

Travelling Stock Reserves

Vegetation Guide

Central Tablelands Local Land Services



Local Land
Services

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Central Tablelands Local Land Services Travelling Stock Reserve Vegetation Guide
Prepared for NSW Local Land Services

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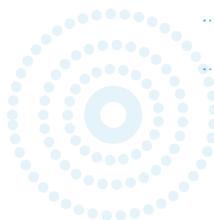
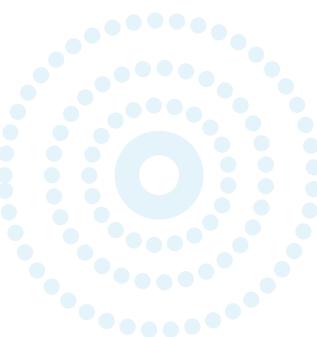






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Vegetation in the Central Tablelands region

The Central Tablelands Local Land Services region is located in central NSW and covers an area of approximately 31,365 km². It includes the major towns of Bathurst, Blayney, Cowra, Lithgow, Molong, Mudgee, Oberon and Orange and falls predominantly within Wiradjuri Aboriginal country. The area includes properties that make up 4.2 per cent of NSW's annual value of agricultural production, includes almost 10 per cent of NSW's agricultural business and contains 3.2 per cent of NSW's agricultural land.

The area has a number of natural resource assets such as national parks and culturally significant areas and is home to a vast range of native fauna and flora, with some of these being listed as threatened or endangered. Agriculturally, the region is highly diverse, adding to the complexity of natural resource management issues. Evenly spread summer and winter rainfall supports productive cropping systems, with grazing the most significant land use, followed by irrigated farming, broadacre crops and horticultural enterprises, including areas of fruit and vegetable growing and viticulture.



Figure 1 The Central Tablelands Local Land Services region



The Central Tablelands Local Land Services region

Vegetation mapping was undertaken using the available NSW state vegetation type mapping (SVTM) that consist of regional-scale maps of NSW plant community types. This mapping is based on new spatial models, on-ground surveys and aerial imagery interpretation. This project is ongoing and not all mapping for all regions is publicly available at this time. The Central Tablelands Local Land Services region is covered by one map set:

- State vegetation type map: Central Tablelands version 1.0 in draft.

Detailed methodology information can be found at:

www.environment.nsw.gov.au/resources/vegetation/nsw-state-vegetation-type-map-methodology-170134.pdf and in the technical reports and metadata statements that accompany each map set at <http://data.environment.nsw.gov.au>.

Each mapped polygon within SVTM includes an attribute for plant community type (PCT), class and formation. The SVTM layer was clipped against the current TSR layer to provide a dataset of PCTs, classes and formations found within TSRs in the Local Land Services area. Individual class maps were produced of classes with more than 30 ha occurring within the TSRs.

A total of 23 vegetation classes, falling into nine Keith vegetation formations, have been identified for the TSR network in the Central Tablelands region. Another map unit exists for non-native vegetation that includes cleared areas without native understorey vegetation. The list of vegetation classes found within the Central Tablelands is provided in Table 1.

Presence of each vegetation class within TSRs varies considerably, from more than 1,383 ha of western slopes grassy woodlands to less than one hectare of montane bogs and fens, and less than one hectare of north coast dry sclerophyll forests. Vegetation classes present in more than 30 ha of the TSR network were identified as relevant for the overall management of vegetation in TSRs within the region. These vegetation classes and their constituent PCTs are described in more detail in this guide.

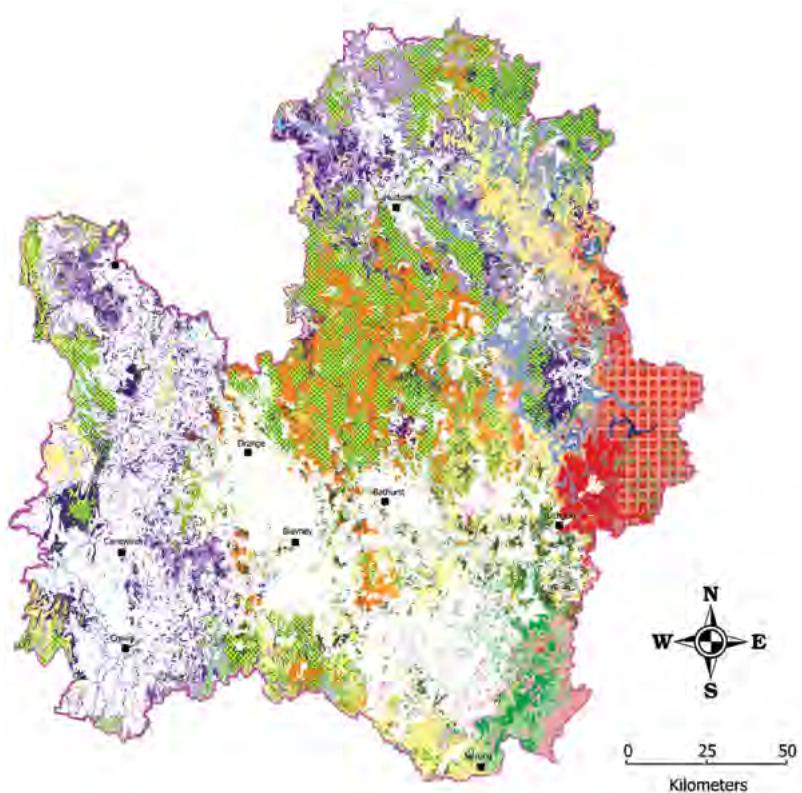


Figure 2 Legend for vegetation mapping in Central Tablelands Local Land Services region

Vegetation Class

Central Gorge Dry Sclerophyll Forests	South East Dry Sclerophyll Forests
Coastal Floodplain Wetlands	Southern Escarpment Wet Sclerophyll Forests
Coastal Freshwater Lagoons	Southern Lowland Wet Sclerophyll forests
Coastal Heath Swamps	Southern Montane Heaths
Coastal Swamp Forests	Southern Tableland Dry Sclerophyll Forests
Coastal Valley Grassy Woodlands	Southern Tableland Grassy Woodlands
Dry Rainforests	Southern Tableland Wet Sclerophyll Forests
Eastern Riverine Forests	Southern Warm Temperate Rainforests
Floodplain Transition Woodlands	Subalpine Woodlands
Inland Riverine Forests	Subtropical Rainforests
Inland Rocky Hill Woodlands	Sydney Hinterland Dry Sclerophyll Forests
Montane Bogs and Fens	Sydney Montane Dry Sclerophyll Forests
New England Grassy Woodlands	Sydney Montane Heaths
Non Native	Sydney Sand Flats Dry Sclerophyll Forests
North Coast Dry Sclerophyll Forests	Tableland Clay Grassy Woodlands
North Coast Wet Sclerophyll Forests	Temperate Montane Grasslands
North-west Floodplain Woodlands	Upper Riverina Dry Sclerophyll Forests
North-west Slopes Dry Sclerophyll Woodlands	Western Slopes Dry Sclerophyll Forests
Northern Tableland Wet Sclerophyll Forests	Western Slopes Grasslands
Northern Warm Temperate Rainforests	Western Slopes Grassy Woodlands
South Coast Sands Dry Sclerophyll Forests	

Figure 3 Vegetation mapping for the Central Tablelands Local Land Services region

Table 1 Area reported for vegetation classes within TSRs in the Central Tablelands Local Land Services region, with number of PCTs in each class

Class	Area (ha)	PCTs
Western slopes grassy woodlands	1,383.791	14
Non native	789.2216	n/a
Western slopes dry sclerophyll forests	658.9744	22
Southern tableland grassy woodlands	273.0808	7
Floodplain transition woodlands	227.3678	2
Western slopes grasslands	95.32098	1
Temperate montane grasslands	73.83696	1
Southern tableland dry sclerophyll forests	72.86059	11
Eastern riverine forests	66.86038	3
Tableland clay grassy woodlands	65.99611	2
Southern tableland wet sclerophyll forests	55.01629	3
South east dry sclerophyll forests	39.826	1
North-west slopes dry sclerophyll woodlands	39.14066	2
Subalpine woodlands	21.34762	2
South coast sands dry sclerophyll forests	20.12209	1
Inland riverine forests	14.31962	2
Southern escarpment wet sclerophyll forests	9.182828	1
Coastal valley grassy woodlands	7.925711	2
Inland Rocky Hill Woodlands	7.401302	3
Upper Riverina Dry Sclerophyll Forests	6.989698	2
Coastal freshwater lagoons	6.355971	1
Central gorge dry sclerophyll forests	2.591949	1
Montane bogs and fens	0.757399	1
North coast dry sclerophyll forests	0.705088	1
Total area (ha)	3,939.0	86

Several of the vegetation classes listed above include PCTs that are protected under state and/or federal legislation.

