



BioCondition Benchmarks for Regional Ecosystem Condition Assessment

Benchmarks are quantitative values for each vegetation condition attribute assessed in BioCondition (Eyre et al. 2015), and are used as a reference for comparison purposes within and between regional ecosystems. Benchmarks are subject to regular review and updates based on additional data.

BioCondition benchmarks are compiled from quantitative site data from reference sites, data from the Queensland Herbarium's CORVEG database and expert opinion, and are specific to each regional ecosystem vegetation community. BioCondition benchmarks aim to reflect the natural variability in structure and floristic composition under a range of climatic and natural disturbance regimes throughout the geographic extent of a regional ecosystem. However, data from local reference sites should be collected where possible to account for spatial and temporal (seasonal and annual) variability when undertaking BioCondition assessments.

In some rangeland ecosystems, seasonal conditions can account for wide variation in the values obtained for some attributes assessed in BioCondition. Therefore in these ecosystems a range is expressed instead of a single benchmark value. When using rangeland regional ecosystem benchmarks to assess condition, the lower value of the benchmark range can be used as the benchmark, or if assessing a site under good seasonal conditions then use of the average value as the benchmark.

Definitions

Attribute	Brief description
Recruitment of dominant canopy species	Proportion of the dominant canopy (ecologically dominant layer) species with evidence of recruitment.
Native plant species richness	The number of species expected in four life form groups, i.e. tree, shrub, grass, forbs and other species
Tree strata: <ul style="list-style-type: none"> • Canopy • Sub-canopy • Large trees 	A tree is defined as a woody plant, single stemmed >2 m tall. <ul style="list-style-type: none"> • <i>Height</i> – median height in metres • <i>Cover</i> - percentage cover (assessed as opaque crowns) • <i>DBH (Diameter at Breast Height)</i> – For large trees only; dbh threshold (cm). • <i>Typical tree species</i>
Shrub strata: <ul style="list-style-type: none"> • Native shrub cover 	A shrub is defined as a woody plant, multi-stemmed from base or single stemmed and <2 m tall. <ul style="list-style-type: none"> • <i>Cover</i> - percentage cover (assessed as opaque crowns) • <i>Typical shrub species</i>
Ground cover: <ul style="list-style-type: none"> • Native perennial grass cover • Litter cover 	<ul style="list-style-type: none"> • <i>Cover</i> – percentage cover (assessed as projected foliage cover) • <i>Typical ground cover species</i>
Coarse woody debris	<ul style="list-style-type: none"> • Total length in metres of woody debris > 10 cm diameter and > 0.5 m per hectare
Non-native plant cover	<ul style="list-style-type: none"> • <i>Cover</i> – The percentage cover of non-native plants • <i>Typical non-native species</i> listed with common names and declared pest status¹

Conditions of use

BioCondition benchmarks have been developed from information published by the State of Queensland and remain the property of the State of Queensland. BioCondition benchmarks are not to be included on internet sites other than the Queensland Government website.

Users should reference information contained in the BioCondition benchmarks as: Queensland Herbarium (year*) BioCondition benchmarks for Regional Ecosystems, (month, year*) (Department of Science, Information Technology and Innovation: Brisbane). * Date shown in footnote of individual descriptions.

While every effort has been made to ensure the information presented is as reliable as possible, the State of Queensland accepts no liability and gives no assurance in respect of its accuracy and shall not be liable for any loss or damage arising from its use. BioCondition benchmarks are based on a combination of quantitative and qualitative information and should be used as a guide only. BioCondition benchmarks are subject to review and are updated as additional data becomes available.

For more information, contact:

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Last reviewed 5/10/2016

¹ **Declared**—either: a) a plant or animal species listed in Schedule 2 of the *Biosecurity Act 2014*; or b) an exotic plant that is listed in a local government pest management plan.

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Notophyll vine forest on parabolic high dunes

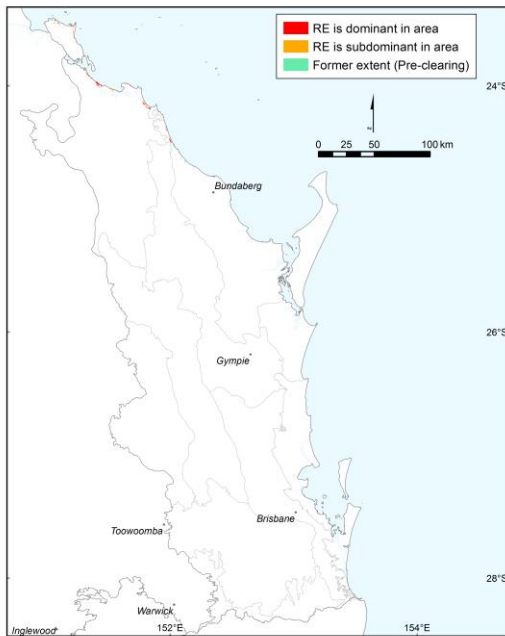


Bill McDonald

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	44
Shrub:	7
Grass:	0
Forbs and other:	36
Trees:	
Tree canopy	
Tree canopy median height (m):	28
Tree canopy cover (%):	74
Tree sub-canopy	
Tree sub-canopy median height (m):	na
Tree sub-canopy cover (%):	na
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	45
Number of large non-eucalypt trees per hectare:	61
Typical tree species: <i>Syzygium luehmannii</i> (riberry), <i>Agathis robusta</i> (kauri pine), <i>Acmena hemilampra</i> , <i>Cryptocarya macdonaldii</i> (McDonald's laurel), <i>Lophostemon confertus</i> (brush box)	
Shrubs:	
Native shrub cover (%):	31
Typical shrub species: <i>Neolitsea dealbata</i> (white bolly gum), <i>Eupomatia laurina</i> (bolwarra), <i>Tasmannia insipida</i> (brush pepperbush)	
Ground cover (%):	
Native perennial grass cover (%):	0
Organic litter cover (%):	79
Typical ground cover species: <i>Pseuderanthemum variabile</i> (pastel flower), <i>Aneilema acuminatum</i> (slug herb)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	817
Non-native plant cover	0
None listed	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Microphyll/notophyll vine forest on beach ridges



BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	11
Shrub:	15
Grass:	1
Forbs and other:	11
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	10
Tree canopy cover (%):	87
Tree sub-canopy	
Tree sub-canopy median height (m):	na
Tree sub-canopy cover (%):	na
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	18
Number of large non-eucalypt trees per hectare:	257
Typical tree species: Cupaniopsis anacardioides (tuckeroo), Acronychia imperforata, Flindersia schottiana, Alectryon coriaceus, Elaeocarpus obovatus	
Shrubs:	
Native shrub cover (%):	49
Typical shrub species: Breynia oblongifolia, Alchornea ilicifolia, Fitzalania bidwillii, Psychotria loniceroides	
Ground cover (%):	
Native perennial grass cover (%):	0
Organic litter cover (%):	1
Typical ground cover species: Ottochloa gracillima, Commelina lanceolata, Dianella congesta, Embelia australiana	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare	567
Non-native plant cover	0
Typical non-native species: Baccharis halmifolia, Megathyrsus maximus, Asparagus aethiopicus, Passiflora suberosa (corky passion flower), Rivina humilis	
Benchmark based on: 6 reference sites and a technical description based on 4 checked CorVeg sites and expert opinion.	
Benchmark reliability ranking:	moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera Eucalyptus, Corymbia, Angophora, Lophostemon and Syncarpia. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

