

DORRIGO PLATEAU DIGITAL CORRIDOR VEGETATION MAPPING AND KOALA HABITAT RESTORATION PROJECT

Plant Community Type (PCT) Descriptions





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Keith, (2004), Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and the ACT

Bionet Vegetation Classification, © State of New South Wales and Office of Environment and Heritage 2018





Why is mapping important?

The Dorrigo Plateau is a unique landscape. It lacks comprehensive digital vegetation mapping, so we started with the most important bits: the regional biodiversity corridors. Vegetation mapping is crucial for understanding plant communities and planning effective landscape rehabilitation. It helps landholders select the right native species mix for restoring disturbed areas and plan their land use accordingly.

Why are corridors important for Koala conservation?

Koalas require large, interconnected habitats for feeding, movement, and breeding. Wildlife corridors provide safe passage across the landscape, connecting larger habitat areas such as National Parks. These corridors are crucial for enabling koala populations to safely navigate when environmental threats such as droughts, fires, floods, and climate change mean their home range is no longer suitable. Koalas are a flagship iconic species but for every koala, there are thousands of other lesser-known species that are just as important that will also benefit.

What is a Plant Community Type?

Plant community types (PCT's) represent the most detailed category within the NSW vegetation classification hierarchy. They identify and characterise consistent groupings of native plant species, considering factors like soil quality, temperature, moisture, and other environmental variables. These communities are defined by recurring combinations of trees, shrubs, and ground cover plants that commonly grow together. Each PCT falls under a vegetation class, which is assigned to a particular vegetation formation (eg Rainforest, Woodland).

What can landholders do to help koala conservation?

- **EVALUATE:** Assess your property's current habitat and pinpoint areas suitable for habitat restoration. Consider factors such as vegetation types, connectivity to existing habitats, and access to water sources.
- **PLAN:** Create a restoration plan tailored to your property. This could range from mapping different vegetation zones to a comprehensive property plan that integrates productive aspects like grazing. If you're new to this, reach out to Landcare or local Bush Regeneration contractors for guidance.
- **PLANT:** Use our Koala Habitat Species List as a guide.. You can begin with small steps and expand your project gradually. Visit the Dorrigo Landcare Nursery at the showground for expert advice.
- **Collaborate:** Share plans with neighboring landholders, and environmental groups to establish wildlife corridors and enhance koala habitat connectivity.
- **MONITOR:** Regularly assess how effectively habitat restoration is progressing on your property. Keep an eye out for koalas and report any sightings to help track their presence across the landscape.

PCT 3031: Northern Escarpment Coachwood-Beech Rainforest

Vegetation Formation (Keith 2004): Rainforests Vegetation Class (Keith 2004): Northern Warm Temperate Rainforests Threatened Ecological Community: N/A Koala Habitat: N/A



Description:

- This PCT generally occurs in sheltered gullies and cooler sites. It occurs in corridors 1 and 2 in the study area on sedimentary and metasedimentary geology, namely clay rich siltstone.
- This community is widespread on the Dorrigo Plateau, however it is generally found as a regrowth community dominated by *Acacia melanoxylon*, exotics and regenerating Antartic Beech, Callicoma, Coachwood, Sassafras and Prickly Ash. At higher elevations on basalt it can grade into PCT 3052.
- The BioNet Vegetation Classification describes the community as: "Very tall to extremely tall rainforest, which occurs on the escarpment and higher ranges between Washpool National Park and Barrington Tops."

Canopy	Mid Story	Ground
Ceratopetalum apetalum Doryphora sassafras Orites excelsus Caldcluvia paniculosa Callicoma serratifolia Nothofagus moorei	Cryptocarya meissneriana	Lomandra spicata Drymophila moorei Blechnum wattsii Blechnum cartilagineum

PCT 3032: Northern Escarpment Sassafras-Booyong-Corkwood Rainforest

Vegetation Formation (Keith 2004): Rainforests

Vegetation Class (Keith 2004): Northern Warm Temperate Rainforests Threatened Ecological Community: Association with: Lowland Rainforest in

the NSW North Coast and Sydney Basin Bioregions

Koala Habitat: Koalas will utilise this PCT where it has Blue Gum (*Eucalyptus saligna*) present as emergents or in stands.



