaya hemiglaucula*. Occurs on sandy clay soils. Not a Wetland. (BVG1M: 31b).

Short description: *Acacia harpophylla* and/or *Eucalyptus cambageana* open woodland to woodland on Mesozoic sediments

Supplementary descriptions: Turner et al. (1978), B1, B3; Thompson and Turpin (in prep), A11g, E65d

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.9.3: Rare (800ha) regional ecosystem with disjunct and scattered distribution. Outlier of regional ecosystems more typical of the Brigalow Belt South. Restricted to south of subregion. The soils are highly dispersible and susceptible to sheet and rill erosion. Bare soil tends crust readily after rain leading to reduced infiltration and increased runoff. Also, evaporation is greater from bare soil resulting in salt concentration at the surface. Potential threats to this ecosystem are mainly from tree clearing, high susceptibility to salinity, weed infestation particularly *Parthenium*, over grazing and soil erosion. It is recommended that grazing be restricted to very short periods after the wet-season. The native pasture under the tree canopy in this regional ecosystem tends to have reasonable nutritive value but low bulk.

10.9.3a: Rare vegetation community known from southern parts of subregion 2.

10.9.3b: Rare vegetation community requiring detailed botanical survey. Often occurs as a narrow strip or as small patches associated with *Eucalyptus thozetiana* on gently sloping pediments. These areas are usually too small to be mapped at 1:100000 scale mapping.

10.9.3c: Rare vegetation community associated with map unit 10.9.3a. Further survey required for a comprehensive species composition for this ecosystem.

Estimated extent:¹

VM class: Least concern

Biodiversity status: Endangered

Biodiversity status notes: Under review

Regional ecosystem 10.9.5

Description: [RE not in use]²: Refer to vegetation communities for new mapping. *Eucalyptus melanophloia* dominates the very sparse tree layer on upper slopes of low rises and *Lysiphyllum carronii* low open woodland. Occurs on mid to lower slopes with shallow brown to red neutral or alkaline duplex soils formed on calcareous sandstones. Not a Wetland. (BVG1M: 17b).

Vegetation communities in this regional ecosystem include:

10.9.5a: [RE not in use]²: This vegetation community is now mapped as 10.5.11. *Eucalyptus melanophloia* dominates the very sparse tree layer. *Lysiphyllum carronii* and *Atalaya hemiglauc*a occur as scattered small trees. *Carissa lanceolata* is often dominate the very sparse shrub layer and *Hakea leucoptera* is usually present and sometimes dominant in a very sparse tall shrub layer. *Bothriochloa ewartiana* dominates the very sparse to sparse ground layer. Occurs on upper slopes of low rises with shallow brown to red neutral or alkaline duplex soils formed on calcareous sandstones. Not a Wetland. (BVG1M: 17b).

10.9.5ax1: [RE not in use]²: This regional ecosystem is now mapped as 10.5.11. *Eucalyptus whitei* dominates the very sparse tree layer. *Themeda triandra* and *Dichanthium sericeum* can dominate the ground layer. Occurs on gently undulating to undulating terrain with clay soil with or without shallow sandy cover. Not a Wetland. (BVG1M: 17b).

10.9.5b: [RE not in use]²: This vegetation community is now mapped as 10.5.7. *Lysiphyllum carronii* dominates the very sparse small tree layer. *Carissa lanceolata* is present as scattered shrubs or is dominant in a very sparse shrub layer. *Bothriochloa ewartiana* with *Sporobolus actinocladus* are usually present as codominants in the ground layer. Occurs on mid to lower slopes with shallow brown to red neutral or alkaline duplex soils formed on calcareous sandstones. Not a Wetland. (BVG1M: 27a).

Short description: *Eucalyptus melanophloia* woodland to open woodland or *Lysiphyllum carronii* low open woodland on calcareous sandstones

Supplementary descriptions: Gunn et al. (1967), U; Lorimer (1998), Mc1; Thompson and Turpin (in prep), E15Ax

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.9.5: Restricted to Ulcanbah area. Subject to pasture development, buffel grass invasion and infrastructure development. The soils are highly dispersible and susceptible to sheet and rill erosion. Bare soil tends crust readily after rain leading to reduced infiltration and increased runoff. Also, evaporation is greater from bare soil resulting in salt concentration at the surface. Potential threats to this ecosystem are mainly from tree clearing, high susceptibility to salinity, weed infestation particularly *Parthenium*, over grazing and soil erosion.