These are categorised as endangered ecological communities (EECs) or critically endangered ecological communities (CEECs) and require special consideration during the management process. A total of six EECs are reported from the Central Tablelands region, several of which are present from a number of constituent PCTs, including derived grasslands. These EECs have been recorded from several vegetation classes. A list of these EECs is provided in the following table.



Table 2 Endangered ecological communities recorded within vegetation classes in TSRs in Central Tablelands Local Land Services region.

NSW BioCon Act EEC (or CEEC)	EPBC Act TEC	Vegetation class
Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South bioregions	Endangered	Floodplain transition woodlands
Fuzzy Box on alluvials of South West Slopes, Darling Riverine Plains and the Brigalow Belt South	Not listed	Western slopes grassy woodlands
White Box Yellow Box Blakely's Red Gum Woodland and derived grasslands	Critically endangered	Western slopes grassy woodlands Western slopes grasslands Western slopes dry sclerophyll forests Southern tableland grassy woodlands Upper Riverina dry sclerophyll forests
Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes bioregions	Not listed	Southern tableland wet sclerophyll forests Subalpine woodlands Tableland clay grassy woodlands
Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands bioregions	Not listed	Southern escarpment wet sclerophyll forests Southern tableland wet sclerophyll forests
Blue Mountains Swamps in the Sydney Basin Bioregion	Endangered	Montane bogs and fens

Vegetation classes

The following sections provide general descriptions for each of the most common vegetation classes, including:

- distribution of the vegetation class in the Central Tablelands Local Land Services region (with map)
- landscape position, soils etc
- general description of vegetation, including canopy species, main shrub and understorey species
- photo(s) of representative communities likely to be found in TSRs in Central Tablelands region
- any TEC/EECs that may be present.

Western slopes grassy woodlands

This vegetation class was recorded in a total of 1,383 hectares within TSRs in the Central Tablelands Local Land Services and incorporates a diverse range of vegetation types. It includes 14 PCTs:

- apple box - Blakelys red gum moist valley and footslopes grass-forb open forest of the NSW South Western Slopes Bioregion
- Blakelys red gum - white box - yellow box - black cypress pine box grass/shrub woodland on clay loam soils on undulating hills of central NSW South Western Slopes Bioregion
- Blakelys red gum - yellow box grassy tall woodland of the NSW South Western Slopes Bioregion
- fuzzy box woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion
- long-leaved box - red box grass-shrub open forest on hillslopes in the Mudgee Region, NSW central western slopes
- riparian Blakelys red gum - box - shrub - sedge - grass tall open forest of the central NSW South Western Slopes Bioregion
- rough-barked apple - red gum - yellow box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes and Brigalow Belt South bioregions
- tumbledown gum woodland on hills in the northern NSW South Western Slopes and southern Brigalow Belt South bioregions
- western Hunter flats fuzzy box woodland
- white box - black cypress pine - red gum +/- mugga ironbark shrubby woodland in hills of the NSW central western slopes
- white box - Blakelys red gum - long-leaved Box - Nortons box - red stringybark grass-shrub woodland on shallow soils on hills in the NSW South Western Slopes Bioregion
- white box - rough-barked apple alluvial woodland of the NSW central western slopes, including in the Mudgee region
- white box - white cypress pine - western grey box shrub/grass/forb woodland in the NSW South Western Slopes Bioregion
- white box grassy woodland in the upper slopes sub-region of the NSW South Western Slopes Bioregion.

Many of these vegetation types form part of an EEC in NSW and are described later in this guide.

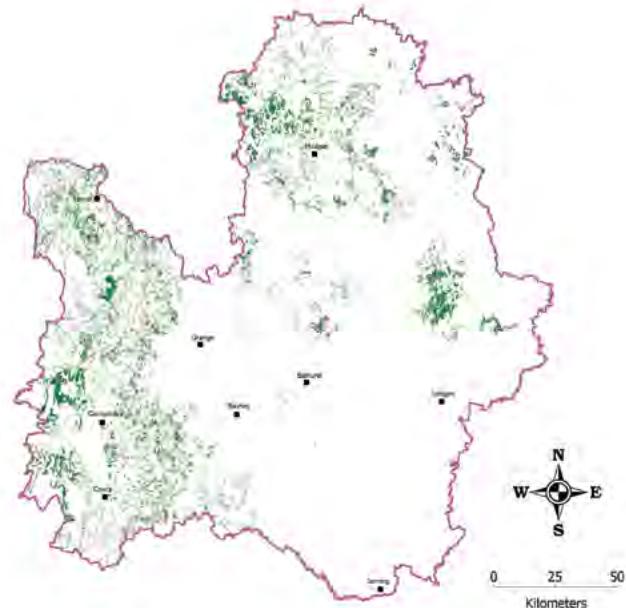


Figure 4 Western Slopes Grassy Woodlands - Keith Class

Distribution of vegetation class

Western slopes grassy woodlands are broadly distributed throughout the north and west parts of the Central Tablelands region, with scattered occurrences in the centre of the region. This vegetation class has not been recorded from the south eastern part of the region.

Landscape position and vegetation description

This vegetation class includes vegetation types that occur on footslopes, gullies or valley flats and floors, gentle slopes, on prior streams and abandoned channels, and on fertile soils on low rises. It is typically a tall or mid to high woodland or open woodland, with canopy ranging from 15 m to 25 m. This vegetation class is found on a range of soil types, including alluvial red clays, red-brown loamy soils, alluvial or colluvial brown loam or clay, and fine grained loamy sands, derived from acid volcanics, igneous or sedimentary rocks.

Main canopy species include apple box (*Eucalyptus bridgesiana*), Blakely's red gum (*Eucalyptus blakelyi*), rough-barked apple (*Angophora floribunda*), yellow box (*Eucalyptus melliodora*), fuzzy box (*Eucalyptus conica*), white box (*Eucalyptus albens*), black cypress pine (*Callitris endlicheri*), tumbledown red gum (*Eucalyptus dealbata*), and white cypress pine (*Callitris glauophylla*).

Common mid-storey species include silver wattle (*Acacia dealbata*), *Acacia paradoxa*, *Acacia decora*, *Acacia implexa*, *Leptospermum continentale*, *Cassinia aculeata*, bracken (*Pteridium esculentum*), *Acacia deanei* subsp. *deanei*, *Dodonaea viscosa* subsp. *cuneata*, wilga (*Geijera parviflora*), *Acacia implexa*, silver cassia (*Senna* form taxon '*artemisioides*'), western boobialla (*Myoporum montanum*), *Acacia buxifolia*, western rosewood (*Alectryon oleifolius* subsp. *canescens*), sticky daisybush (*Olearia elliptica*), *Hibbertia obtusifolia*, *Hibbertia acicularis*, and *Swainsona galegifolia*.

Common groundcover species include a range of grasses and forbs, such as *Microlaena stipoides* var. *stipoides*, kidney weed (*Dichondra repens*), *Acaena ovina*, *Hydrocotyle laxiflora*, Queensland bluegrass (*Dichanthium sericeum* subsp. *sericeum*), kangaroo grass (*Themeda australis*), barbed wire grass (*Cymbopogon refractus*), *Aristida ramosa*, redleg grass (*Bothriochloa macra*), *Austrostipa bigeniculata*, *Elymus scaber*, speargrass (*Austrostipa scabra* subsp. *scabra*), windmill grass (*Chloris truncata*), *Calotis cuneifolia*, *Eremophila debilis*, *Sida corrugata*, *Einadia hastata*, *Dianella revoluta* var. *revoluta*, *Xerochrysum viscosa*, *Austrodanthonia setacea*, *Desmodium varians*, slender bamboo grass (*Austrostipa verticillata*), *Arthropodium milleflorum*, *Bulbine bulbosa*, *Dichopogon fimbriatus*, *Chrysocephalum apiculatum* and *Panicum effusum*.

Endangered ecological communities

White box yellow box Blakely's red gum woodland, a CEEC listed in NSW under the *Biodiversity Conservation Act 2016* and the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999*, is included in this vegetation class.

Fuzzy box on alluvials of South West Slopes, Darling Riverine Plains and the Brigalow Belt South, an EEC listed under the *Biodiversity Conservation Act 2016* and the *Environmental Protection and Biodiversity Conservation Act 1999*, is included in this vegetation class.

Examples from the Central Tablelands region



Apple box - Blakelys red gum moist valley and footslopes grass-forb open forest, north of Bathurst.



White box grassy woodland in the upper slopes, near Wyangala.



Fuzzy box woodland south-west of Cowra.



Rough-barked apple - red gum - yellow box woodland on valley flats west of Gulgong.