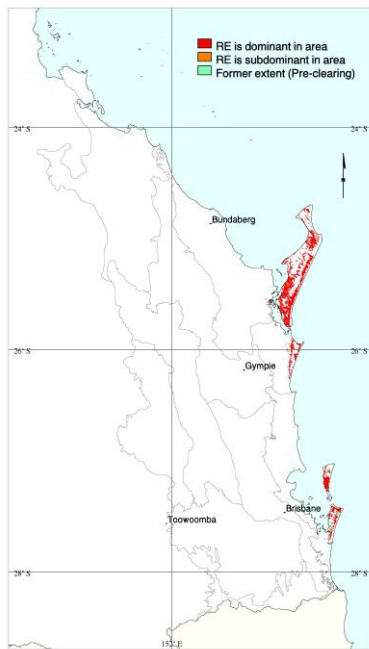
Corymbia intermedia +/- Lophostemon confertus +/- Banksia spp. +/- Callitris columellaris open-forest on beach ridges usually in southern half of bioregion



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	6
	Shrub:	9
	Grass:	8
	Forbs and other:	10
Trees:	Tree canopy	
	Tree canopy median height (m):	15
	Tree canopy cover (%):	80
	Tree sub-canopy	
	Tree sub-canopy median height (m):	6
	Tree sub-canopy cover (%):	17
	Large trees	
	Large eucalypt tree dbh threshold (cm):	40
	Number of large eucalypt trees per hectare:	29
	Large non-eucalypt tree dbh threshold (cm):	33
	Number of large non-eucalypt trees per hectare:	45
Typical tree species: <i>Corymbia intermedia</i> (pink bloodwood), <i>Lophostemon confertus</i> (brush box), <i>Callitris columellaris</i> (white cypress pine)		
Shrubs:	Native shrub cover (%):	15
Typical shrub species: <i>Alphitonia excelsa</i> (soap tree), <i>Monotoca</i> sp. (Fraser Island P.Baxter 777), <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood)		
Ground cover (%):	Native perennial grass cover (%):	12
	Organic litter cover (%):	75
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Lomandra longifolia</i> (spiny mat rush), <i>Pteridium esculentum</i> (common bracken), <i>Dianella caerulea</i> var. <i>vannata</i>		
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:		673
Non-native plant cover		0
Typical non-native species: <i>Lantana camara</i> [^] , <i>Opuntia stricta</i> [^] (smooth pest pear), <i>Passiflora suberosa</i> [^] (corky passion flower), <i>Ageratum houstonianum</i> (blue billygoat weed), <i>Asparagus africanus</i> [^] (asparagus fern)		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

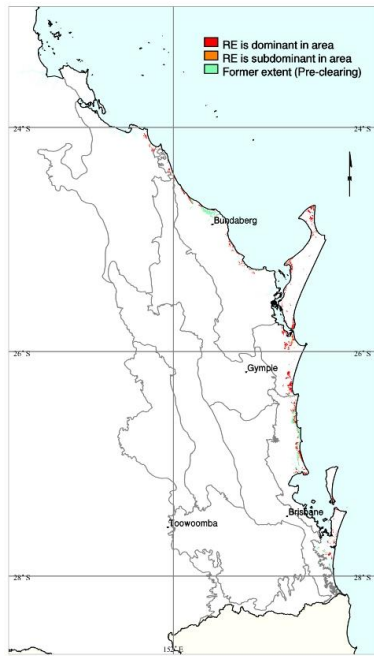
Eucalyptus racemosa open-forest on dunes and sand plains. Usually deeply leached soils



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	9
	Shrub:	16
	Grass:	2
	Forbs and other:	13
Trees:	Tree canopy	
	Tree canopy median height (m):	16
	Tree canopy cover (%):	64
	Tree sub-canopy	
	Tree sub-canopy median height (m):	na
	Tree sub-canopy cover (%):	na
	Large trees	
	Large eucalypt tree dbh threshold (cm):	53
	Number of large eucalypt trees per hectare:	34
	Large non-eucalypt tree dbh threshold (cm):	28
	Number of large non-eucalypt trees per hectare:	24
	Typical tree species: <i>Eucalyptus racemosa</i> (scribbly gum), <i>Corymbia intermedia</i> (pink bloodwood), <i>Angophora leiocarpa</i> (rusty gum)	
Shrubs:	Native shrub cover (%):	26
	Typical shrub species: <i>Leucopogon pimeleoides</i> (beard heath), <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood), <i>Monotoca</i> sp. (Fraser Island P.Baxter 777)	
Ground cover (%):	Native perennial grass cover (%):	4
	Organic litter cover (%):	71
	Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Eriachne pallascens</i> (wanderrie grass), <i>Pteridium esculentum</i> (common bracken), <i>Eustrephus latifolius</i> (wombat berry), <i>Dianella caerulea</i> (blueberry lily)	
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	138
Non-native plant cover		0
	None listed	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

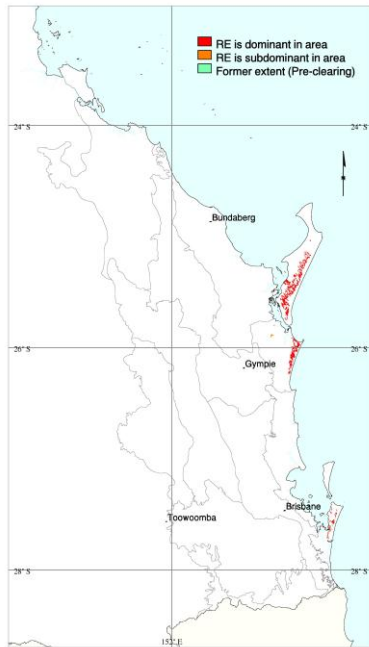
Melaleuca quinquenervia or rarely M. dealbata open forest on sand plains



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:	Tree:	3
	Shrub:	4
	Grass:	3
	Forbs and other:	12
Trees:	Emergent canopy	Tree emergent canopy median height (m): na
		Tree emergent canopy cover (%): na
Tree canopy	Tree canopy median height (m):	14
	Tree canopy cover (%):	60
Tree sub-canopy	Tree sub-canopy median height (m):	8
	Tree sub-canopy cover (%):	20
Large trees	Large eucalypt tree dbh threshold (cm):	50
	Number of large eucalypt trees per hectare:	5
	Large non-eucalypt tree dbh threshold (cm):	30
	Number of large non-eucalypt trees per hectare:	120
Typical tree species: Melaleuca quinquenervia (swamp paperbark), Eucalyptus tereticornis, Eucalyptus robusta, Lophostemon suaveolens (swamp box), Corymbia intermedia (pink bloodwood)		
Shrubs:	Native shrub cover (%):	15
	Typical shrub species: Acacia leiocalyx, Acacia disparrima subsp. disparrima, Melaleuca quinquenervia (swamp paperbark), Glochidion sumatranum, Alphitonia excelsa	
Ground cover (%):	Native perennial grass cover (%):	15
	Organic litter cover (%):	30
Typical ground cover species: Imperata cylindrica (blady grass), Themeda triandra (kangaroo grass), Paspalum scrobiculatum, Entolasia marginata, Blechnum indicum (swamp water fern)		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		900
Non-native plant cover		0
Typical non-native species: Lantana camara [^] (lantana), Baccharis halimifolia [^] (groundsel bush)		
Benchmark based on:	46 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera Eucalyptus, Corymbia, Angophora, Lophostemon and Syncarpia. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus pilularis open-forest on parabolic high dunes