10.9.5a: Rare vegetation community only known from near Ulcanbah and found on upper slopes. There are small patches of *E. brownii* associated with 10.9.5a. Further survey of this *E. brownii* component is desirable.

10.9.5b: Rare ecosystem only known from near Ulcanbah.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: A rare ecosystem and subject to buffel invasion and property infrastructure development

Regional ecosystem 10.9.6

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7x2. *Acacia cambagei* dominates the very sparse to sparse small tree layer. *Carissa ovata* is usually present in the very sparse shrub layer. Occurs on flat to undulating terrain with cracking clay soils with sand cover overlying Cretaceous sediments. Not a Wetland. (BVG1M: 26a).

Vegetation communities in this regional ecosystem include:

10.9.6x1: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7x2. *A. cambagei* dominates the sparse to mid-dense tree layer. Occurs on gentle slopes with clayey soils derived from Mesozoic sediments. Not a Wetland. (BVG1M: 26a).

10.9.6x2: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7x2. *Acacia cambagei* dominates the very sparse small tree layer. The very sparse ground layer has variable species composition. Occurs on undulating terrain with shallow clayey soil usually with stone cover. Not a Wetland. (BVG1M: 26a).

Short description: *Acacia cambagei* low woodland to open woodland on Cretaceous sediments

Supplementary descriptions: Thompson and Turpin (in prep), A13j

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values: 10.9.6: Potential habitat for NCA listed species: *Solanum adoxum*.

Comments: 10.9.6: Areas mapped were previously classified as an outlier of the Mitchell Grass Downs (4.9.11). Restricted ecosystem located south of Barcaldine. The soils are highly dispersible and susceptible to sheet and rill erosion. Naturalised species associated with this regional ecosystem include *Cenchrus ciliaris*, which may dominate the ground layer. Potential threats to this ecosystem are mainly from tree clearing, high susceptibility to salinity, weed infestation, over grazing and soil erosion. It is recommended that grazing be restricted to very short periods after the wet-season. The native pasture under the tree canopy in this regional ecosystem tends to have reasonable nutritive value but low bulk.

Estimated extent:¹

VM class: Least concern

Biodiversity status: Of concern

Biodiversity status notes: Under review

Regional ecosystem 10.9.7

Description: [RE not in use]²: This regional ecosystem is now partly mapped as 10.10.2 and partly mapped as 10.4.5. *Melaleuca uncinata* dominates the very sparse shrub layer. *Melaleuca pallescens* is sometimes a codominant. *Acacia lazaridis* is usually present. *Triodia longiceps* dominates the very sparse to sparse ground layer. Occurs on undulating terrain with gravelly, red sandy loam soil on Cretaceous sediments. Not a Wetland. (BVG1M: 21b).

Short description: *Melaleuca uncinata* dwarf open shrubland on Cretaceous sediments

Supplementary descriptions: Thompson and Turpin (in prep), M8b

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values: 10.9.7: Habitat for uncommon plant species including *Goodenia splendida*.

Comments: 10.9.7: Very restricted distribution, and is presently known from only the White Mountains National Park. The soils are shallow with low water holding capacity and low fertility. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is sparse.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.9.8

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Heliodendron basalticum* dominates the very sparse small tree layer. *Lysiphyllum carronii* and *Acacia excelsa* are often present in the canopy. There are usually scattered shrubs or sometimes there is a very sparse shrub layer. The ground layer is very sparse. Occurs on undulating terrain with sandy soil to sandy clay soil over clay on Cretaceous sediments. Not a Wetland. (BVG1M: 27a).