Description:

- This PCT generally occurs in sheltered gullies and cooler sites. It occurs in corridors 1 and 2 in the study area, on sedimentary and metasedimentary geology, namely clay rich siltstone.
- This community is widespread on the Dorrigo Plateau, however it is generally found as a regrowth community dominated by Booyong, Sassafras, Corkwood, Brush Box and emergent Blue Gum.
- The BioNet Vegetation Classification describes the community as: "Very tall to extremely tall dense rainforest, or occasionally extremely tall eucalypt open forest with a dense rainforest subcanopy, which occurs extensively on the escarpment and adjacent ranges north from Barrington Tops.

F	Canopy	Mid Story	
	Caldcluvia paniculosa Heritiera actinophylla Doryphora sassafras Schizomeria ovata	Tasmannia insipida Pittosporum multiflorus Palmeria scandens Neolitsea dealbata	Epiphytic ferns (e.g. Arthropteris tenella and Asplenium australasicum)



PCT 3033: Northern Escarpment Sassafras-Prickly Ash Rainforest

Vegetation Formation (Keith 2004): Rainforests

Vegetation Class (Keith 2004): Northern Warm Temperate Rainforests **Threatened Ecological Community:** N/A

Koala Habitat: Koalas will utilise this PCT where it has Blue Gum (*Eucalyptus saligna*) present as emergents or in stands.



Description:

- This PCT generally occurs in warmer and more exposed sites than PCT 3031 sites and at higher elevations than PCT 3031. It occurs in corridors 1, 2 and 3 in the study area on sedimentary and metasedimentary geology, namely clay rich siltstone.
- This community is widespread on the Dorrigo Plateau, at higher elevations and can be highly disturbed. It is often found as a regrowth community dominated by Callicoma, *Acacia melanoxylon*, exotics and regenerating Sassafras, Prickly Ash and Coachwood.
- The BioNet Vegetation Classification describes the community as: "Very tall to extremely tall dense rainforest, which occurs extensively on the escarpment and adjacent ranges north from Barrington Tops.

Canopy	Mid Story	
Doryphora sassafras Orites excelsa Caldcluvia paniculosa Ceratopetalum apetalum	Tasmannia insipida Pittosporum multiflorus Palmeria scandens Schizomeria ovata Sloanea woollsii Polyosma cunninghamii Arthropteris tenella	Epiphytic ferns (e.g. Arthropteris tenella and Asplenium australasicum)



PCT 3052: Northern Escarpment Antarctic Beech Rainforest

Vegetation Formation (Keith 2004): Rainforests Vegetation Class (Keith 2004): Cool Temperate Rainforests Threatened Ecological Community: N/A



Koala Habitat: These remnants will provide koala refuge and may provide feed trees where Ribbon gum (*E. nobilis*) & messmate (*E.obliqua*) are present.



Description:

- This PCT is generally found in sheltered gullies and is always dominated by Antarctic Beech. It occurs in parts of corridor 2 and within corridor 3 in the study area on Basalt soils, generally above 1200m asl.
- This community is widespread on the Dorrigo Plateau, at higher elevations, in cold, very wet locations on deep soils. It will sometimes have emergent large Eucalypts such as E.nobilis, E.obliqua and E.fastigata (brown barrel). A mid stratum of dense Soft Tree Fern is common.
- The BioNet Vegetation Classification describes the community as: "A very tall dense rainforest, which is disjunct on the plateau escarpment south-west of Dorrigo and on Barrington Tops, with possible scattered occurrences in the Nowendoc area, south-east of Walcha."

Canopy	Mid Story	Ground
Nothofagus moorei Doryphora sassafras Eucalyptus obliqua Eucalyptus fastigata	Elaeocarpus holopetalus Coprosma quadrifida Dicksonia antarctica	Smilax australis

PCT 3206: Northern Escarpment Corkwood-Brush Box Wet Forest

Vegetation Formation (Keith 2004): Wet Sclerophyll Forests

Vegetation Class (Keith 2004): Northern Escarpment Wet Sclerophyll Forests

Threatened Ecological Community: N/A

Koala Habitat: Contains koala high use trees.



Description:

- This wet sclerophyll community is widespread on the Dorrigo Plateau, on siltstone derived soils. It is generally found in sheltered gullies and slopes in corridors 1 and 2. In our study area it is always dominated by *Eucalyptus saligna*, often *E.microcorys* and Brush Box. Callicoma regrowth is also mostly present in this community mid story.
- The BioNet Vegetation Classification describes the community as: " Very tall to extremely tall, sclerophyll open forest with mid-dense to dense mesic tree subcanopy or mid-stratum, or rarely very tall rainforest. This PCT occurs on the escarpment ranges from south-east of Tenterfield to north-west of Taree, with a disjunct southern occurrence on Barrington Tops.