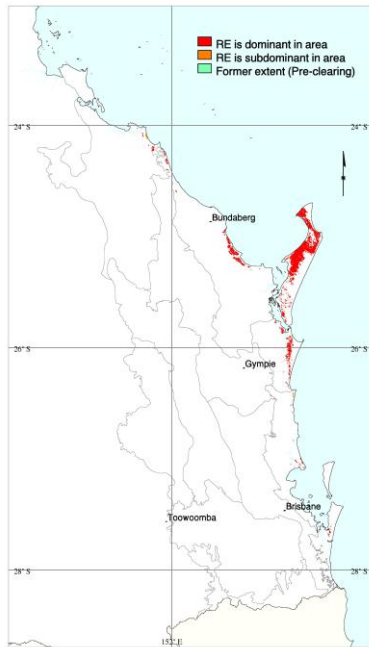


Melinda Laidlaw

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	10
	Shrub:	19
	Grass:	1
	Forbs and other:	16
Trees:	Tree canopy	
	Tree canopy median height (m):	22
	Tree canopy cover (%):	83
	Tree sub-canopy	
	Tree sub-canopy median height (m):	na
	Tree sub-canopy cover (%):	na
	Large trees	
	Large eucalypt tree dbh threshold (cm):	67
	Number of large eucalypt trees per hectare:	29
	Large non-eucalypt tree dbh threshold (cm):	31
	Number of large non-eucalypt trees per hectare:	28
	Typical tree species: <i>Eucalyptus pilularis</i> (blackbutt), <i>Corymbia intermedia</i> (pink bloodwood), <i>Allocasuarina torulosa</i> (forest oak)	
Shrubs:	Native shrub cover (%):	26
	Typical shrub species: <i>Banksia serrata</i> (red honeysuckle), <i>Monotoca</i> sp. (Fraser Island P.Baxter 777), <i>Austromyrtus dulcis</i> (midgen berry)	
Ground cover (%):	Native perennial grass cover (%):	0
	Organic litter cover (%):	86
	Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Alloteropsis semialata</i> (cockatoo grass), <i>Pteridium esculentum</i> (common bracken), <i>Eustrephus latifolius</i> (wombat berry)	
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	540
Non-native plant cover		0
	None listed	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Banksia aemula low open-woodland on dunes and sand plains. Usually deeply leached soils

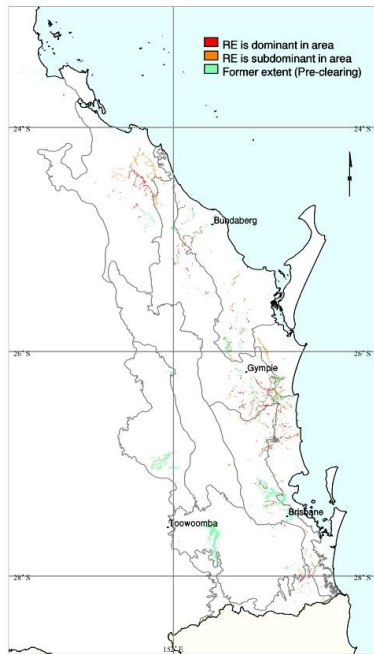


Melinda Laidlaw

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	3
	Shrub:	20
	Grass:	0
	Forbs and other:	4
Trees:	Tree canopy	
	Tree canopy median height (m):	8
	Tree canopy cover (%):	6
	Tree sub-canopy	
	Tree sub-canopy median height (m):	na
	Tree sub-canopy cover (%):	na
	Large trees	
	Large eucalypt tree dbh threshold (cm):	48
	Number of large eucalypt trees per hectare:	12
	Large non-eucalypt tree dbh threshold (cm):	14
	Number of large non-eucalypt trees per hectare:	2
Typical tree species: <i>Banksia aemula</i> (wallum banksia), <i>Eucalyptus racemosa</i> (scribbly gum), <i>Leptospermum trinervium</i> (woolly tea-tree)		
Shrubs:	Native shrub cover (%):	19
Typical shrub species: <i>Dillwynia floribunda</i> (showy parrot pea), <i>Woolfsia pungens</i> , <i>Leucopogon leptospermoides</i> (beard heath)		
Ground cover (%):	Native perennial grass cover (%):	0
	Organic litter cover (%):	47
Typical ground cover species: <i>Xanthorrhoea johnsonii</i> (forest grasstree), <i>Patersonia sericea</i> , <i>Coleocarya gracilis</i> , <i>Cassytha glabella</i> , <i>Caustis recurvata</i> (curly wigs)		
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:		103
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Gallery rainforest (notophyll vine forest) on alluvial plains

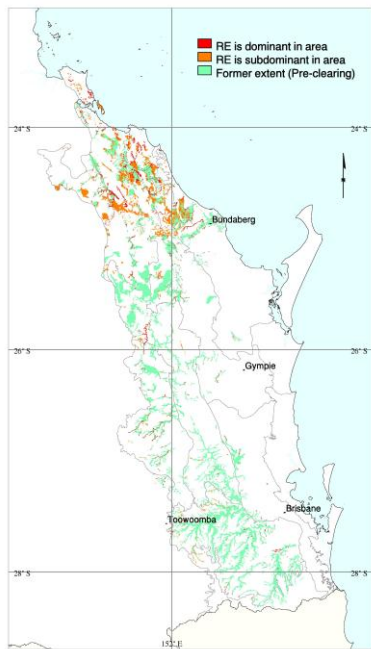


Bill McDonald

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	13
Shrub:	15
Grass:	1
Forbs and other:	16
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	20
Tree canopy cover (%):	70
Tree sub-canopy	
Tree sub-canopy median height (m):	9
Tree sub-canopy cover (%):	35
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	33
Number of large non-eucalypt trees per hectare:	148
Typical tree species: <i>Syzygium luehmannii</i> , <i>Castanospermum australe</i> , <i>Cryptocarya macdonaldii</i> (McDonald's laurel), <i>Archontophoenix cunninghamiana</i> (piccabeen palm), <i>Waterhousea floribunda</i>	
Shrubs:	
Native shrub cover (%):	20
Typical shrub species: <i>Pittosporum revolutum</i> , <i>Alyxia ruscifolia</i> , <i>Cordyline rubra</i>	
Ground cover (%):	
Native perennial grass cover (%):	1
Organic litter cover (%):	36
Typical ground cover species: <i>Oplismenus aemulus</i> (creeping shade grass), <i>Pseuderanthemum variabile</i> (pastel flower), <i>Lomandra hystrix</i>	
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	236
Non-native plant cover	0
Typical non-native species: <i>Cinnamomum camphora</i> , <i>Macfadyena unguis-cati</i> , <i>Lantana camara</i> [^] (lantana), <i>Ageratina riparia</i> , <i>Senna pendula</i> var. <i>glabrata</i> (Easter cassia)	
Benchmark based on: 3 reference sites, 11 Corveg sites and expert opinion	
Benchmark reliability ranking:	High

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus tereticornis woodland on Quaternary alluvium