Western slopes dry sclerophyll forests

This vegetation class was recorded in a total of 659 ha within TSRs in the Central Tablelands Local Land Services region and incorporates a diverse range of vegetation types. It includes 22 PCTs:

- Capertee Escarpment ironbark forest
- inland scribbly gum - red stringybark - black cypress pine - red ironbark open forest on sandstone hills in the southern Brigalow Belt South and northern NSW South Western Slopes bioregions
- inland scribbly gum - red stringybark - black cypress pine hillslope shrub-tussock grass open forest on mainly sandstone ranges in the NSW central western slopes
- inland scribbly gum grassy open forest on hills in the Mudgee region, NSW central western slopes
- long-leaved box - red box - red stringybark mixed open forest on hills and hillslopes in the NSW South Western Slopes Bioregion
- mugga ironbark - black cypress pine - red stringybark - Blakelys red gum - red ironbark woodland on hillslopes and in valleys on ranges in the NSW central western slopes
- narrow-leaved ironbark - black pine - narrow-leaved wattle shrub - grass open forest on sandstone slopes of the upper Hunter and Sydney Basin
- narrow-leaved ironbark - black pine - Sifton bush heathy open forest on sandstone ranges of the upper Hunter and Sydney Basin
- narrow-leaved ironbark - black cypress pine - stringybark +/- grey gum +/- narrow-leaved wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South and Sydney Basin bioregions
- narrow-leaved Ironbark heathy woodland on sandstone ranges of the Sydney Basin and Brigalow Belt South
- narrow-leaved wattle low open forest / very tall shrubland on ridges in northern NSW South Western Slopes Bioregion and southern Brigalow Belt South Bioregion
- red ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern Brigalow Belt South Bioregion
- red ironbark - grey gum - black pine heathy woodland on sandstone ranges of the Sydney Basin
- red Ironbark - grey gum - narrow-leaved stringybark - brown bloodwood shrubby open forest on sandstone ranges of the Sydney Basin
- red stringybark - inland scribbly gum open forest on steep hills in the Mudgee - northern section of the NSW South Western Slopes Bioregion

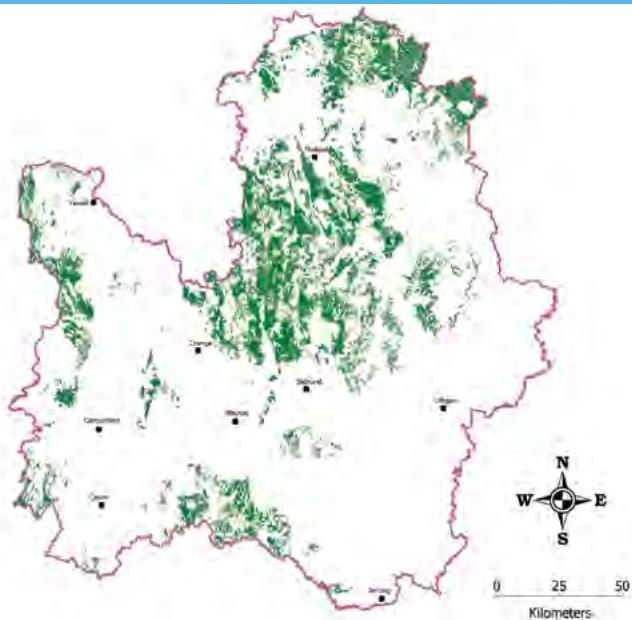


Figure 5 Western Slopes Dry Sclerophyll Forests- Keith Class

- red stringybark - long-leaved box - joycea pallida grassy open forest in the upper Lachlan catchment, NSW South Western Slopes and South Eastern Highlands bioregions
- red stringybark - rough-barked apple +/- Nortons box open forest on hillslopes in the Warrumbungle National Park - Coolah regions
- western Hunter Dwyers red gum - cypress woodland
- western Hunter escarpment ironbark forest
- western Hunter grey gum - stringybark forest
- white box - black cypress pine shrubby woodland of the western slopes
- white box shrubby open forest on fine grained sediments on steep slopes in the Mudgee region of the central western slopes of NSW.

Several of these vegetation types form part of an EEC in NSW and are described later in this guide.

Distribution of vegetation class

Western slopes dry sclerophyll forests are broadly distributed across most of the Central Tablelands Local Land Services region, especially in the northern and central parts of the region and are very likely to be found in TSRs in these areas.

Landscape position and vegetation description

Western slopes dry sclerophyll forests are typically found on low ridges and rises, footslopes on undulating plains, steep stony slopes and rocky areas at lower altitudes, and occasionally on exposed rocky ridges and cliffs at higher elevations, especially in the east and north of the region.

Vegetation structure ranges from mid-high woodland or open forest to tall woodland across soil types ranging from sandy alluvium and sandy loams to fine grained loamy clay soils, predominantly derived from sedimentary rocks.

Main canopy species include black cypress pine (*Callitris endlicheri*), blue-leaved ironbark (*Eucalyptus nubila*), mugga ironbark (*Eucalyptus sideroxylon*), Dwyer's red gum (*Eucalyptus dwyeri*), narrow-leaved ironbark (*Eucalyptus crebra*), red ironbark (*Eucalyptus fibrosa*), bulloak (*Allocasuarina luehmannii*), narrow-leaved ironbark (*Eucalyptus crebra*), tumbledown red gum (*Eucalyptus dealbata*), silver-leaved ironbark (*Eucalyptus melanophloia*), scribbly gum (*Eucalyptus rossii*), white box (*Eucalyptus albens*), and red stringybark (*Eucalyptus macrorhyncha*).

Common shrub species include broombush (*Melaleuca uncinata*), currawang (*Acacia doratoxylon*), spurwing wattle (*Acacia triptera*), *Dodonaea viscosa* subsp. *angustissima*, *Leptospermum parvifolium*, *Leptospermum polygalifolium*, *Exocarpos cupressiformis*, black oak (*Allocasuarina littoralis*), *Brachyloma daphnoides*, *Acacia gladiiformis*, *Acacia paradoxa*, *Acacia implexa*, *Acacia vestita*, western boobialla (*Myoporum montanum*), *Micromyrtus ciliata*, *Calytrix tetragona*, *Stypandra glauca*, *Cassinia aculeata*, *Lissanthe strigosa*, *Xanthorrhoea australis*, *Macrozamia spiralis*, and many others.

Common groundcover species are dominated by a mix of grasses and forbs, and include *Aristida ramosa*, *Gonocarpus elatus*, *Xerochrysum viscosa*, *Cheilanthes sieberi* subsp. *sieberi*, *Austrostipa densiflora*, *Rytidosperma setaceum*, curly windmill grass (*Enteropogon acicularis*), *Elymus scaber* var. *plurinervis*, *Dampiera lanceolata* var. *lanceolata*, *Hibbertia obtusifolia*, *Galium gaudichaudii*, *Chrysocephalum apiculatum*, *Gonocarpus tetragynus*, *Lomandra* spp., windmill grass (*Chloris truncata*), *Microlaena stipoides* var. *stipoides*, red-anther wallaby grass (*Rytidosperma pallidum*), *Goodenia hederacea* subsp. *hederacea*, *Lepidosperma laterale*, *Xerochrysum viscosa*, *Einadia hastata*, *Austrostipa scabra*, *Calotis cuneifolia*, *Austrostipa densiflora*, *Eragrostis lacunaria*, *Rytidosperma fulva*, kangaroo grass (*Themeda australis*), *Arthropodium milleflorum*, and kidney weed (*Dichondra repens*).

Endangered ecological communities

White box yellow box Blakely's red gum woodland, a CEEC listed in NSW under the *Biodiversity Conservation Act 2016* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*, is included in this vegetation class.

Examples from the Central Tablelands region



Mugga ironbark - Blakely's red gum woodland on hillslopes and in valleys, north-west of Cowra.



Mugga with black pine north of Bumbadry.



White box shrubby open forest on fine-grained sediments on steep slopes in the Mudgee region.

Southern tableland grassy woodlands

This vegetation class was recorded in a total of 273 ha within TSRs in the Central Tablelands region. It includes seven PCTs:

- apple box - yellow box dry grassy woodland of the South Eastern Highlands Bioregion
- black Sallee - tussock grass open woodland of the South Eastern Highlands Bioregion
- broad-leaved peppermint - red stringybark grassy open forest on undulating hills, South Eastern Highlands Bioregion
- broad-leaved peppermint - ribbon gum grassy open forest in the north east of the South Eastern Highlands Bioregion
- candlebark - Blakelys red gum - long-leaved box grassy woodland in the Rye Park to Yass region of the NSW South Western Slopes and South Eastern Highland bioregions
- ribbon gum - yellow box grassy woodland on undulating terrain of the eastern tablelands, South Eastern Highlands Bioregion
- yellow box - Blakelys Red gum grassy woodland on the tablelands, South Eastern Highlands Bioregion.

