

Attachment G – Assessment of White Box-Yellow Box- Blakely's Red Gum Grassy Woodland and Derived Native Grassland against the EPBC Act Listing

General Description

Yellow Box White Box Blakely's Gum Grassy Woodland and Derived Native Grassland (Box Gum Woodland) is listed a Critically Endangered Threatened Ecological Community (TEC) under the EPBC Act. The community occurs in the Brigalow Belt South, Nandewar, New England Tableland, South Eastern Queensland, Sydney Basin, NSW North Coast, South Eastern Highlands, South East Corner, NSW South Western Slopes, Victorian Midlands and Riverina Interim Biogeographic Regionalisation for Australia (IBRA) Bioregions. This broadly encompasses the western slopes and tablelands of the Great Dividing Range from Southern Queensland through NSW and ACT, to Victoria. The TEC generally occurs on hilly to undulating landscapes in areas with soils of moderate fertility derived from a range of lithologies, including alkaline and acid volcanics, granites, sediments, serpentinites and metamorphics. Box Gum Woodland is dominated by a range of eucalypts, most commonly including White Box (*Eucalyptus albens*), Yellow Box (*E. melliodora*) and/or Blakely's Red Gum (*E. blakelyi*) and in some areas the Grey Box species (*E. microcarpa* and/or *E. moluccana*). The community also includes 'derived grasslands' that have resulted from the loss of the characteristic tree layer but retain an intact ground layer.

Project Area Description

Within the project area Box Gum Woodland tends to occur in the lower lying areas between hills, including along minor ephemeral drainage lines. It is therefore associated with deeper soils than surrounding areas, which have accumulated in lower lying areas than the surrounding vegetation communities. Occurrences in the south-west of the disturbance area are limited to degraded occurrences of derived native grasslands, and in the north-east the TEC is limited to small patches surrounded by other vegetation communities, with the largest patches occurring along the central eastern boundary of the project area.

Within the project area, the TEC is typically dominated by a sparse regrowth canopy of *Eucalyptus blakelyi* (Blakely's Red Gum), and to a lesser extent *Eucalyptus melliodora* (Yellow Box). Species occurring less frequently include *Eucalyptus cinerea* (Argyle Apple) and *Eucalyptus globoidea* (White Stringybark). Due to what is evidently colonisation after cessation of clearing, likely due to downhill seed wash, by several species common on site, the understorey and shrub layer have dense occurrences in many areas of *Allocasuarina littoralis* (Black She-oak) and *Cassinia sifton* (Sifton Bush), which are likely to have been rare in historical occurrences of the TEC. Other shrub species occurring include *Lissanthe strigosa*, *Acacia ulicifolia* (Prickly Moses), *Leptospermum trinervium* (Slender Tea-tree), and *Micromyrtus ciliata* (Fringed Heath-myrtle).

The ground layer is grassy and is dominated variously by *Microlaena stipoides* var. *stipoides* (Weeping Grass), *Aristida ramosa* (Threeawn Grass), *Poa sieberiana* (Snow Grass), *Eragrostis leptostachya* (Paddock Lovegrass), and *Rytidosperma pallidum* (Redanther Wallaby Grass). Other grasses and graminoids present include *Sporobolus creber* (Slender Rat Tail Grass), *Lomandra filiformis* (Wattle Mat-rush), and *Lepidosperma gunnii*. Native forbs present include *Lagenophora stipitata* (Common Lagenophora), *Goodenia hederacea* (Forest Goodenia), *Gonocarpus tetragynus* (Poverty Raspwort), and *Chrysocephalum apiculatum* (Common Everlasting).



Intact

This intact condition zone of Box Gum Woodland comprises small patches of vegetation in the north of the disturbance area, and larger patches in the east of the project area, with some further isolated patches occurring in the south of the project area. Vegetation is as described above. Large old growth trees are rare, and most trees are young indicating clearing from a previous clearing event, however weeds are relatively uncommon, and mostly consist of scattered individuals of small, wind dispersed herbs including *Gamochaeta pensylvanica* (Cudweed) and *Hypochaeris radicata* (Catsear).

Photograph 1: Box Gum Woodland – Intact within the project area



Regeneration

The regeneration condition zone of Box Gum Woodland occurs as scattered patches in the north-east, south-east, and south-west of the project area, and as two small patches in the disturbance area. This condition zone is characterised by very young regrowth trees, many only of a shrub size, and a higher density of shrub regrowth than the Intact form.

Photograph 2: Box Gum Woodland – Regeneration within the project area



Derived Native Grassland

The Derived Native Grassland (DNG) condition zone of Box Gum Woodland occurs in the south-west of the project area. This condition is generally dominated by native grass species, with scattered occurrences of native forbs. It mostly lacks canopy and shrub species due to historical clearing for grazing. Due to a history of grazing, coverage of exotic grass species and forbs is high, with particularly prevalent species including the grasses *Anthoxanthum odoratum* (Sweet Vernal Grass), *Paspalum dilatatum* (Paspalum) and *Eragrostis curvula* (African Lovegrass). Exotic species are sub-dominant in some areas of these grasslands.