Annie Kelly

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	5
Shrub:	4
Grass:	11
Forbs and other:	24
Trees:	
Tree canopy	
Tree canopy median height (m):	27
Tree canopy cover (%):	53
Tree sub-canopy	
Tree sub-canopy median height (m):	12
Tree sub-canopy cover (%):	9
Large trees	
Large eucalypt tree dbh threshold (cm):	47
Number of large eucalypt trees per hectare:	24
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus tereticornis</i> (blue gum), <i>Angophora subvelutina</i> (broad-leaved apple), <i>Lophostemon suaveolens</i> (swamp box), <i>Allocasuarina torulosa</i> (forest oak)	
Shrubs:	
Native shrub cover (%):	1
Typical shrub species: <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood), <i>Acacia maidenii</i> (Maiden's wattle)	
Ground cover (%):	
Native perennial grass cover (%):	47
Organic litter cover (%):	34
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Heteropogon contortus</i> (black speargrass), <i>Pteridium esculentum</i> (common bracken), <i>Imperata cylindrica</i> (blady grass), <i>Cymbopogon refractus</i> (barbed-wire grass)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	445
Non-native plant cover	0
Typical non-native species: <i>Opuntia stricta</i> [^] (smooth pest pear), <i>Lantana camara</i> [^] , <i>Cyanthillium cinereum</i> (vernonia)	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Melaleuca irbyana low open-forest on alluvial plains

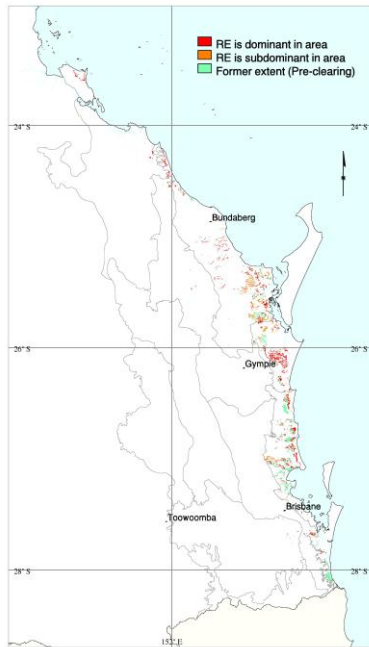


Jessica Scanlan, SEQ catchments

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	2
	Shrub:	5
	Grass:	15
	Forbs and other:	27
Trees:		
Emergent	Emergent canopy median height (m):	21
	Emergent canopy cover (%):	15
Tree canopy	Tree canopy median height (m):	9
	Tree canopy cover (%):	70
Tree sub-canopy	Tree sub-canopy median height (m):	na
	Tree sub-canopy cover (%):	na
Large trees	Large eucalypt tree dbh threshold (cm):	36
	Number of large eucalypt trees per hectare:	10
	Large non-eucalypt tree dbh threshold (cm):	25
	Number of large non-eucalypt trees per hectare:	98
Typical tree species: Melaleuca irbyana (bush house paperbark), Eucalyptus moluccana (gum-topped box), Eucalyptus melanophloia (silver-leaved ironbark), Eucalyptus tereticornis (blue gum), Eucalyptus crebra (narrow-leaved red ironbark)		
Shrubs:	Native shrub cover (%):	3
Typical shrub species: Melaleuca irbyana (bush house paperbark), Acacia maidenii (Maiden's wattle), Acacia concurrens (curracabah), Acacia leiocalyx subsp. leiocalyx (early-flowering black wattle), Alphitonia excelsa (soap tree)		
Ground cover (%):	Native perennial grass cover (%):	35
	Organic litter cover (%):	22
Typical ground cover species: Fimbristylis bisumbellata, Leptochloa decipiens (slender canegrass), Cyperus trinervis, Cymbopogon refractus, Scleria mackaviensis		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		360
Non-native plant cover		0
Typical non-native species: Echinochloa colona (awnless barnyard grass), Bryophyllum spp., Opuntia stricta [^] (smooth pest pear), Megathyrus maximus (guinea grass), Baccharis halimifolia (groundsel bush)		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Melaleuca quinquenervia open-forest on coastal alluvium

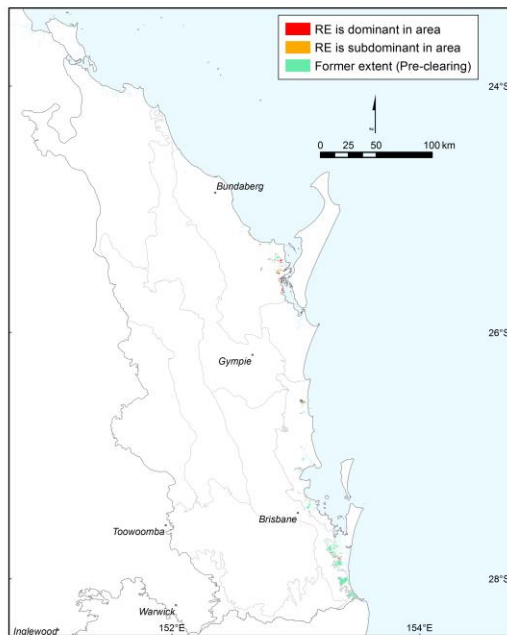


Melinda Laidlaw

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	2
	Shrub:	1
	Grass:	4
	Forbs and other:	15
Trees:	Tree canopy	
	Tree canopy median height (m):	14
	Tree canopy cover (%):	96
	Tree sub-canopy	
	Tree sub-canopy median height (m):	na
	Tree sub-canopy cover (%):	na
	Large trees	
	Large eucalypt tree dbh threshold (cm):	na
	Number of large eucalypt trees per hectare:	na
	Large non-eucalypt tree dbh threshold (cm):	33
	Number of large non-eucalypt trees per hectare:	168
Typical tree species: <i>Melaleuca quinquenervia</i> (swamp paperbark), <i>Lophostemon suaveolens</i> (swamp box), <i>Eucalyptus tereticornis</i> (blue gum)		
Shrubs:	Native shrub cover (%):	1
Typical shrub species: <i>Melaleuca quinquenervia</i> (swamp paperbark), <i>Lophostemon suaveolens</i> (swamp box), <i>Alphitonia excelsa</i> (soap tree)		
Ground cover (%):	Native perennial grass cover (%):	2
	Organic litter cover (%):	20
Typical ground cover species: <i>Leersia hexandra</i> (swamp rice grass), <i>Imperata cylindrica</i> (blady grass), <i>Gahnia clarkei</i> (tall sawsedge), <i>Blechnum indicum</i> (swamp water fern), <i>Lepironia articulata</i>		
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:		898
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

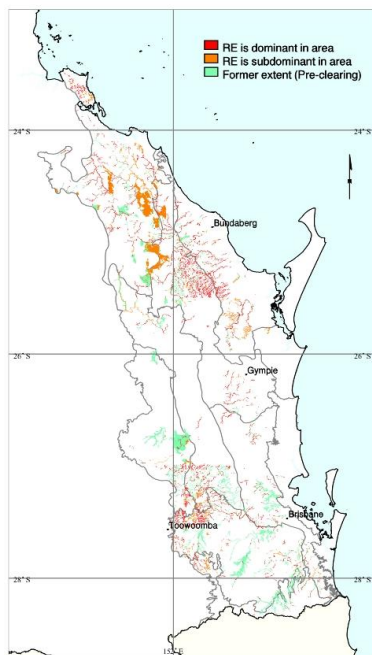
Melaleuca quinquenervia, Casuarina glauca +/- Eucalyptus tereticornis open forest on lowest river terraces