Vegetation communities in this regional ecosystem include:

10.9.8x1: [RE not in use]²: This regional ecosystem is now mapped as 10.5.7. *Flindersia maculosa* or *Atalaya hemiglauc* as scattered trees to very sparse small tree layer. Ground consists of scattered forbs and grasses. Occurs on undulating terrain with shallow clay soil. Not a Wetland. (BVG1M: 27a).

Short description: *Heliodendron basalticum* low open woodland on Cretaceous sediments

Supplementary descriptions:

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.9.8: Similarities to map unit M4 in RE 10.3.27 and M4b in 10.3.6. *Archidendropsis basaltica* is more commonly found as an understorey species in *Eucalyptus brownii*, *E. populnea* or *E. melanophloia* woodlands but occasionally occurs as a dominant. Restricted ecosystem only known from near Barcaldine. The soils are highly dispersible and susceptible to sheet and rill erosion. Potential threats to this ecosystem are mainly from tree clearing, high susceptibility to salinity, weed infestation, over grazing and soil erosion. It is recommended that grazing be restricted to very short periods after the wet-season. The native pasture under the tree canopy in this regional ecosystem tends to have reasonable nutritive value but low bulk.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.10.1

Description: *Acacia shirleyi* low woodland to closed forest, commonly with *Eucalyptus exilipes*. *Acacia burdekensis*, *Corymbia trachyphloia*, *Corymbia lamprophylla* and *Corymbia leichhardtii* are occasionally present in the canopy. A variable shrub layer, dominated by *Acacia shirleyi* and *Eucalyptus exilipes*, is usually present. Tussock grass ground layer dominated by *Cleistochloa subjuncea*. Occurs on rocky hills or pediments to talus below cliffs with skeletal soils to shallow earths on sandstone ranges. Not a Wetland. (BVG1M: 24a).

Vegetation communities in this regional ecosystem include:

10.10.1a: [RE not in use]²: This vegetation community is now mapped as 10.10.1. *Acacia shirleyi* dominates the very sparse to sparse low tree layer. *Acacia burdekensis*, *Eucalyptus exilipes*, *Corymbia trachyphloia* and *E. exserta* occasionally occur as subdominants or codominants. The shrub layer is highly variable ranging from very sparse to mid-dense. *Cleistochloa subjuncea* frequently dominates the very sparse to sparse ground layer. *Triodia pungens* is occasionally dominant. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 24a).

10.10.1b: [RE not in use]²: This vegetation community is now mapped as 10.10.1. *Acacia catenulata* with or without *Acacia shirleyi* dominate the sparse tree layer. *Acacia catenulata* dominates the sparse canopy. *Acacia shirleyi* is usually present in the canopy. *Erythroxylon australe*, *Beyeria viscosa* and *Everistia vacciniifolia* are usually present in the very sparse shrub layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 24a).

10.10.1c: [RE not in use]²: This vegetation community is now mapped as 10.10.1. *Acacia shirleyi* dominates the mid-dense to dense tree layer. There are sometimes scattered shrubs including *Solanum galbinum* in a very sparse shrub layer. *Cleistochloa subjuncea* usually dominates the ground layer which is otherwise variable. Occurs on pediments with shallow to deep sandy soils below sandstone scarps. Not a Wetland. (BVG1M: 24a).

Short description:	<i>Acacia shirleyi</i> open forest on sandstone ranges
Supplementary descriptions:	Bean (1992), As; Gunn et al. (1967), Ca, So; Perry et al. (1964), Tr; Turner et al. (1978), E7, R1, R2; Turner et al. (1993), E4, R1, R4
Subregions:	2, 4, (3), (9.5), (9.4), (4.5), (4.6)
Protected areas:	White Mountains NP, Cudmore (Limited Depth) NP, White Mountains RR, Cudmore RR
Extent in reserves:	High
Wetland:	Not a Wetland
Special values:	10.10.1: Habitat for vulnerable plant species <i>Kardomia squarrulosa</i> and near threatened species, <i>Aristida burraensis</i> , <i>Bertya pedicellata</i> , and <i>Boronia eriantha</i> . <i>Solanum crassitomentosum</i> is endemic to the White Mountains and occurs in this ecosystem.
Comments:	10.10.1: The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. It is recommended that grazing be controlled by fencing out areas of land zone 10. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover and the sensitivity to burning of species such as lancewood. Potential threat is mainly wildfire. 10.10.1a: Mostly occurs along the Great Dividing Range. 10.10.1b: Often associated with small patches of 10.10.1a. 10.10.1c: Uncommon vegetation community restricted to the White Mountains National Park.
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 10.10.2