Several of these vegetation types form part of an EEC in NSW and are described later in this guide.

Distribution of vegetation class

Southern tablelands grassy woodlands are broadly distributed throughout central and south-eastern parts of the Central Tablelands Local Land Services region, but largely absent from the western parts.

Landscape position and vegetation description

Southern tablelands grassy woodlands typically occur on gently undulating slopes and adjacent to drainage lines and on moist valley floors, often in frost hollows.

Main canopy species include apple box (*Eucalyptus bridgesiana*), yellow box (*Eucalyptus melliodora*) and black Sallee (*Eucalyptus stellulata*), broad-leaved peppermint (*Eucalyptus dives*), red stringybark (*Eucalyptus macrorhyncha*), ribbon gum (*Eucalyptus viminalis*), candlebark (*Eucalyptus rubida*), snow gum (*Eucalyptus pauciflora*), Blakelys red gum (*Eucalyptus blakelyi*) and long-leaved box (*Eucalyptus goniocalyx*).

Shrub layer species are typically absent or uncommon, and include *Melichrus urceolatus*, *Acacia dealbata*, *Bossiaea buxifolia*, *Bursaria spinosa* subsp. *spinosa*, *Hibbertia obtusifolia*, *Acacia implexa*, *Daviesia genistifolia*, *Hovea linearis*, *Pimelea curviflora* var. *curviflora*, *Bossiaea prostrata*, and *Cryptandra amara* var. *amara*.

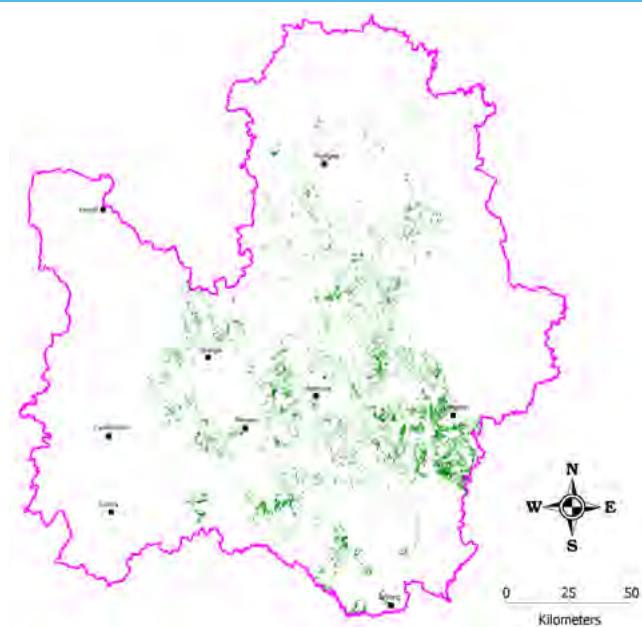


Figure 6 Southern Tablelands Grass Woodlands- Keith Class

Common groundlayer species include numerous grasses with some forbs, including kangaroo grass (*Themeda australis*), *Rytidosperma racemosa*, *Microlaena stipoides* var. *stipoides*, *Hydrocotyle laxiflora*, *Hypericum gramineum*, *Lomandra filiformis* subsp. *coriacea*, *Panicum effusum*, snowgrass (*Poa sieberiana* var. *sieberiana*), tussock grass (*Poa labillardierei*), *Microlaena stipoides* var *stipoides*, *Gonocarpus tetragynus*, *Convolvulus erubescens*, *Acaena ovina*, common woodruff (*Asperula conferta*), *Carex appressa*, *Hemarthria uncinata*, *Pennisetum alopecuroides*, *Lepydrobia scariosa*, and *Lythrum hyssopifolia*.

Endangered ecological communities

Includes white box yellow box Blakely's red gum woodland, a critically endangered ecological community listed in NSW under the *Biodiversity Conservation Act 2016* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*.

Includes tablelands snow gum, black Sallee, candlebark and ribbon gum grassy woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes bioregions, an EEC in NSW.

Examples from Central Tablelands region



Apple box – yellow box dry grassy woodland near Bathurst.



Black Sallee tussock grass forest, Mt Canobolas.



Yellow box – Blakely's red gum grassy woodland regenerating north of Bathurst.

Floodplain transition woodlands

This vegetation class was recorded in a total of 227 ha within TSRs in the Central Tablelands Local Land Services region. It includes two PCTs:

- western grey box - cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion
- western grey box - white cypress Pine tall woodland on loam soil on alluvial plains of NSW South Western Slopes and Riverina bioregions.

Several of these vegetation types form part of an EEC in NSW and are described later in this guide.

Distribution of vegetation class

Floodplain transition woodlands have limited distribution in the Central Tablelands region and are only found north-west of Mudgee and west of Canowindra and Cowra.

Landscape position and vegetation description

Floodplain transition woodlands are found on terraces on old alluvial plains or undulating peneplain landforms overlaying a range of underlying rock types, and on flats and low rises on alluvial and stagnant alluvial plains. This vegetation class includes vegetation types that form mid-high to tall woodlands on red or red-brown loams or clay loams, and occasionally on grey clay soils that may form gilgais.

The main canopy species for this vegetation class include inland grey box (*Eucalyptus microcarpa*), poplar box (*Eucalyptus populnea* subsp. *bimbil*), white cypress pine (*Callitris glauophylla*), with yellow box (*Eucalyptus melliodora*), belah (*Casuarina cristata*), bulloak (*Allocasuarina luehmannii*), *Pittosporum angustifolium*, and kurrajong (*Brachychiton populneus* subsp. *populneus*).

Common shrub layer species include *Dodonaea viscosa* subsp., wilga (*Geijera parviflora*), *Acacia deanei*, *Pimelea microcephala*, buddha (*Eremophila mitchellii*), western boabialla (*Myoporum montanum*), warrior bush (*Apophyllum anomalum*), western rosewood (*Alectryon oleifolius*), tarbush (*Eremophila glabra*), *Acacia buxifolia* subsp. *buxifolia*, *Acacia oswaldii*, *Acacia pycnantha*, *Acacia hakeoides*, *Acacia brachybotrys*, *Santalum acuminatum*, yarran (*Acacia homalophylla*), *Exocarpos aphyllus*, silver cassia (*Senna* form taxon '*artemisioides*'), and hooked needlewood (*Hakea tephrosperma*).

Common groundcover species include a diverse range of grasses, saltbushes and forbs, including *Rytidosperma caespitosa*, windmill grass (*Chloris truncata*), *Sida corrugata*, speargrass (*Austrostipa scabra*), *Wahlenbergia gracilis*, *Einadia nutans*, *Paspalidium constrictum*, kangaroo grass (*Themeda australis*), plains grass (*Austrostipa aristiglumis*), *Aristida behriana*, *Elymus scaber*, *Rytidosperma setacea*, curly windmill grass (*Enteropogon acicularis*),

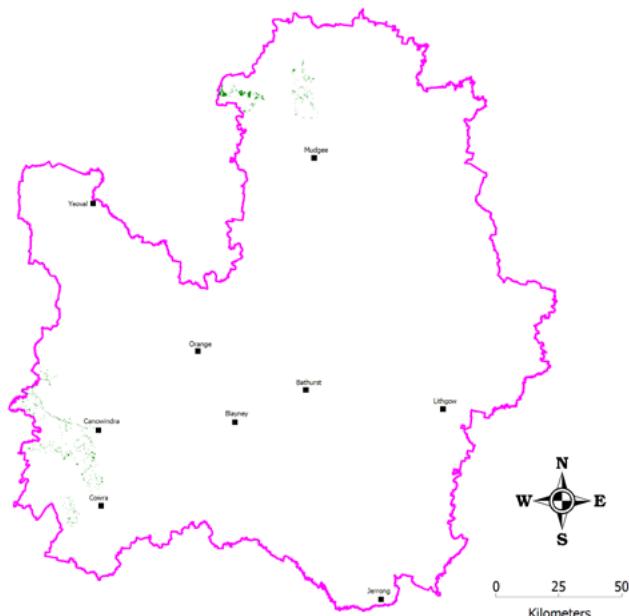


Figure 7 Floodplain Transition Woodlands- Keith Class

Calotis lappulacea, *Maireana enchylioides*, *Sclerolaena diacantha*, *Vittadinia cuneata*, black roly poly (*Sclerolaena muricata*), Queensland bluegrass (*Dichanthium sericeum*), *Aristida jerichoensis*, ruby saltbush (*Enchylaena tomentosa*), *Tetragonia tetragonoides*, *Eremophila debilis*, and bamboo grass (*Austrostipa verticillata*).

Endangered ecological communities

Inland grey box woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South bioregions, an EEC listed in NSW under the *Biodiversity Conservation Act 2016* and the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999*, is included in this vegetation class.

Examples from Central Tablelands region



Inland grey box – mixed box – white pine north-east of Gulgong.