Photograph 3: Box Gum Woodland – DNG within the project area



Alignment with EPBC Act Listed Communities

The vegetation mapped as PCT 3373 is consistent with the EPBC Act listed critically endangered ecological community *White Box – Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. All condition zones match the following key diagnostic characteristics for the TEC as defined in the Approved Conservation Advice (DCCEEW, 2023):

- The ecological community occurs in the following bioregions: NSW North Coast, NSW South Western Slopes, Riverina, South Eastern Queensland, South East Corner, South East Coastal Plain, South Eastern Highlands, Southern Volcanic Plain, Sydney Basin and Victorian Midlands;
- It has, or previously had, an overstorey dominated or co-dominated by *Eucalyptus albens* (white box) and/or *E. melliodora* (yellow box) and/or *E. blakelyi* (Blakely's red gum) (applicable across the entire range of the ecological community); or,
- It has a predominantly native ground layer;
- Tussock grasses are conspicuous in the ground layer (except in some situations, such as under dense groves of shrubs or regenerating trees), usually with several native species from some the following genera: *Austrostipa*, *Bothriochloa*, *Chloris*, *Cymbopogon*, *Dichanthium*, *Microlaena*, *Poa*, *Themeda*, *Rytidosperma* or *Sorghum*;
- Amongst the grass tussocks and sometimes in swathes, a range of broad-leaved forbs and petaloid monocots (e.g. lilies sens. lat.) may be a major component of the plant diversity; and



- While shrubs may be dominant locally within areas of the ecological community, areas of native vegetation with a more continuous shrub layer, in which the average shrub cover of the whole patch is greater than 30%, are considered to be consistent with a shrubby woodland and so are not part of the listed ecological community. In assessing this, the effects of disturbance need to be considered, for example where heavy grazing may result in high densities of shrubs during a recovery phase.

Although shrub cover including young *Allocasuarina littoralis* individuals and *Cassinia sifton* shrubs are dense within patches and sometimes greater than 30% cover, this is attributable to the young, regrowth nature of vegetation, and as such does not exclude occurrences, so as described above, has been treated as a function of disturbance when assessed onsite occurrences against the key diagnostic criteria.

The EPBC Act listing includes condition criteria for assessing whether areas meet the listed TEC. An assessment has been made against each condition zone and patch to determine if areas meet the EPBC Act listed TEC. It should be noted, for the purposes of this assessment, *Cynodon dactylon* var. *dactylon* is considered as exotic/naturalised, as per its designation in the Flora of Australia. While under the BAM this species is required to be assessed as native due to the designation of it as native in the Flora of NSW, as reported in the PlantNet database (Botanic Gardens Trust, 2025), this is not relevant to the EPBC Act assessment.

The Intact, Regeneration and DNG condition zones of the PCT meet the listing for the EPBC Act as:

- Patch sizes are greater than 0.1 ha;
- Ground layer is predominately native (>50% cover perennial native species);
- More than 12 natives species are present in the ground layer; and
- At least one important species is present (threatened species, species sensitive to grazing, rare species, or regionally important species).

Table 1 outlines the criteria for three eligible condition classes of Box Gum Woodland listed in Approved Conservation Advice. According to Table 1 below, all three condition states of Box Gum Woodland within the project area meet Class B. It is unlikely that any of the Intact occurrences meet the Class A condition thresholds, due to the young regrowth nature of the project area. Nevertheless, all occurrences of Box Gum Woodland within the project area align with the EPBC Act listing for the TEC.

Table 1 Box Gum Woodland Condition Classes and Thresholds

Condition Classes	Criteria Thresholds
Class A Good quality understorey and mature overstorey both present.	0.1 ha (1,000 m ²) or larger The ground layer is predominantly native* and; the understorey contains at least 12 native, non-grass species (such as forbs, shrubs, ferns and sedges) and; at least one of the understorey species should be a species recognised as 'important' (e.g. grazing sensitive, regionally significant, listed threatened or uncommon species) (see 'Important' column in plant species list at Appendix A – Species lists) and; the patch contains 10 or more mature trees* per hectare consistent with the key diagnostics for the ecological community.
Class B	0.1 ha (1,000 m ²) or larger The ground layer is predominantly native* and;



Condition Classes	Criteria Thresholds
Good quality understorey present. Characteristic trees may be absent.	the understorey contains at least 12 native, non-grass species (such as forbs, shrubs, ferns and sedges) and; at least one of the understorey species should be a species recognised as 'important' (e.g. grazing sensitive, regionally significant, listed threatened or uncommon species) (see 'Important' column in plant species list at Appendix A – Species lists).
Class C Allows for a lower diversity in the understorey in areas where there is regeneration and/or tree density may be relatively dense	2 ha (20,000m ²) or larger The ground layer is predominantly native* and; The patch contains 20 or more mature trees* per hectare and/or; The patch contains natural regeneration of dominant overstorey eucalypts*.



Client Name
Report Title

Click to enter a date
SLR Project No.: XXX.XXXXX.XXXXX
SLR Ref No.: Attachment G - Assessment of White Box-
Yellow Box-Blakely's Red Gum Grassy Woodland and
Derived Native Grassland against the EPBC Act Listing



Client Name
Report Title

Click to enter a date
SLR Project No.: XXX.XXXXX.XXXXX
SLR Ref No.: Attachment G - Assessment of White Box-Yellow Box-Blakely's Red Gum
Grassy Woodland and Derived Native Grassland against the EPBC Act Listing

A3 Landscape placeholder – Remove if not needed.



Client Name
Report Title

Click to enter a date
SLR Project No.: XXX.XXXXX.XXXXX
SLR Ref No.: Attachment G - Assessment of
White Box-Yellow Box-Blakely's Red Gum
Grassy Woodland and Derived Native
Grassland against the EPBC Act Listing