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	3
	Shrub:	3
	Grass:	3
	Forbs and other:	8
Trees:	Emergent canopy	
	Tree emergent canopy median height (m):	na
	Tree emergent canopy cover (%):	na
	Tree canopy	
	Tree canopy median height (m):	16
	Tree canopy cover (%):	80
	Tree sub-canopy	
	Tree sub-canopy median height (m):	8
	Tree sub-canopy cover (%):	10
	Large trees	
	Large eucalypt tree dbh threshold (cm):	30
	Number of large eucalypt trees per hectare:	10
	Large non-eucalypt tree dbh threshold (cm):	33
	Number of large non-eucalypt trees per hectare:	168
	Typical tree species: <i>Melaleuca quinquenervia</i> (swamp paperbark), <i>Casuarina glauca</i> , <i>Eucalyptus tereticornis</i> (forest red gum), <i>Corymbia tessellaris</i> (Moreton Bay ash), <i>Eucalyptus exserta</i> (Queensland peppermint)	
Shrubs:	Native shrub cover (%):	10
	Typical shrub species: <i>Casuarina glauca</i> , <i>Glochidion ferdinandi</i> , <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Cupaniopsis anacardioides</i> (tuckeroo), <i>Jagera pseudorhus</i>	
Ground cover (%):	Native perennial grass cover (%):	5
	Organic litter cover (%):	28
	Typical ground cover species: <i>Cynodon dactylon</i> , <i>Phragmites australis</i> , <i>Imperata cylindrica</i> (blady grass), <i>Cyperus polystachyos</i> , <i>Parsonia staminea</i>	
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare	898
Non-native plant cover		0
	Typical non-native species: <i>Lantana camara</i> [^] , <i>Baccharis halimifolia</i> [^] (groundsel bush), <i>Passiflora suberosa</i> (corky passion flower)	
Benchmark based on:	14 Corveg sites, a technical description and a similar RE's benchmark and expert opinion	Benchmark reliability ranking: moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus tereticornis, Casuarina cunninghamiana subsp. cunninghamiana ± Melaleuca spp. fringing woodland

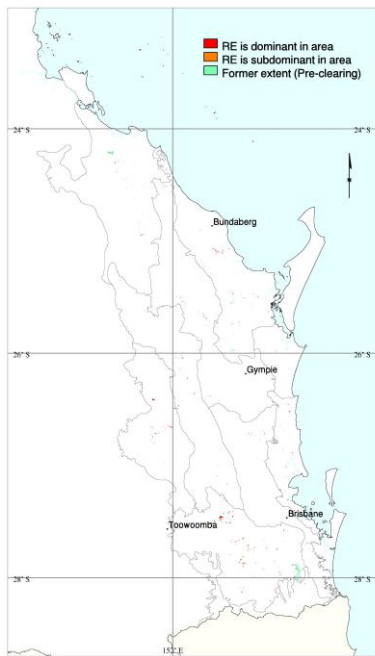


Melinda Laidlaw

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	10
Shrub:	10
Grass:	7
Forbs and other:	30
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	16
Tree canopy cover (%):	30
Tree sub-canopy	
Tree sub-canopy median height (m):	11
Tree sub-canopy cover (%):	30
Large trees	
Large eucalypt tree dbh threshold (cm):	53
Number of large eucalypt trees per hectare:	1
Large non-eucalypt tree dbh threshold (cm):	23
Number of large non-eucalypt trees per hectare:	220
Typical tree species: <i>Eucalyptus tereticornis</i> , <i>Melaleuca viminalis</i> , <i>Casuarina cunninghamiana</i> , <i>Waterhousea floribunda</i>	
Shrubs:	
Native shrub cover (%):	18
Typical shrub species: <i>Pittosporum revolutum</i> , <i>Breynia oblongifolia</i> , <i>Mallotus philippensis</i>	
Ground cover (%):	
Native perennial grass cover (%):	1
Organic litter cover (%):	54
Typical ground cover species: <i>Lomandra hystrix</i> , <i>Oplismenus aemulus</i> (creeping shade grass), <i>Viola hederacea</i>	
Coarse woody debris: Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare:	667
Non-native plant cover	0
Typical non-native species: <i>Celtis sinensis</i> , <i>Macfadyena unguis-cati</i> , <i>Lantana camara</i> [^] (lantana), <i>Digitaria didactyla</i> , <i>Bidens pilosa</i>	
Benchmark based on: 1 reference site, a technical description and expert opinion	Benchmark reliability ranking: Moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Swamps with *Cyperus* spp., *Schoenoplectus* spp. and *Eleocharis* spp.

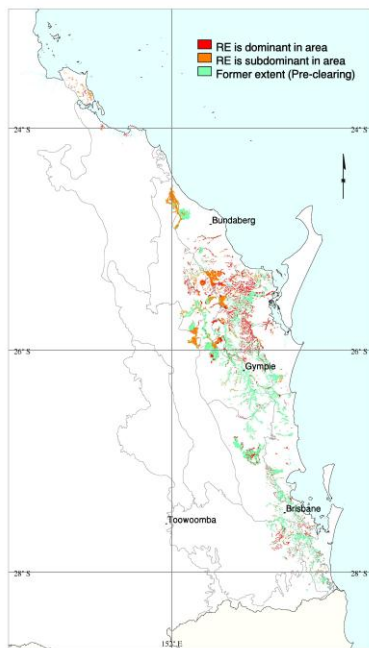


Annie Kelly

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	na
Native plant species richness:	
Tree:	0
Shrub:	0
Grass:	1
Forbs and other:	5
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	na
Tree canopy cover (%):	na
Tree sub-canopy	
Tree sub-canopy median height (m):	na
Tree sub-canopy cover (%):	na
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Shrubs:	
Native shrub cover (%):	na
Ground cover (%):	
Native perennial grass cover (%):	20
Organic litter cover (%):	1
Typical ground cover species: <i>Cyperus</i> spp., <i>Eleocharis</i> spp., <i>Persicaria</i> spp., <i>Juncus</i> spp., <i>Leersia hexandra</i> (swamp rice grass)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	na
Non-native plant cover	0
Typical non-native species: <i>Eichhornia crassipes</i> (water hyacinth), <i>Phyla canescens</i> , <i>Salvinia molesta</i> (salvinia), <i>Hydrocotyle bonariensis</i> (pennywort), <i>Urochloa mutica</i> (para grass)	
Benchmark based on: 4 reference sites, 2 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

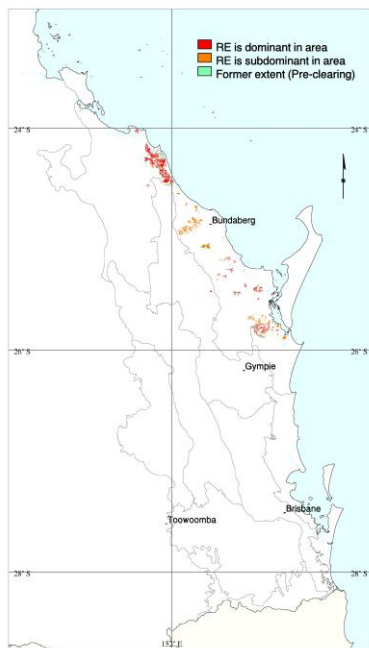
Eucalyptus tereticornis +/- Eucalyptus siderophloia, Corymbia intermedia open-forest on alluvial plains usually near coast