Inland grey box – white box – white cypress pine east of Yeoval.

Western slopes grasslands

This vegetation class was recorded in a total of 95 ha within TSRs in the Central Tablelands Local Land Services region. It includes one PCT:

- derived grassland of the NSW South Western Slopes.

This vegetation type forms part of an EEC in NSW and is described later in this guide.

Distribution of vegetation class

Western slopes grasslands are broadly distributed throughout the northern and western parts of the Central Tablelands Local Land Services region.

Landscape position and vegetation description

Derived grassland communities result from the clearing of various grassy woodland and forest communities. It occurs on any landscape position formerly occupied by woodland and dry forest communities, from which these grassland communities are derived. This community typically occurs on footslopes, midslopes, upper slopes and crests, on all lithologies.

Canopy species are typically absent, usually cleared, from this vegetation class.

Common understorey species include *Acacia dealbata*, *Acacia genistifolia*, *Acacia mearnsii*, *Hibbertia obtusifolia*, *Kunzea ericoides* and *Lissanthe strigosa*.

Common groundlayer species include *Acaena ovina*, *Bothriochloa macra*, *Chloris truncata*, *Chrysocephalum apiculatum*, *Dichondra repens*, *Elymus scaber*, *Euchiton spp.*, *Hydrocotyle laxiflora*, *Joycea pallida*, *Microlaena stipoides*, *Panicum effusum*, *Poa sieberiana*, *Rumex brownii*, *Solenogyne spp.*, *Themeda australis* and *Wahlenbergia spp.*

Endangered ecological communities

Included in white box yellow box Blakely's red gum woodland, a CEEC listed in NSW under the *Biodiversity Conservation Act 2016* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*.

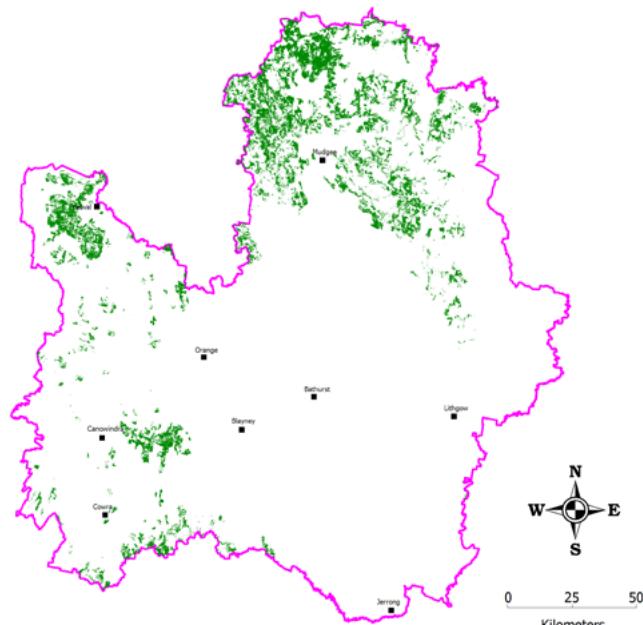


Figure 8 Western Slopes Grasslands - Keith Class

Examples from Central Tablelands region



Cemeteries are a great place for derived grasslands, such as this one south of Mudgee.

Temperate montane grasslands

This vegetation class was recorded in a total of 73 ha within TSRs in the Central Tablelands Local Land Services region. It includes one PCT:

- derived grassland of the South Eastern Highlands bioregion and South East Corner bioregions.

This vegetation type forms part of an Endangered Ecological Community in NSW and is described later in this guide.

Distribution of vegetation class

Temperate montane grasslands are broadly distributed throughout the central parts of the Central Tablelands Local Land Services region.

Landscape position and vegetation description

Derived grassland communities resulting from the clearing of various grassy woodland and forest communities. It may occur on any landscape position formerly occupied by woodland and dry and wet forest communities, from which these grassland communities are derived. This vegetation class typically occurs on footslopes, midslopes, upper slopes and crests, on all lithologies.

Canopy species are typically absent, usually cleared, from this vegetation class.

Common shrublayer species include *Acacia dealbata*, *Acacia genistifolia*, *Acacia mearnsii*, *Hibbertia obtusifolia*, *Kunzea ericoides*, and *Melichrus urceolatus*.

Common groundlayer species include *Acaena ovina*, *Bothriochloa macra*, *Chloris truncata*, *Chrysocephalum apiculatum*, *Dichondra repens*, *Euchiton spp.*, *Hydrocotyle laxiflora*, *Joycea pallida*, *Microlaena stipoides*, *Panicum effusum*, *Poa sieberiana*, *Rumex brownii*, *Solenogyne spp.*, *Themeda australis*, and *Wahlenbergia spp.*

Endangered ecological communities

Include snow gum, black Sallee, candlebark and ribbon gum grassy woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes bioregions, an EEC in NSW.

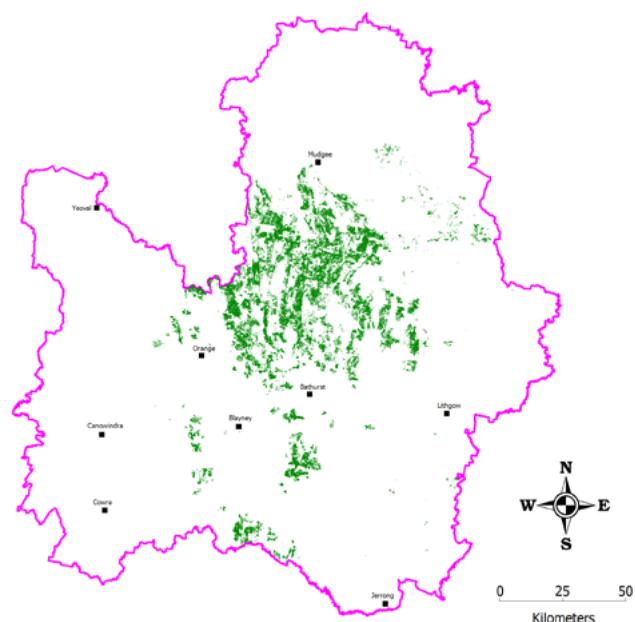


Figure 9 Temperate Montane Grasslands - Keith Class

Examples from Central Tablelands region



Temperate montane derived grasslands, north of Blayney.



Temperate montane derived grasslands, north of Bathurst.

Southern tableland dry sclerophyll forests

This vegetation class was recorded in a total of 72 ha within TSRs in the Central Tablelands region. It includes 11 PCTs:

- apple box - broad-leaved peppermint dry open forest of the South Eastern Highlands Bioregion
- brittle gum - broad-leaved peppermint - red stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion
- broad-leaved peppermint - brittle gum - red stringybark dry open forest on the South Eastern Highlands Bioregion
- central tableland sand-slope scribbly gum woodland
- Cudgegong Footslopes Forest
- Growee Ranges grey gum sheltered forest
- Growee Ranges grey gum-scribbly gum forest
- inland scribbly gum - red stringybark open forest on hills composed of silicous substrates in the mid-Murrumbidgee and upper Lachlan catchments, mainly in the western South Eastern Highlands Bioregion
- red box - tumbledown gum - red stringybark - long-leaved box dry woodland, upper NSW South Western Slopes Bioregion
- red stringybark - brittle gum - inland scribbly gum dry open forest of the tablelands, South Eastern Highlands Bioregion
- western Blue Mountains pagoda woodland.

Distribution of vegetation class

Southern tableland dry sclerophyll forests occur in the eastern and southern parts of the Central Tablelands region, with minor scattered occurrences in the central part.

Landscape position and vegetation description

Southern tablelands dry sclerophyll forests are found in broad flat gullies and undulating exposed and sheltered footslopes, and in hilly to undulating terrain mainly on the western fall of the tablelands. This vegetation class occurs on alluvial soils, or loamy soils on granites, as well as deep volcanic or granitic soils and loamy soils of moderate fertility.