Description: *Melaleuca uncinata* shrubland, usually with *Melaleuca tamariscina*. *Acacia julifera* subsp. *curvinervia*, *Acacia lazaridis* and *Thryptomene parviflora* commonly occur. *Triodia* spp. hummock grass ground layer, usually with *Schoenus kennyi*. Occurs on rock platforms and rocky slopes in hills with shallow to skeletal soils or bare rock on sandstone ranges. Not a Wetland. (BVG1M: 24a).

Vegetation communities in this regional ecosystem include:

10.10.2a: [RE not in use]²: This vegetation community is now mapped as 10.10.2d. *Acacia burdekinsii* dominates the very sparse tree layer. *Corymbia trachyphloia* is present and sometimes subdominant in the canopy. *Acacia shirleyi* is often present and occasionally subdominant. *Grevillea decora*, *G. sessilis*, *Hibbertia stricta*, *Lithomyrtus microphylla*, *Ochrosperma adpressum*, *Pseudanthus ligulatus*, *Hemigenia cuneifolia*, *Boronia warangensis* and *Hovea lanceolata* are commonly present and sometimes dominant in the very sparse to mid-dense shrub layer. *Triodia pungens* and/or *Cleistochloa subjuncea* are dominant in the very sparse ground layer. Occurs on rock platforms and rocky slopes in hills with shallow to skeletal soils on sandstone ranges. Not a Wetland. (BVG1M: 24a).

10.10.2b: Bare coarse sandstone rock. Mostly bare rock pavement with shrubs growing in fissures. Bare rock areas in sandstone ranges. Not a Wetland. (BVG1M: 29b).

10.10.2c: *Acacia julifera* dominates the sparse shrub layer. *Triodia longiceps* frequently dominates the very sparse ground layer. Occurs mostly on the most elevated parts of sandstone hills in mosaic with bare rock to sparsely vegetated areas. Not a Wetland. (BVG1M: 24a).

10.10.2d: *Melaleuca uncinata* dominates the sparse shrub layer. *Acacia julifera* dominates the sparse canopy. *Triodia longiceps* frequently dominates the very sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 21b).

Short description: *Melaleuca uncinata* shrubland on mostly bare rock in sandstone ranges

Supplementary descriptions:

Subregions: 2, (9.5), (3), (4), (4.5), (4.6)

Protected areas: White Mountains NP, White Mountains RR, Porcupine Gorge NP

Extent in reserves: High

Wetland: Not a Wetland

Special values: 10.10.2: Habitat for vulnerable species, *Kardomia squarrulosa*. Habitat for *Goodenia splendida* which is known from only ten Herbarium records.

Comments: 10.10.2: The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. It is recommended that grazing be controlled by fencing out areas of land zone 10. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover and the sensitivity to burning of species such as lancewood. Potential threat is mainly wildfire.

10.10.2a: Restricted to the White Mountains National Park where it is common.

10.10.2b: Consists of largely bare sandstone pavement and boulders with highly variable species composition. Restricted to northern parts of subregion 2.

10.10.2c: Restricted to the White Mountains National Park.

10.10.2d: Restricted to the northern parts of subregion 2 where it often occurs in small patches.

Estimated extent:¹ Pre-clearing 24000 ha; Remnant 2021 24000 ha

VM class: Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.10.3

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.10.4. *E. drepanophylla* dominates the very sparse tree layer and *Corymbia lamprophylla* dominates the small tree layer. *C. leichhardtii* can be present in the canopy. *Petalostigma banksii* often dominates the shrub layer. *Jacksonia ramosissima* and *Dodonaea dodecandra* are usually present. *Eriachne mucronata*, *Alloteropsis semialata* and *Schizachyrium fragile* dominate very sparse ground layer. Occurs on slopes of rocky hills with skeletal soils to shallow sandy earths, often gravelly, on sandstone ranges. Not a Wetland. (BVG1M: 12a).