Canopy	Mid Story	Ground
Eucalyptus microcorys Lophostemon confertus Eucalyptus saligna Eucalyptus campanulata Eucalyptus laevopinea Eucalyptus pilularis	Caldcluvia paniculosa Schizomeria ovata Tasmannia insipida Trochocarpa laurina Cryptocarya rigida Synoum glandulosum	Blechnum cartilagineum



PCT 3207: Northern Escarpment Layered Blackbutt Fern Forest

Vegetation Formation (Keith 2004): Wet Sclerophyll Forests

Vegetation Class (Keith 2004): Northern Escarpment Wet Sclerophyll Forests

Threatened Ecological Community: N/A

Koala Habitat: Contains koala occasional use trees.



Description:

- This wet sclerophyll community is widespread on the Dorrigo Plateau, on clay-rich metasediments, namely siltstone derived soils. It is generally found in exposed sites in corridors 1 and 2. In our study area it can be dominated by *E.campanulata* and also, *E.obliqua, E.dorrigoensis* and *E.saligna*. It can grade into PCT 3033 in sheltered gullies.
- The BioNet Vegetation Classification describes the community as: "Very tall to extremely tall, sclerophyll open forest with variable, mixed small tree, shrub and grass components, which occurs on the escarpment ranges from south-east of Tenterfield to north-west of Taree, with a disjunct southern occurrence on Barrington Tops. "

Canopy	Mid Story	Ground	
Eucalyptus campanulata Eucalyptus obliqua Eucalyptus saligna Eucalyptus cameronii Eucalyptus laevopinea Eucalyptus nobilis	Cyathea australis Persoonia media Elaeocarpus reticulatus Acacia melanoxylon Caldcluvia paniculosa Trochocarpa laurina Banksia integrifolia	Hibbertia scandens Hibbertia dentata Smilax australis Lomandra longifolia Pteridium esculentum Poa sieberiana Dianella caerulea Blechnum cartilagineum	

PCT 3287: Northern Escarpment Messmate Cool Wet Forest

Vegetation Formation (Keith 2004): Wet Sclerophyll Forests **Vegetation Class (Keith 2004):** Northern Tableland Wet Sclerophyll Forests **Threatened Ecological Community:** N/A

Koala Habitat: Contains koala occasional use trees.





Description:

- This wet sclerophyll community is common on the Dorrigo Plateau at elevations of 1000-1400m asl where mean annual rainfall is 900-1900 mm. Occurring on basalt soils, it is generally found in sheltered sites in corridor 2 and 3. In our study area it can be dominated by *Eucalyptus nobilis* and also, *E.obliqua, E.fastigata* and Antarctic Beech. It can grade into PCT 3288 on drier, more exposed sites and can also grade into the Antarctic Beech type, 3052 in protected gullies.
- The BioNet Vegetation Classification describes the community as: "A tall to very tall moist shrub/grass sclerophyll open forest restricted to high, cold wet ranges along the south-east rim of the New England Tableland from Barren Mountain south to Ben Halls Gap, and on Barrington Tops.

Canopy	Mid Story	Ground
Eucalyptus obliqua Eucalyptus fastigata Eucalyptus nobilis	Acacia melanoxylon Banksia integrifolia Trochocarpa montana Lomatia arborescens Coprosma quadrifida Leucopogon lanceolatus Dicksonia antarctica	Poa sieberiana Lomandra longifolia Pteridium esculentum Blechnum nudum Smilax australis Clematis aristata

PCT 3288: Northern Escarpment Messmate Moist Grassy Forest

Vegetation Formation (Keith 2004): Wet Sclerophyll Forests **Vegetation Class (Keith 2004):** Northern Tableland Wet Sclerophyll Forests **Threatened Ecological Community:** N/A

Koala Habitat: Contains koala occasional use trees.



Description:

- This wet sclerophyll community is common at elevations of 850-1450 metres asl with mean annual rainfall of 850-1500 mm, and may be subject to frequent frost and occasional winter snow. On the Dorrigo Plateau, it occurs on basalt soils and is generally found on exposed sites in corridor 3. In our study area it can be dominated by *Eucalyptus obliqua*, commonly with *E. nobilis* and occasionally *E. campanulata* so is similar to PCT 3287 but occurs where it is dry or exposed and hence will have a grassier understorey.
- The BioNet Vegetation Classification describes the community as: "Very tall moist grassy sclerophyll open forest of high, cool, fertile environments of the lower northern escarpment rim from Mt Royal north to Nowendoc, Mummel Gulf, Ebor and Mt Hyland.