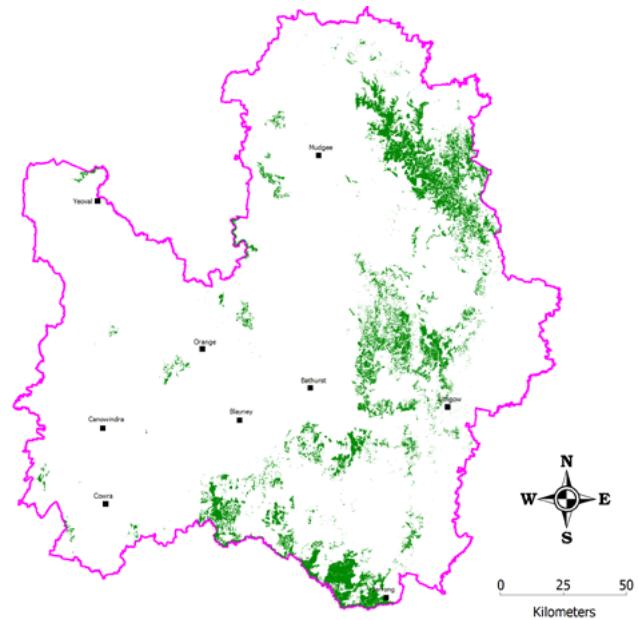


Figure 10 Southern Tableland Dry Sclerophyll Forests - Keith Class

Main canopy species include broad-leaved peppermint (*Eucalyptus dives*), brittle gum (*Eucalyptus mannifera*), red stringybark (*Eucalyptus macrorhyncha*), apple box (*Eucalyptus bridgesiana*), mountain gum (*Eucalyptus dalrympleana* subsp. *dalrympleana*), inland scribbly gum (*Eucalyptus rossii*), red box (*Eucalyptus polyanthemos* subsp. *polyanthemos*), tumbledown red gum (*Eucalyptus dealbata*), and long-leaved box (*Eucalyptus goniocalyx*).

Common shrub layer species include silver wattle (*Acacia dealbata*), *Cassinia longifolia*, *Cassinia laevis*, *Pultenaea microphylla* var. *microphylla*, *Phyllanthus hirtellus*, *Podolobium ilicifolium*, *Daviesia* spp., bgoad-leaved hickory (*Acacia falciformis*), *Acacia gunnii*, *Brachyloma daphnoides*, *Dillwynia phylicoides*, *Hibbertia obtusifolia*, and *Melichrus urceolatus*.

Common understorey species include *Elymus scaber*, snowgrass (*Poa sieberiana* var. *sieberiana*), *Microlaena stipoides* var. *stipoides*, *Stellaria pungens*, *Acaena ovina*, *Acaena novae-zelandiae*, *Glycine clandestina*, red-anther wallaby grass (*Rytidosperma pallida*), *Danthonia racemosa* var. *racemosa*, kangaroo grass (*Themeda australis*), *Hibbertia obtusifolia*, *Hydrocotyle laxiflora*, *Dianella revoluta* var. *revoluta*, *Gonocarpus tetragynus*, *Hovea linearis*, kidney weed (*Dichondra repens*), *Cheilanthes sieberi* subsp. *sieberi*, *Rytidosperma fulva*, *Dichelachne rara*, *Hypericum gramineum*, *Daucus glochidiatus*, *Rytidosperma racemosa*, and *Lomandra filiformis*.

Endangered ecological communities

May include tableland basalt forest in the Sydney Basin and South Eastern Highlands bioregions EEC, listed in NSW but not under EPBC Act.

Examples from Central Tablelands region



Broad leaved peppermint – mountain gum dry open forest, south of Blayney.



Western Blue Mountains padoga woodlands, east of Rylstone.



Apple box - broad-leaved peppermint dry open forest east of Blayney.



Red stringybark - inland scribbly gum dry open forest, north of Yetholme.

Eastern riverine forests

This vegetation class was recorded in a total of 67 ha within TSRs in the Central Tablelands region. It includes three PCTs:

- river oak forest
- river oak forest and woodland wetland of the NSW South Western Slopes and South Eastern Highlands bioregions
- western Hunter flats rough-barked apple forest.

Distribution of vegetation class

Eastern riverine forests in the Central Tablelands region are scattered throughout the eastern part of the region, along drainage lines, with a more abundant presence in the northeast of the region, north-east of Mudgee (western Hunter catchment).

Landscape position and vegetation description

Eastern riverine forests are found on streams and drainage lines at low to high altitudes on slopes and tablelands.

Main canopy species include river oak (*Casuarina cunninghamiana*), rough-barked apple (*Angophora floribunda*), yellow box (*Eucalyptus melliodora*), and there may be the occasional emergent white cypress pine (*Callitris glaucophylla*), white box (*Eucalyptus albens*), Blakely's red gum (*Eucalyptus blakelyi*), manna gum (*Eucalyptus viminalis*), and snow gum (*Eucalyptus pauciflora*).

Common shrub layer species include native olive (*Notelaea microcarpa* var. *microcarpa*), *Acacia implexa*, blackthorn (*Bursaria spinosa* subsp. *spinosa*), *Phyllanthus subcrenulatus*, *Callistemon sieberi*, *Dodonaea viscosa* subsp. *viscosa*, *Glochidion ferdinandi*, *Canthium odoratum*, *Pimelea neo-anglica*, *Leptospermum brachyandrum*, *Leptospermum brevipes*, Red Ash (*Alphitonia excelsa*), *Pittosporum undulatum*, *Hymenanthera dentata*, *Nyssanthes diffusa*, *Stephania japonica* var. *japonica*, *Pandorea pandorana*, and *Clematis glycinoides* var. *glycinoides*.

Common ground layer species include *Microlaena stipoides* var. *stipoides*, *Oplismenus imbecillis*, *Lomandra longifolia*, *Urtica incisa*, slender bamboo brass (*Austrostipa verticillata*), *Elymus scaber*, *Alternanthera denticulata*, *Persicaria maculosa*, *Ranunculus lappaceus*, *Carex incomitata*, *Carex appressa*, kidney weed (*Dichondra repens*), and *Adiantum aethiopicum*.

Endangered ecological communities

No EECs are recorded for this vegetation class.

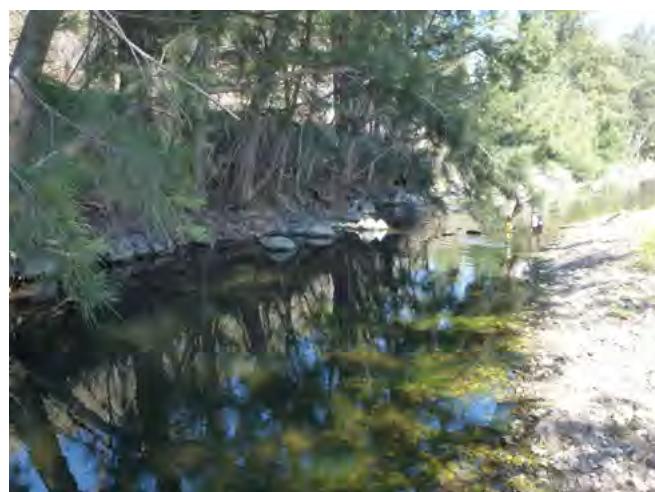


Figure 11 Eastern Riverine Forests - Keith Class

Examples from Central Tablelands region



River oak forest and woodland wetland on Belubula River near Canowindra.



River oak forest on the Turon River near Sofala.

Tableland clay grassy woodlands

This vegetation class was recorded in a total of 66 ha within TSRs in the Central Tablelands region. It includes two PCTs:

- ribbon gum - snow gum grassy forest on damp flats, eastern South Eastern Highlands Bioregion
- ribbon gum - snow gum grassy open forest on flats and undulating hills of the eastern tableland, South Eastern Highlands Bioregion.

Several of these vegetation types form part of an EEC in NSW and are described later in this guide.

Distribution of vegetation class

Tableland clay grassy woodlands are scattered through the higher regions in the centre and east of the Central Tablelands.

Landscape position and vegetation description

Tableland Clay Grassy Forests are an open eucalypt forest or woodland with sparse shrubs and dense grassy groundcover. It typically occurs on granite soils in gently undulating to flat terrain at altitudes between 600 and 1,100 m.

Main canopy species include *Eucalyptus viminalis*, *Eucalyptus pauciflora*, *Eucalyptus radiata* subsp. *radiata*, and *Eucalyptus stellulata*.

Shrub species are not common but include *Acacia dealbata* and *Cassinia longifolia*.

Common groundlayer species include *Acaena novae-zelandiae*, *Desmodium varians*, *Dichondra repens*, *Glycine clandestina*, *Gonocarpus tetragynus*, *Hypericum gramineum*, *Lomandra longifolia*, *Microlaena stipoides* var. *stipoides*, *Poa labillardierei* var. *labillardierei*, *Pteridium esculentum*, and *Themeda australis*.

Endangered ecological communities

Included in Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes Bioregions, an Endangered Ecological Community in NSW.



Figure 12 Tableland Clay Grass Woodlands - Keith Class

Examples from Central Tablelands region



Ribbon gum - snow gum grassy forest, near Yetholme.



Ribbon gum - snow gum open forest on flats and undulating hills, lower Mt Canobolas.

Southern tablelands wet sclerophyll forests

This vegetation class was recorded in a total of 55 ha within TSRs in the Central Tablelands region. It includes three PCTs:

- Central Tableland ribbon gum-apple gully forest
- ribbon gum - narrow-leaved peppermint grassy open forest on basalt plateau; Sydney Basin and South Eastern Highlands bioregions
- snow gum - mountain gum tussock grass-herb forest of the South Eastern Highlands Bioregion.