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	7
	Shrub:	7
	Grass:	12
	Forbs and other:	25
Trees:	Tree canopy	
	Tree canopy median height (m):	23
	Tree canopy cover (%):	56
	Tree sub-canopy	
	Tree sub-canopy median height (m):	8
	Tree sub-canopy cover (%):	33
	Large trees	
	Large eucalypt tree dbh threshold (cm):	49
	Number of large eucalypt trees per hectare:	22
	Large non-eucalypt tree dbh threshold (cm):	36
	Number of large non-eucalypt trees per hectare:	8
Typical tree species: <i>Eucalyptus tereticornis</i> (blue gum), <i>Eucalyptus siderophloia</i> (red ironbark), <i>Melaleuca quinquenervia</i> (swamp paperbark)		
Shrubs:	Native shrub cover (%):	20
Typical shrub species: <i>Acacia leiocalyx</i> (early flowering black wattle), <i>Allocasuarina littoralis</i> (woolly oak), <i>Alphitonia excelsa</i> (soap tree)		
Ground cover (%):	Native perennial grass cover (%):	44
	Organic litter cover (%):	37
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Imperata cylindrica</i> (blady grass), <i>Eremochloa bimaculata</i> (poverty grass), <i>Lomandra longifolia</i> (spiny mat rush), <i>Eustrephus latifolius</i> (wombat berry)		
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	555
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus latisinensis or E. exserta, Melaleuca viridiflora var. viridiflora woodland on alluvial plains



Queensland Herbarium

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	6
	Shrub:	9
	Grass:	10
	Forbs and other:	20
Trees:	Tree canopy	
	Tree canopy median height (m):	12
	Tree canopy cover (%):	53
	Tree sub-canopy	
	Tree sub-canopy median height (m):	5
	Tree sub-canopy cover (%):	12
	Large trees	
	Large eucalypt tree dbh threshold (cm):	47
	Number of large eucalypt trees per hectare:	11
	Large non-eucalypt tree dbh threshold (cm):	26
	Number of large non-eucalypt trees per hectare:	64
Typical tree species: <i>Melaleuca viridiflora</i> var. <i>viridiflora</i> , <i>Eucalyptus latisinensis</i> , <i>Eucalyptus exserta</i> (Queensland peppermint), <i>Melaleuca quinquenervia</i> (swamp paperbark), <i>Corymbia intermedia</i> (pink bloodwood)		
Shrubs:	Native shrub cover (%):	4
Typical shrub species: <i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i> (early-flowering black wattle), <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood), <i>Grevillea banksii</i> (red-flowered silky oak), <i>Xanthorrhoea johnsonii</i> (forest grasstree)		
Ground cover (%):	Native perennial grass cover (%):	41
	Organic litter cover (%):	17
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Rhynchospora rubra</i> , <i>Schoenus apogon</i> var. <i>apogon</i> (fluke bogrush), <i>Scleria rugosa</i> , <i>Xanthorrhoea johnsonii</i> (forest grasstree)		
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	54
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

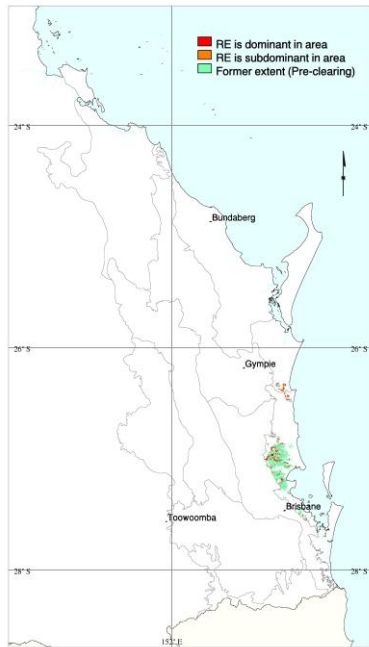
Melaleuca irbyana low open-forest on remnant Tertiary surfaces



BioCondition attribute		Benchmark	
Recruitment of dominant canopy species (%):		100	
Native plant species richness:	Tree:	3	
	Shrub:	2	
	Grass:	12	
	Forbs and other:	26	
Trees:	Tree canopy	Tree canopy median height (m): 9	
		Tree canopy cover (%): 74	
	Tree sub-canopy	Tree sub-canopy median height (m): 4	
		Tree sub-canopy cover (%): 7	
	Large trees	Large eucalypt tree dbh threshold (cm):	na
		Number of large eucalypt trees per hectare:	na
	Large non-eucalypt tree dbh threshold (cm):	24	
	Number of large non-eucalypt trees per hectare:	105	
Typical tree species: <i>Melaleuca irbyana</i> (bush house paperbark), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus tereticornis</i> (blue gum), <i>Eucalyptus moluccana</i> (gum-topped box), <i>Corymbia citriodora</i> subsp. <i>variegata</i> (spotted gum)			
Shrubs:	Native shrub cover (%):	2	
	Typical shrub species: <i>Alphitonia excelsa</i> (soap tree), <i>Alstonia constricta</i> (bitterbark), <i>Melaleuca irbyana</i> (bush house paperbark), <i>Acacia concurrens</i> (curracabah)		
Ground cover (%):	Native perennial grass cover (%):	29	
	Organic litter cover (%):	26	
Typical ground cover species: <i>Paspalidium distans</i> (shotgrass), <i>Themeda triandra</i> (kangaroo grass), <i>Enteropogon unispiceus</i> , <i>Digitaria breviglumis</i> , <i>Bothriochloa decipiens</i> (pitted bluegrass)			
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		223	
Non-native plant cover		0	
Typical non-native species: <i>Megathyrsus maximus</i> (guinea grass), <i>Bryophyllum</i> spp., <i>Lantana camara</i> [^] , <i>Lantana montevidensis</i> (creeping lantana)			

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus racemosa woodland on remnant Tertiary surfaces

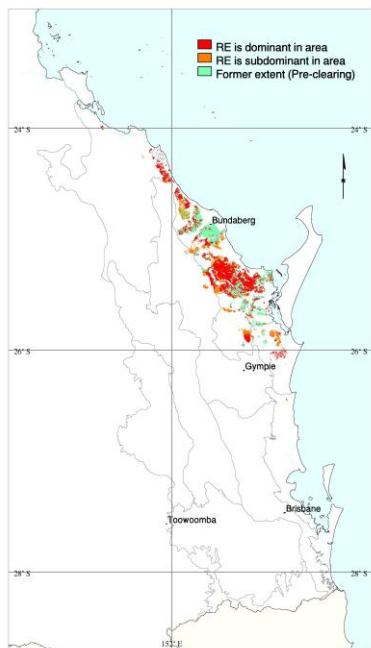


Tony Bean

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	5
	Shrub:	6
	Grass:	5
	Forbs and other:	13
Trees:	Tree canopy	
	Tree canopy median height (m):	24
	Tree canopy cover (%):	62
	Tree sub-canopy	
	Tree sub-canopy median height (m):	8
	Tree sub-canopy cover (%):	33
	Large trees	
	Large eucalypt tree dbh threshold (cm):	51
	Number of large eucalypt trees per hectare:	25
	Large non-eucalypt tree dbh threshold (cm):	na
	Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus racemosa</i> (scribbly gum), <i>Corymbia intermedia</i> (pink bloodwood), <i>Corymbia gummifera</i> (red bloodwood), <i>Lophostemon confertus</i> (brush box), <i>Angophora woodsiana</i> (smudgee)		
Shrubs:	Native shrub cover (%):	27
Typical shrub species: <i>Alphitonia excelsa</i> (soap tree), <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood), <i>Banksia spinulosa</i> , <i>Persoonia stradbrokeensis</i> , <i>Banksia integrifolia</i>		
Ground cover (%):	Native perennial grass cover (%):	15
	Organic litter cover (%):	67
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Entolasia stricta</i> (wiry panic), <i>Xanthorrhoea latifolia</i> , <i>Lepidosperma laterale</i> (broad sword sedge), <i>Pteridium esculentum</i> (common bracken)		
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	432
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus spp., Corymbia spp., Melaleuca spp. woodland on complex of remnant Tertiary surfaces and Cainozoic and Mesozoic sediments