Canopy	Mid Story	Ground
Eucalyptus obliqua Eucalyptus nobilis Eucalyptus campanulata	Acacia melanoxylon Leucopogon lanceolatus Indigofera australis Coprosma quadrifida Cyathea australis	Smilax australis Hibbertia scandens Poa sieberiana Pteridium esculentum Lomandra longifolia Viola betonicifolia Rubus parvifolius



PCT 3379: Barrington-Point Lookout Montane Grassy Forest

Vegetation Formation (Keith 2004): Grassy Woodlands **Vegetation Class (Keith 2004):** Subalpine Woodlands **Threatened Ecological Community:** N/A **Koala Habitat:** Contains koala high use trees.





Description:

- This PCT is used to map the occurrence of *Eucalyptus pauciflora* (snow gum) in corridor 3 where it is found in very cold gullies and slopes on basalt soils. It generally has a *Poa sieberiana* (snow grass) understorey and sometimes bracken fern. In corridor 3 this PCT grades into PCT 3288 which is drier and dominated *E.obliqua* and *E.fastigata* or it can grade into PCT 3287 which is moister and dominated by *E.nobilis* and Antarctic Beech.
- The BioNet Vegetation Classification describes the community as: "Grassy woodland occurs at elevations of 1150-1550m asl with mean annual rainfall of 1050-2100 mm, generally on basaltic rocks. It is known from Ben Halls Gap to Back River, Ngulin and Porters Mountain at the head of Mummel Gulf, with outliers on the escarpment rim east of Ebor at Point Lookout and large areas on northern Barrington Tops."

Canopy	Mid Story	Ground
Eucalyptus pauciflora Eucalyptus dalrympleana Eucalyptus fastigata	Acacia melanoxylon Acacia dealbata Leucopogon lanceolatus Coprosma quadrifida	Poa sieberiana Pteridium esculentum Lobelia pedunculata Dichondra repens Viola betonicifolia

PCT 4107: Mid North Escarpment Coachwood Warm Temperate Rainforest

Vegetation Formation (Keith 2004): Rainforests

Vegetation Class (Keith 2004): Northern Warm Temperate Rainforests **Threatened Ecological Community:** Association with: Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions

Koala Habitat: These remnants will provide koala refuge and shelter. There are examples of *E.pilularis* and *E.microcorys* within stands of this PCT where previous fires created pyrophytic vegetation.



Description:

- This PCT generally occurs on the ridges and slopes of hills of the Dorrigo Plateau, mostly
 at lower elevations closer to the escarpment. It's defined by emergent Hoop Pines,
 Brush Box and Coachwood. It occurs in corridor 1 in the study area on sedimentary
 geology, namely clay-rich siltstone. There are some examples of good condition
 remnants on the higher ridges, but predominantly it occurs as regrowth. Coachwood
 and Sassafras are commonly found in this community, however when regenerating
 these species are often difficult to locate as they cannot compete with fast growing
 wattles and exotics.
- The BioNet Vegetation Classification describes the community as: "Very tall to extremely tall dense rainforest, or extremely tall sclerophyll open forest with a dense rainforest sub-canopy, which occurs on the ranges and escarpment in the eastern Dorrigo district, north coast.

Canopy	Mid Story	Ground
Ceratopetalum apetalum Acmena smithii Doryphora sassafras Schizomeria ovata Lophostemon confertus Araucaria cunninghamii Acradenia euodiiformis	Sarcopteryx stipata Callicoma serratifolia Wilkiea huegeliana Tasmannia insipida Cryptocarya meissneriana Archontophoenix cunninghamiana	Calamus muelleri Ripogonum elseyanum

Regeneration Mix

Vegetation Formation (Keith 2004): N/A Vegetation Class (Keith 2004): N/A Threatened Ecological Community: N/A

Koala Habitat: Commonly has emergent plants of Blue Gum (Eucalyptus saligna) or stands of Blue Gum.





Description:

- This community was created to cover instances where the mapped vegetation was unable to be assigned to a PCT. This mix will occur in corridors 1, 2 and 3. However, Banksia is less common in areas of Basalt soils.
- The regeneration mix is generally young and highly disturbed and the composition will vary across the study area.
- It is important to capture this mapping unit as it provides opportunities for wildlife movement and soil stabilisation. It can grade into adjacent intact communities which will also provide seed bank opportunities for additional regeneration and wildlife habitat.