Several of these vegetation types form part of an EEC in NSW and are described later in this guide.

Distribution of vegetation class

Southern tablelands wet sclerophyll forests are restricted to higher altitude parts of the Central Tablelands Local Land Services region and are found along the ranges in the eastern part of the region and at Mt Canobolas, near Orange.

Landscape position and vegetation description

Southern tablelands wet sclerophyll forests are found on sheltered slopes and undulating plateau hills and on undulating ridges and slopes. They often occur on ridges and frost hollows on clay loams derived from a wide variety of substrates.

Main canopy species for this vegetation class include mountain gum (*Eucalyptus dalrympleana* subsp. *heptantha*), manna gum (*Eucalyptus viminalis*), narrow-leaved peppermint (*Eucalyptus radiata* subsp. *sejuncta*), brown barrel (*Eucalyptus fastigata*) and snow gum (*Eucalyptus pauciflora*).

Common shrub layer species include silver wattle (*Acacia dealbata*), blackwood (*Acacia melanoxylon*), *Lomatia myricoides*, *Monotoca scoparia*, *Leucopogon lanceolatus* var. *lanceolatus*, *Hibbertia obtusifolia* and *Exocarpos strictus*.

Common groundlayer species include *Lomandra longifolia*, *Dianella tasmanica*, Bracken (*Pteridium esculentum*), *Stellaria pungens*, *Viola hederacea*, *Gonocarpus tetragynus*, snowgrass (*Poa sieberiana* var. *sieberiana*), *Stylidium graminifolium*, *Lomandra filiformis* subsp. *coriacea*, *Microlaena stipoides* var. *stipoides*, *Wahlenbergia stricta*, *Viola betonicifolia*, and *Acaena ovina*.

Endangered ecological communities

May include tablelands snow gum, black sallee, candlebark and ribbon gum grassy woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes bioregions, an EEC in NSW.



Figure 13 Southern Tableland Wet Sclerophyll Forests - Keith Classs

Examples from Central Tablelands region



Snow gum - mountain gum tussock grass-herb forest, north of Yetholme.



Snow gum - mountain gum tussock grass forest, south of Oberon.

South east dry sclerophyll forests

This vegetation class was recorded in a total of 39 ha within TSRs in the Central Tablelands region. It includes one PCT:

- silvertop ash - broad-leaved peppermint dry shrub forest of the South Eastern Highlands Bioregion.

Distribution of vegetation class

South east dry sclerophyll forests in the Central Tablelands region occur almost exclusively between Jenolan and Jerrong, in the south-eastern corner of the region.

Landscape position and description of vegetation

This vegetation class occurs on shallow infertile sandy loams derived from sedimentary rocks and granites in a narrow band along the spine of the Great Dividing Range.

Main canopy species include silvertop ash (*Eucalyptus sieberi*), broad-leaved peppermint (*Eucalyptus dives*), narrow-leaved peppermint (*Eucalyptus radiata* subsp. *sejuncta*), and brittle gum (*Eucalyptus mannifera*).

Common shrub layer species include *Acacia gunnii*, *Acacia terminalis*, *Brachyloma daphnoides*, *Monotoca scoparia*, and *Persoonia linearis*.

Common groundlayer species include *Hibbertia obtusifolia*, *Lomandra filiformis* subsp. *coriacea*, *Poa sieberiana* var. *sieberiana*.

Endangered ecological communities

No EECs were recorded for this vegetation class.

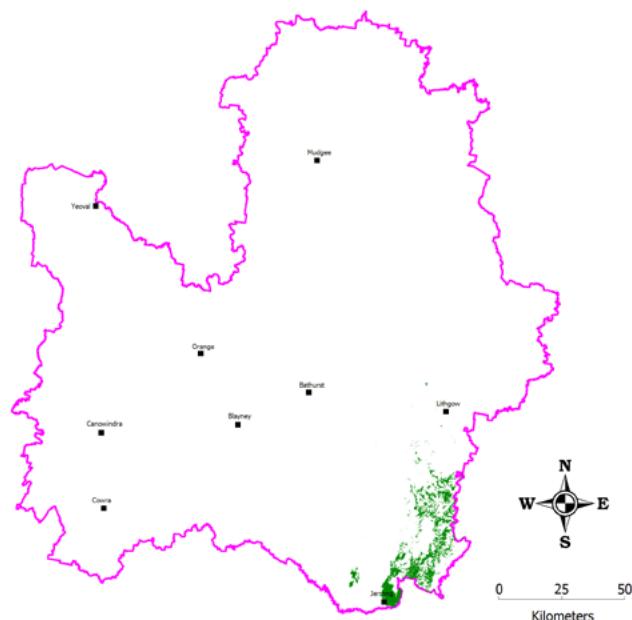


Figure 14 South East Dry Sclerophyll Forests - Keith Class

Examples from Central Tablelands region



Silvertop ash - broad-leaved peppermint dry shrub forest, north-east of Jerrong.

North west slopes dry sclerophyll woodlands

This vegetation class was recorded in a total of 39.8 ha within TSRs in the Central Tablelands region. It includes two PCTs:

- Capertee footslopes box-stringybark forest
- Hunter escarpment slaty gum-box forest.

Distribution of vegetation class

North-west slopes dry sclerophyll woodlands in the Central Tablelands region are concentrated in the north-eastern part of the region, with minor occurrences west of Orange.

Landscape position and vegetation description

North west slopes dry sclerophyll woodlands occur on steep hilly areas on volcanics, and on flats and rises on alluvial plains.

Main canopy species include white box (*Eucalyptus albens*), red stringybark (*Eucalyptus macrorhyncha*), rough-barked apple (*Angophora floribunda*), narrow-leaved ironbark (*Eucalyptus crebra*), white cypress pine (*Callitris glauophylla*) and black cypress pine (*Callitris endlicheri*).

Common shrub layer species include currawang (*Acacia doratoxylon*), sticky daisy bush (*Olearia elliptica*), native olive (*Notelaea microcarpa* var. *microcarpa*), *Pimelea neo-anglica*, *Canthium odoratum*, *Cassinia quinquefaria*, *Melichrus urceolatus*, sticky wallaby bush (*Beyeria viscosa*), spurwing wattle (*Acacia triptera*), *Pittosporum undulatum*, red ash (*Alphitonia excelsa*), *Dodonaea viscosa* subsp. *angustifolia*, *Clematis glycinoides* var. *glycinoides*, *Eustrephus latifolius* and blackthorn (*Bursaria spinosa* subsp. *spinosa*).

Common ground layer species include *Oplismenus aemulus*, *Gahnia aspera*, *Desmodium brachypodium*, kidney weed (*Dichondra repens*), snowgrass (*Poa sieberiana* var. *sieberiana*), *Aristida ramosa*, *Adiantum aethiopicum*, *Cheilanthes sieberi* subsp. *sieberi*, *Geranium solanderi* var. *solanderi*, *Pellaea calidirupium*, *Cyperus eragrostis*, barbed wire grass (*Cymbopogon refractus*), *Microlaena stipoides* var. *stipoides*, *Pomax umbellata* and red-anther wallaby grass (*Rytidosperma pallidum*).

Endangered Ecological Communities

Includes white box woodland, part of the white box yellow box Blakely's red gum woodland, a CEEC listed in NSW under the *Biodiversity Conservation Act 2016* and the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999.

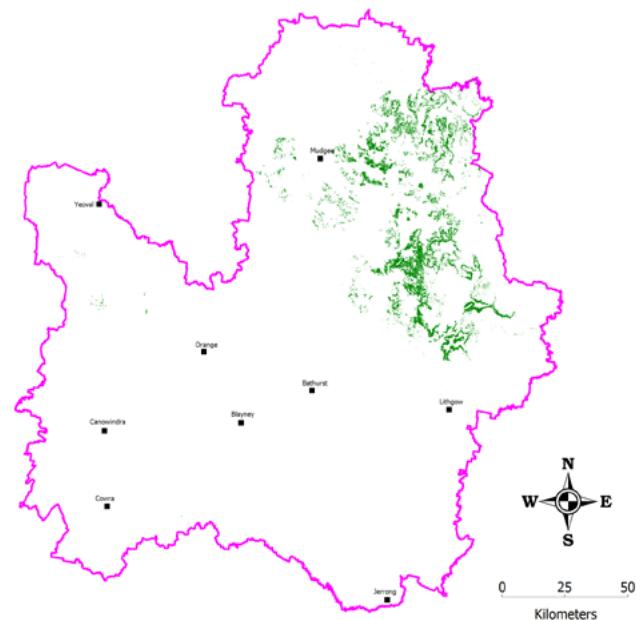


Figure 15 North West Slopes Dry Sclerophyll Woodlands - Keith Class

Examples from Central Tablelands region



Capertee footslopes box-stringybark forest near Glen Davis.