Short description: *Eucalyptus drepanophylla* woodland on sandstone ranges

Supplementary descriptions: Bean (1992), Ee; Gunn et al. (1967), Ca, Du; Thompson and Turpin (in prep)E30; Turner et al. (1978), E3, R1, R2

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.10.3: A rare ecosystem which is difficult to map. Recorded in southern parts of subregion 2 and 4 along the Great Dividing Range. The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very low. It is recommended that grazing be controlled by fencing out areas of land zone 10. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover. Potential threat is mainly wildfire.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Of concern

Biodiversity status notes:

Regional ecosystem 10.10.4

Description: Mixed woodland to open forest, including a combination of the species *Corymbia leichhardtii*, *C. lamprophylla*, *Eucalyptus exilipes*, *E. similis*, *Acacia shirleyi* and *E. chartaboma*. A secondary tree layer, dominated by canopy species and *Lysicarpus angustifolius*, commonly occurs. The variable shrub layer is dominated by *Acacia* spp., *Grevillea* spp., *Jacksonia ramosissima* and *Petalostigma banksii*. Density and species composition vary with fire history. The ground layer is dominated by *Triodia* spp. and *Cleistochloa subjuncea*. Occurs on slopes of rocky hills with sandy to skeletal soils on sandstone ranges. Not a Wetland. (BVG1M: 12a).

Vegetation communities in this regional ecosystem include:

10.10.4a: [RE not in use]²: This vegetation community is now mapped as 10.10.4. *Corymbia leichhardtii* dominates the very sparse tree layer. *Corymbia lamprophylla* and *Acacia shirleyi* are frequently present and sometimes codominant in the canopy. *Triodia* spp. usually dominate the very sparse to sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 12a).

10.10.4b: [RE not in use]²: This vegetation community is now mapped as 10.10.4. *Eucalyptus exilipes* with *Corymbia leichhardtii* or *C. lamprophylla* dominates the very sparse tree layer. *Eucalyptus exilipes* dominates the very sparse canopy. *Corymbia leichhardtii* and/or *C. lamprophylla* are usually present and are sometimes codominants in the canopy. There is a very sparse to mid-dense shrub layer. *Triodia* spp. And *Cleistochloa subjuncea* are frequently present and sometimes dominant in the very sparse to sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 12a).

10.10.4c: [RE not in use]²: This vegetation community is now mapped as 10.10.4. *Eucalyptus similis* dominates the very sparse tree layer. *Corymbia lamprophylla* is present and sometimes codominant in the canopy. There is a very sparse to sparse shrub layer. *Triodia* spp. Are usually present and sometimes dominate the very sparse to sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 17c).

10.10.4d: [RE not in use]²: This vegetation community is now mapped as 10.10.4. *Eucalyptus chartaboma* dominates the very sparse tree layer. *Corymbia lamprophylla* and/or *C. leichhardtii* are often present and sometimes codominant in the canopy. *Jacksonia ramosissima* frequently dominates the very sparse to sparse shrub layer. *Triodia pungens* usually dominates the very sparse to sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 14d).