Floristics: * introduced species **Mid Story** Canopy Ground Eucalyptus saligna Acacia melanoxylon Ligustrum sinense* Banksia integrifolia Ligustrum lucidum* Lonicera japonica * Callicoma serrata Solanum mauritianum* Dorvphora sassafras Pittosporum undulatum Ceratopetalum apetalum



Riparian Regeneration Mix

Vegetation Formation (Keith 2004): N/A Vegetation Class (Keith 2004): N/A Threatened Ecological Community: N/A

Koala Habitat: Commonly has emergent Blue Gum plants (*Eucalyptus saligna*) or stands of Blue Gum.



Description:

- This code was created to cover instances where the mapped vegetation was unable to be assigned to a PCT in areas adjacent to creeks and wet gullies. Generally this type of regenerating mix is located in drainage features and riparian zones on waterways where vegetation was previously cleared but is now regenerating. Occurs mostly on yellow podzolic soils in corridors 1 and 2.
- The regeneration mix is generally young and highly disturbed and the composition will vary across the study area.
- It is important to capture this mapping unit as it provides opportunities for wildlife movement and soil stabilisation. It can grade into adjacent intact communities which will also provide seed bank opportunities for additional regeneration and wildlife habitat.

Floristics:

Note: * = introduced species

Canopy		Mid Story	Ground
Eucalyptus saligno Acacia melanoxylo Banksia integrifolio Callicoma serrata Leptospermum polygali	r n 3 So folium Pi	Ligustrum sinense* Ligustrum lucidum* olanum mauritianum* ittosporum undulatum	Lonicera japonica *



Species	Koala Use	Where to Plant
Allocasuarina torulosa Forest Oak	Significant use shelter tree	Understory in open forests with higher fertiity soils & moister than <i>A. littoralis</i>
Allocasuarina littoralis Black She-oak	Occasional use shelter tree	Understorey in dryer open forests
Corymbia maculata Spotted gum	Significant use	Eastern esarpment
Eucalyptus acaciiformis Wattle-leaved Peppermint	High preferred use	Forest and woodland on granite. West of Ebor.
E. acmenoides White mahogany	Significant Use	Tall open forest on dry exposed crests in north, on Orrara esarpment and Cascade hills
Eucalyptus amplifolia Cabbage Gum	High use	Few small patches of woodland - near Tyringham rd.
Eucalyptus caliginosa Broad-leaved Stringybark	High Use	In dry sclerophyll forest and woodland. West side of plateau (NE tabeland sp).
Eucalyptus campanulata New England Blackbutt	Occasional use	Wet & Dry schlerophyll forest between 500-1000m. More common on granite.
Eucalyptus dorrigoensis Dorrigo white gum	Observed use	Usually below 900m. Seldom on Basalt
Eucalyptus grandis Flooded Gum	High use	Eastern esarpment
Eucalyptus laevopinea Silvertop stringybark	High Use	Between 900 & 1100m on western plateau Dry open forest.
Eucalyptus melliodora Yellow box	High preferred use	Woodlands on western edge of plateau.
Eucalyptus microcorys Tallowwood	High preferred use	Wet schlerophyll forest & rainforest margins. Warmer areas below 700m.
Eucalyptus nobilis Forrest ribbon gum	Occasional use	Wet sclerophyll forest up to 1200m. Most common on basalt. Often with Messmate.
Eucalyptus nova-anglica New England peppermint	Significant use	Grassy woodland at higher altitudes - around Ebor.
Eucalyptus obliqua Messmate	Occasional use	Wet sclerophyll forest above 900m. Deervale, Ebor, Point lookout areas.
Eucalyptus paucifora White Sally/snow gum	High preferred use	Occurs above 1100m west of Deervale.
Eucalyptus pilularis Blackbutt	Ocassional use	Tall open forest, ridges & north facing , Orara escarpment and Cascade Hills.
Eucalyptus propinqua Small fruited grey gum	High preferred use	Open forest, dry exposed rests, Orara escarpment, Cascade Hills.
Eucalyptus radiata Narrow leaved peppermint	High use	Forest and woodland on granite. West of Ebor.
Eucalyptus saligna Sydney bue gum	High use	Wet sclerophyll forest up to 800m.
Eucalyptus stellulata Black Sally	High use	Occurs above 1100m in cold forest pockets. Not on granite.
Eucalyptus tereticornis Forest Red Gum	High preferred use	Grassy wet or dry forest & woodland.
Eucalyptus viminalis Ribbon Gum		Between 900 & 1100m on western plateau - dry open forest & frosty sites.
Lophostemon confertus Brush box	Ocasional Use shelter tree	Valley floors with rainforest understory. Edges of closed forest on Orara escarpment and Cascade Hills.