Capertee footslopes box-stringybark forest near Glen Davis.



Endangered and threatened ecological communities

Fuzzy box on alluvial soils of South West Slopes, Darling Riverine Plains and the Brigalow Belt South

This EEC is described as a tall woodland or open forest, dominated by fuzzy box (*Eucalyptus conica*), often with grey box (*Eucalyptus microcarpa*), yellow box (*Eucalyptus melliodora*), or kurrajong (*Brachychiton populneus*). Buloke (*Allocasuarina luehmannii*) is common in places. Shrubs are generally sparse, and the groundcover moderately dense, although this will vary with season.

For more information on this EEC refer to www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10335

Inland grey box woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South bioregions

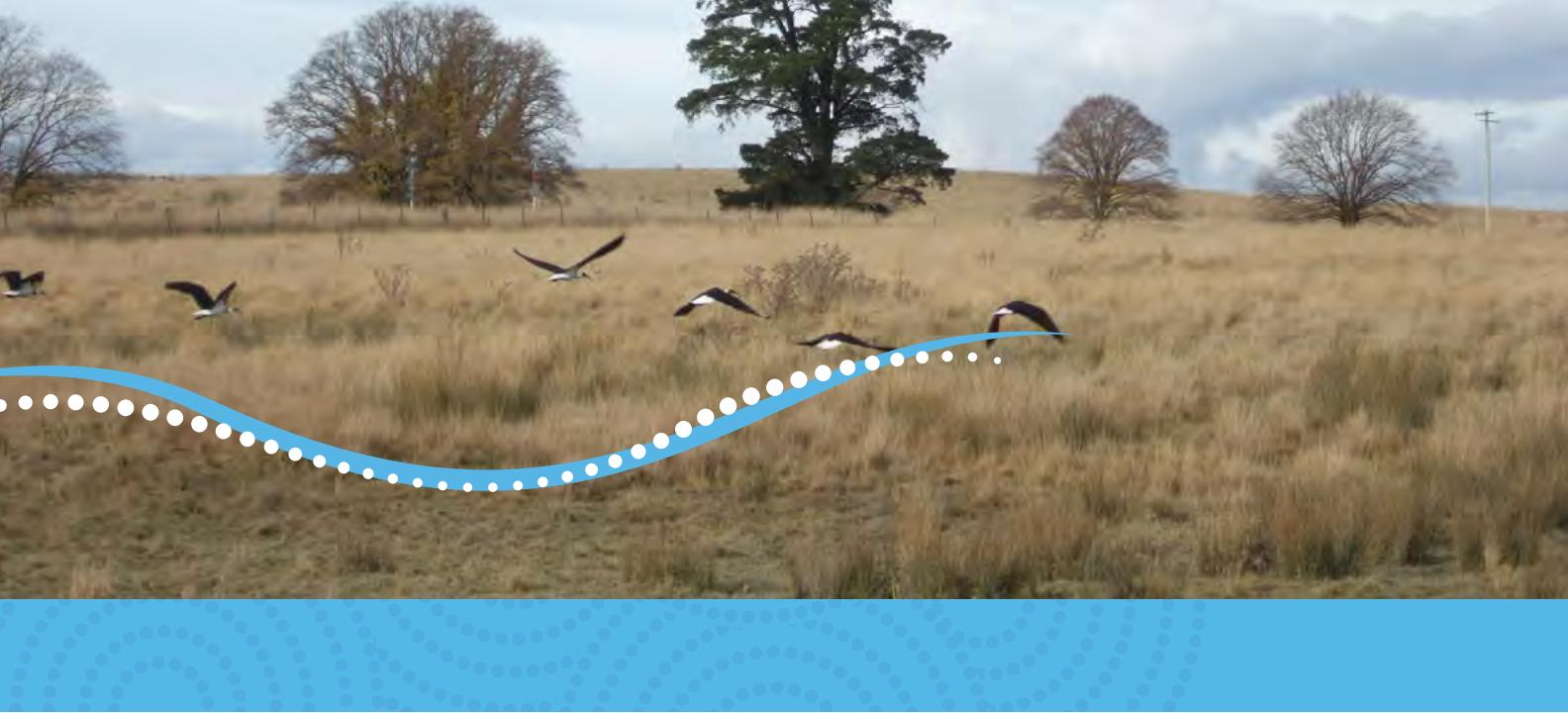
This EEC is described as woodlands in which the most characteristic tree species, *Eucalyptus microcarpa* (Inland grey box), is often found in association with *E. populnea* subsp. *bimbel* (bimble or poplar box), *Callitris glaucophylla* (white cypress pine), *Brachychiton populneus* (kurrajong), *Allocasuarina luehmannii* (bulloak) or *E. melliodora* (yellow box), and sometimes with *E. albens* (white box). Shrubs are typically sparse or absent, although this component can be diverse and may be locally common, especially in drier western portions of the community. A variable ground layer of grass and herbaceous species is present at most sites. At severely disturbed sites the ground layer may be absent. The community generally occurs as an open woodland 15 to 25 m tall, but in some locations the overstorey may be absent as a result of past clearing or thinning, leaving only an understorey.

For more information on this EEC refer to www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20072

Tableland basalt forest in the Sydney Basin and South Eastern Highlands bioregions

This EEC is described as is dominated by an open eucalypt canopy of variable composition. *Eucalyptus viminalis*, *E. radiata*, *E. dalrympleana* subsp. *dalrympleana* and *E. pauciflora* may occur in the community in pure stands or in varying combinations. The community typically has an open canopy of eucalypts with sparse mid-story shrubs (e.g. *Acacia melanoxylon* and *A. dealbata*) and understorey shrubs (e.g. *Rubus parvifolius*) and a dense groundcover of herbs and grasses, although disturbed stands may lack either or both of the woody strata. The structure of the community varies depending on past and current disturbances, particularly fire history, clearing and grazing. Contemporary tree-dominated stands of the community are largely relics or regrowth of originally taller forests and woodlands, which are likely to have had scattered shrubs and a largely continuous grassy groundcover. At some sites, mature trees may exceed 30 m tall, although regrowth stands may be shorter than 10 m.

For more information on this EEC refer to www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20074



Tablelands snow gum, black sallee, candlebark and ribbon gum grassy woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes bioregions

This EEC is described as an open-forest, woodland or open woodland. This community may also occur as a secondary grassland where the trees have been removed, but the groundlayer remains. The main tree species are *Eucalyptus pauciflora* (snow gum), *E. rubida* (candlebark), *E. stellulata* (black sallee) and *E. viminalis* (ribbon gum), either alone or in various combinations. Other eucalypt species may occur. A shrub layer may be present and sub-shrubs are common. The most common shrubs include *Melicytus* sp. 'Snowfileds' (gruggly-bush) and *Melichrus urceolatus* (urn heath). The ground layer is grassy, with the most common species including *Themeda australis* (kangaroo grass), *Poa* spp. (snow-grasses), *Austrostipa* spp. (spear-grasses) and *Rytidosperma* spp. (wallaby-grasses). Sites in high condition have a range of forb (wildflower) species, including *Leptorhynchus squamatus* (scaly-buttons), *Chrysocephalum apiculatum* (common everlasting) and *Asperula conferta* (native woodruff). Many threatened flora and fauna species have been recorded in this community. The community commonly occurs on valley floors, margins of frost hollows and on footslopes and undulating hills. It occurs between approximately 600 and 1,400 m in altitude on a variety of substrates, including basalt, sediments, granite, colluvium and alluvium.

For more information on this EEC refer to www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20259

White box yellow box Blakely's red gum woodland

This EEC is described as an open woodland community (sometimes occurring as a forest formation), in which the most obvious species are one or more of the following: white box (*Eucalyptus albens*), yellow box (*E. melliodora*) and Blakely's red gum (*E. blakelyi*). Intact sites contain a high diversity of plant species, including the main tree species, additional tree species, some shrub species, several climbing plant species, many grasses and a very high diversity of herbs. The community also includes a range of mammal, bird, reptile, frog and invertebrate fauna species. Intact stands that contain diverse upper and mid-storeys and groundlayers are rare. Modified sites include the following:

- areas where the main tree species are present ranging from an open woodland formation to a forest structure and the ground layer is predominantly composed of exotic species
- sites where the trees have been removed and only the grassy ground layer and some herbs remain.

The Australian Government listing of white box-yellow box-Blakely's red gum grassy woodland and derived native grassland is slightly different to the NSW listing. Areas that are part of the Australian Government listed ecological community must have either:

- an intact tree layer and predominately native ground layer
- an intact native ground layer with a high diversity of native plant species but no remaining tree layer.

For more information on this EEC refer to www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10837



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