Short description:	Corymbia leichhardtii, Corymbia lamprophylla, Eucalyptus exilipes and Eucalyptus similis in mixed woodlands on sandstone ranges
Supplementary descriptions:	Bean (1992), Pw;
Subregions:	2, 4, (3), (9.4)
Protected areas:	White Mountains NP, Cudmore (Limited Depth) NP, White Mountains RR, Cudmore RR
Extent in reserves:	High
Wetland:	Not a Wetland
Special values:	10.10.4: Potential habitat for the vulnerable species Kardomia squarrulosa and Micromyrtus rotundifolia. Goodenia splendida occurs in this habitat and is known from only ten Herbarium records. Calytrix microcoma is occurs mostly in the DEU and is common in this ecosystem. Also habitat for poorly known species Coronidium lanosum and Tephrosia sp. (Lake Buchanan E.J.Thompson+ BUC2128). Eucalyptus chartaboma occurs near its southern most known location in this ecosystem.
Comments:	<p>10.10.4: Mainly occurs in subregion 2. The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. It is recommended that grazing be controlled by fencing out areas of land zone 10. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover and the sensitivity to burning of species such as lancewood. Potential threat is mainly wildfire.</p> <p>10.10.4a: Widely distributed along the Great Dividing Range.</p> <p>10.10.4b: Common in northern parts of subregion 2.</p> <p>10.10.4c: Occurs in northern parts of subregion 2. Sometimes occurs as small unmappable patches at 1:100 000 scale.</p> <p>10.10.4d: Uncommon vegetation community occurring northern parts of subregion 2. Sometimes occurs as small patches unmappable at 1:100 000 scale.</p>
Estimated extent:¹	Pre-clearing 70000 ha; Remnant 2021 70000 ha
VM class:	Least concern
Biodiversity status:	No concern at present
Biodiversity status notes:	

Regional ecosystem 10.10.5

Description: Mixed woodland, including combinations of the species *Corymbia trachyphloia*, *Eucalyptus mediocris*, *C. lamprophylla*, *C. leichhardtii* and *Lophostemon suaveolens*. The shrub layer is variable in density and species composition with *Acacia* spp. and *Grevillea* spp. prominent. The ground layer is dominated by *Cleistochloa subjuncea* and *Triodia* spp. Occurs on sandstone ranges with skeletal soils and exposed rock. Not a Wetland. (BVG1M: 12a).

Vegetation communities in this regional ecosystem include:

10.10.5a: Mixed woodland, including combinations of the species *Corymbia trachyphloia*, *Eucalyptus mediocris*, *C. lamprophylla*, *C. leichhardtii* and *Lophostemon suaveolens*. The shrub layer is variable in density and species composition with *Acacia* spp. and *Grevillea* spp. prominent. The ground layer is dominated by *Cleistochloa subjuncea* and *Triodia* spp. Occurs on sandstone ranges with skeletal soils and exposed rock. Not a Wetland. (BVG1M: 12a).

10.10.5b: [RE not in use]²: This vegetation community is now mapped as 10.10.5a. *Eucalyptus mediocris* and *Corymbia trachyphloia* dominate the very sparse tree layer. *Corymbia trachyphloia* dominates the very sparse to sparse canopy. *Eucalyptus mediocris* is usually a codominant in the canopy. A very sparse to sparse shrub layer is present. There is a very sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 12a).

10.10.5c: [RE not in use]²: This vegetation community is now mapped as 10.10.5a. *Corymbia lamprophylla* dominates the very sparse canopy. A very sparse to sparse shrub layer is present. *Triodia mitchellii* usually dominates the usually sparse ground layer. Occurs on sandstone ranges. Not a Wetland. (BVG1M: 12a).

10.10.5d: *Corymbia trachyphloia* and *Eucalyptus exserta* mallee shrubland with emergent *Lysicarpus angustifolius*. Second shrub layer of *Acacia julifera*, *Acacia faucium* and *Acacia simsii*. Ground layer dominated by *Scleria* sp., *Triodia* sp. and *Cleistochloa subjuncea*. Occurs on exposed rock and skeletal soils on sandstone ranges. Not a Wetland. (BVG1M: 12a).

10.10.5e: *Lophostemon suaveolens* dominates the very sparse tree layer. *Corymbia leichhardtii*, *Eucalyptus exilipes*, *E. mediocris* and *Angophora costata* frequently occur in the canopy. A tall shrub layer is present. *Cleistochloa subjuncea* and *Paspalidium spartellum* frequently occur as dominants in the very sparse to mid-dense ground layer. Occurs on valley floors of rocky hills with shallow sandy to skeletal soils on sandstone ranges. Not a Wetland. (BVG1M: 12a).