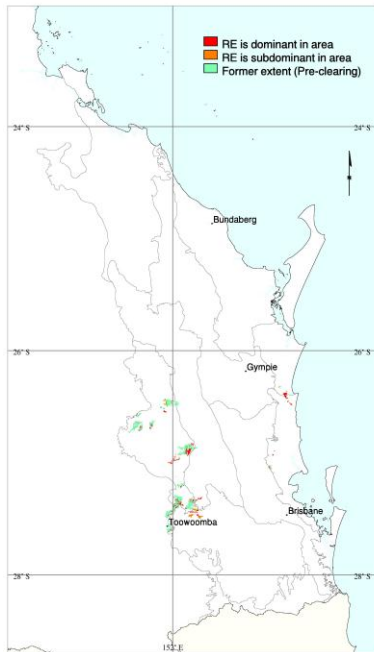


Melinda Laidlaw

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	6
	Shrub:	14
	Grass:	10
	Forbs and other:	20
Trees:	Tree canopy	
	Tree canopy median height (m):	15
	Tree canopy cover (%):	57
	Tree sub-canopy	
	Tree sub-canopy median height (m):	na
	Tree sub-canopy cover (%):	na
	Large trees	
	Large eucalypt tree dbh threshold (cm):	41
	Number of large eucalypt trees per hectare:	24
	Large non-eucalypt tree dbh threshold (cm):	40
	Number of large non-eucalypt trees per hectare:	4
Typical tree species: <i>Angophora leiocarpa</i> (rusty gum), <i>Eucalyptus latisinensis</i> , <i>Corymbia trachyphloia</i> (yellow bloodwood)		
Shrubs:	Native shrub cover (%):	14
Typical shrub species: <i>Acrotriche aggregata</i> (red cluster heath), <i>Acacia leiocalyx</i> (early flowering black wattle), <i>Monotoca scoparia</i> (prickly broom heath)		
Ground cover (%):	Native perennial grass cover (%):	29
	Organic litter cover (%):	41
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Alloteropsis semialata</i> (cockatoo grass), <i>Eremochloa bimaculata</i> (poverty grass), <i>Xanthorrhoea johnsonii</i> (forest grasstree), <i>Gompholobium pinnatum</i> (poor mans gold)		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		415
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

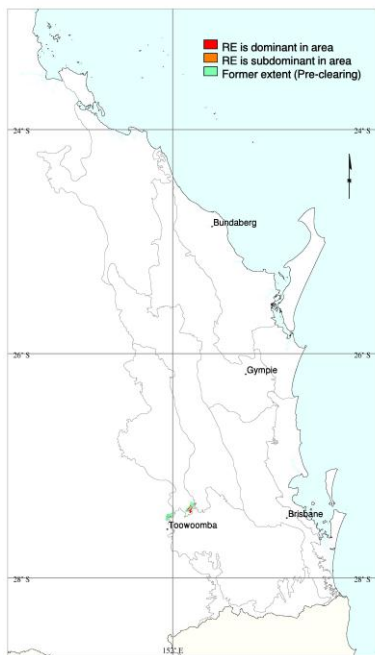
Eucalyptus siderophloia, E. propinqua, E. microcorys and/or E. pilularis open-forest on remnant Tertiary surfaces. Usually deep red soils



BioCondition attribute		Benchmark	
Recruitment of dominant canopy species (%):		100	
Native plant species richness:	Tree:	12	
	Shrub:	11	
	Grass:	1	
	Forbs and other:	9	
Trees:	Tree canopy	Tree canopy median height (m):	38
		Tree canopy cover (%):	91
	Tree sub-canopy	Tree sub-canopy median height (m):	na
		Tree sub-canopy cover (%):	na
	Large trees	Large eucalypt tree dbh threshold (cm):	61
		Number of large eucalypt trees per hectare:	26
		Large non-eucalypt tree dbh threshold (cm):	26
		Number of large non-eucalypt trees per hectare:	30
Typical tree species: Eucalyptus saligna, Eucalyptus pilularis (blackbutt), Eucalyptus microcorys (tallow wood), Eucalyptus siderophloia (red ironbark), Eucalyptus propinqua (small-fruited grey gum)			
Shrubs:	Native shrub cover (%):	25	
Ground cover (%):	Native perennial grass cover (%):	0	
	Organic litter cover (%):	78	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		447	
Non-native plant cover		0	
Typical non-native species: Lantana camara^			

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus saligna or E. grandis open-forest, often with vine forest understorey on remnant Tertiary surfaces. Usually deep red soils

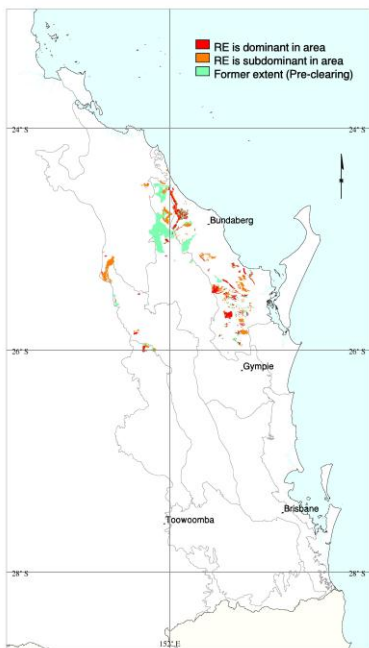


Bill McDonald

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	11
Shrub:	9
Grass:	3
Forbs and other:	24
Trees:	
Tree canopy	
Tree canopy median height (m):	31
Tree canopy cover (%):	85
Tree sub-canopy	
Tree sub-canopy median height (m):	na
Tree sub-canopy cover (%):	na
Large trees	
Large eucalypt tree dbh threshold (cm):	56
Number of large eucalypt trees per hectare:	32
Large non-eucalypt tree dbh threshold (cm):	29
Number of large non-eucalypt trees per hectare:	6
Typical tree species: Eucalyptus pilularis (blackbutt), Eucalyptus saligna, Eucalyptus montivaga, Eucalyptus microcorys (tallow wood), Eucalyptus eugenioides (thin-leaved stringybark)	
Shrubs:	
Native shrub cover (%):	25
Ground cover (%):	
Native perennial grass cover (%):	31
Organic litter cover (%):	45
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	447
Non-native plant cover	0
Typical non-native species: Lantana camara [^]	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Corymbia citriodora subsp. *variegata* +/- *Eucalyptus portuensis* or *E. acmenoides*, *E. fibrosa* subsp. *fibrosa* open-forest on remnant Tertiary surfaces. Usually deep red soils