Short description:	<i>Corymbia trachyphloia</i> , <i>Eucalyptus mediocris</i> , <i>Corymbia lamprophylla</i> , <i>Corymbia leichhardtii</i> in mixed woodlands on sandstone ranges
Supplementary descriptions:	Bean (1992), Ws;
Subregions:	2, 4, (3)
Protected areas:	White Mountains NP, Cudmore (Limited Depth) NP, White Mountains RR, Cudmore RR
Extent in reserves:	High
Wetland:	Not a Wetland
Special values:	10.10.5: Potential habitat for the vulnerable plant species <i>Kardomia squarrulosa</i> and near threatened plant species including <i>Acacia spania</i> . A disjunct population of <i>Zieria tenuis</i> occurs in this ecosystem in the White Mountains. 10.10.5c: The near threatened species, <i>Acacia spania</i> recorded at a single location in this vegetation community. Potential habitat for the vulnerable species <i>Kardomia squarrulosa</i> .
Comments:	10.10.5: Mainly occurs in subregion 2. The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very sparse. It is recommended that grazing be controlled by fencing out areas of land zone 10. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover and the sensitivity to burning of species such as lancewood. Potential threat is mainly wildfire. 10.10.5a: Occurs mostly along the Great Dividing Range from north to south in subregion 2. 10.10.5b: Occurs in northern parts of subregion 2 mostly in the White Mountains National Park. 10.10.5c: Recorded in southern parts of subregion 2. Further survey required to determine full extent of this vegetation community which occurs in generally inaccessible terrain. 10.10.5d: Occurs in White Mountains NP. 10.10.5e: Uncommon vegetation community only known from the White Mountains National Park.
Estimated extent: ¹	Pre-clearing 62000 ha; Remnant 2021 62000 ha
VM class:	Least concern

Biodiversity status: No concern at present

Biodiversity status notes:

Regional ecosystem 10.10.6

Description: Springs associated with Great Artesian Basin recharge and discharge areas. Associated with Great Artesian Basin recharge and discharge areas usually around the margins of sandstone plateaus but including springs emanating from duricrusts. Palustrine. (BVG1M: 34e).

Short description: Springs associated with margins of sandstone plateaus

Supplementary descriptions: Fensham et al. (2004)

Subregions:

Protected areas:

Extent in reserves:

Wetland: Palustrine

Special values: 10.10.6: Provides wetland habitat for a flora and fauna.

Comments: 10.10.6: Recorded from a number of locations mostly on the eastern side of the Alice Tableland. Threatening processes include high total grazing pressure, disturbance of intakes of aquifer and water extraction, weed invasion and possibly harvesting of special species.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Endangered

Biodiversity status notes: A rare ecosystem and subject to cattle trampling and excavation for stock watering.

Regional ecosystem 10.10.7

Description: [RE not in use]²: This regional ecosystem is now mapped as 10.10.5. *Eucalyptus cloeziana* dominates the very sparse tree layer. *Corymbia trachyphloia* is sometimes codominant. *Corymbia leichhardtii* is usually present. A very sparse shrub layer is present. *Triodia pungens* usually dominates the very sparse to sparse ground layer. Occurs in valleys and on slopes of hills with shallow sandy to skeletal soils on sandstone ranges. Not a Wetland. (BVG1M: 12a).

Short description: *Eucalyptus cloeziana* open woodland on sandstone ranges

Supplementary descriptions: Thompson and Turpin (in prep), E43

Subregions:

Protected areas:

Extent in reserves:

Wetland: Not a Wetland

Special values:

Comments: 10.10.7: The soils are shallow with low water holding capacity and low fertility. The nature of the soils and the very sparse ground cover of plants renders this ecosystem highly susceptible to erosion. Degradation in the form of soil disturbance or reduction of ground cover will be difficult to reverse and therefore tree-clearing should not occur. Plant growth is seasonal and pasture productivity is low. There are few palatable species and their cover is very low. It is recommended that grazing be controlled by fencing out areas of land zone 10. Fire management requires consideration of the effect of the expected slow recovery rate of plant cover and the sensitivity to burning of some species. Potential threat is mainly wildfire.

Estimated extent:¹

VM class: Of concern

Biodiversity status: Of concern

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.