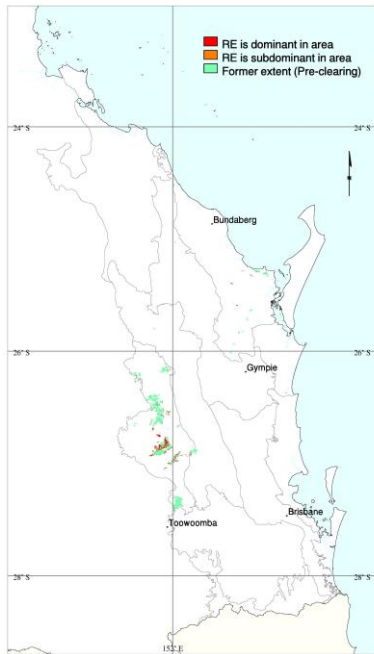


Queensland Herbarium

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	5
	Shrub:	8
	Grass:	12
	Forbs and other:	14
Trees:	Tree canopy	
	Tree canopy median height (m):	27
	Tree canopy cover (%):	71
	Tree sub-canopy	
	Tree sub-canopy median height (m):	8
	Tree sub-canopy cover (%):	22
	Large trees	
	Large eucalypt tree dbh threshold (cm):	47
	Number of large eucalypt trees per hectare:	65
	Large non-eucalypt tree dbh threshold (cm):	na
	Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Corymbia citriodora</i> subsp. <i>variegata</i> (spotted gum), <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> (red ironbark), <i>Eucalyptus portuensis</i> , <i>Corymbia intermedia</i> (pink bloodwood), <i>Eucalyptus exserta</i> (Queensland peppermint)		
Shrubs:	Native shrub cover (%):	17
Typical shrub species: <i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i> (early-flowering black wattle), <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood), <i>Jacksonia scoparia</i> (native broom), <i>Alphitonia excelsa</i>		
Ground cover (%):	Native perennial grass cover (%):	23
	Organic litter cover (%):	48
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Pultenaea spinosa</i> , <i>Chrysopogon fallax</i> (golden beardgrass), <i>Eremochloa bimaculata</i> (poverty grass)		
Coarse woody debris:	Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	280
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Microphyll to notophyll vine forest +/- Araucaria cunninghamii on remnant Tertiary surfaces

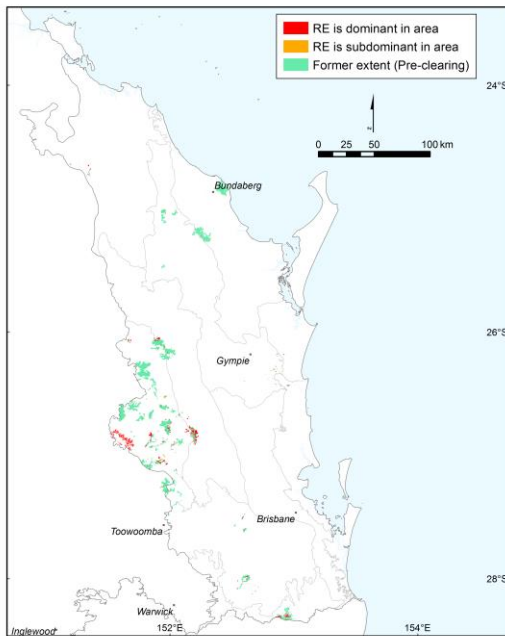


Bill McDonald

BioCondition attribute		Benchmark	
Recruitment of dominant canopy species (%):		100	
Native plant species richness:	Tree:	20	
	Shrub:	17	
	Grass:	1	
	Forbs and other:	12	
Trees:	Tree canopy	Tree canopy median height (m):	23
		Tree canopy cover (%):	90
	Tree sub-canopy	Tree sub-canopy median height (m):	8
		Tree sub-canopy cover (%):	31
	Large trees	Large eucalypt tree dbh threshold (cm):	na
		Number of large eucalypt trees per hectare:	na
		Large non-eucalypt tree dbh threshold (cm):	32
		Number of large non-eucalypt trees per hectare:	100
Typical tree species: Excoecaria dallachyana (scrub poison tree), Dendrocnide excelsa (giant stinging tree), Olea paniculata (native olive), Vitex lignum-vitae (lignum vitae), Brachychiton discolor (white kurrajong)			
Shrubs:	Native shrub cover (%):	31	
Ground cover (%):	Native perennial grass cover (%):	0	
	Organic litter cover (%):	87	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		481	
Non-native plant cover		0	
Typical non-native species: Lantana camara [^]			

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

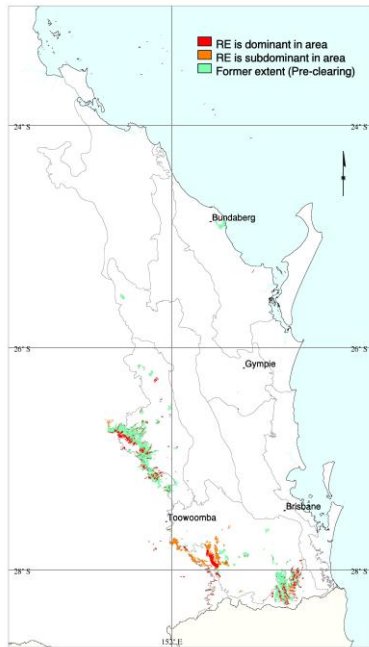
Araucarian complex microphyll vine forest on Cainozoic igneous rocks



BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	23
Shrub:	20
Grass:	1
Forbs and other:	21
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	24
Tree emergent canopy cover (%):	5
Tree canopy	
Tree canopy median height (m):	16
Tree canopy cover (%):	58
Tree sub-canopy	
Tree sub-canopy median height (m):	8
Tree sub-canopy cover (%):	28
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	28
Number of large non-eucalypt trees per hectare:	55
Typical tree species: Araucaria cunninghamii, Araucaria bidwillii (bunya pine), Cupaniopsis parvifolia, Dendrocnide photinophylla (Shiny-leaved stinging tree), Rhodospaera rhodantha (deep yellow wood)	
Shrubs:	
Native shrub cover (%):	17
Typical shrub species: Alchornea ilicifolia, Alyxia ruscifolia, Argyrodermon trifoliolatum, Atalaya salicifolia, Capparis arborea (brush caper berry)	
Ground cover (%):	
Native perennial grass cover (%):	1
Organic litter cover (%):	79
Typical ground cover species: Oplismenus aemulus (creeping shade grass), Geitonoplesium cymosum, Smilax australis, Pellaea paradoxa, Lastreopsis decomposita	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare	614
Non-native plant cover	0
Typical non-native species: Lantana camara^	
Benchmark based on: 1 reference site, 7 Corveg sites and expert opinion	
Benchmark reliability ranking:	high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera Eucalyptus, Corymbia, Angophora, Lophostemon and Syncarpha. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus crebra +/- E. melliodora, E. tereticornis woodland on Cainozoic igneous rocks

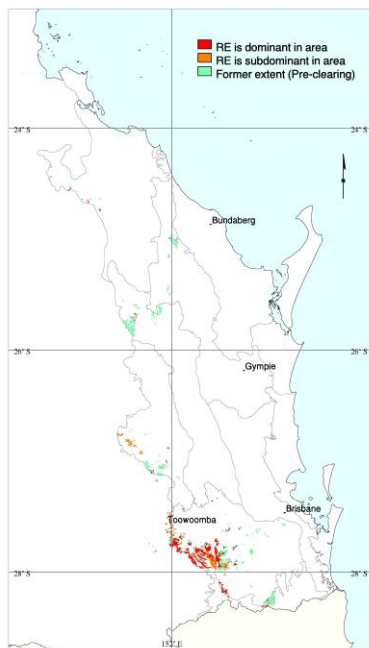


Annie Kelly

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	7
Shrub:	7
Grass:	7
Forbs and other:	29
Trees:	
Tree canopy	
Tree canopy median height (m):	20
Tree canopy cover (%):	41
Tree sub-canopy	
Tree sub-canopy median height (m):	8
Tree sub-canopy cover (%):	17
Large trees	
Large eucalypt tree dbh threshold (cm):	41
Number of large eucalypt trees per hectare:	32
Large non-eucalypt tree dbh threshold (cm):	30
Number of large non-eucalypt trees per hectare:	2
Typical tree species: <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus melliodora</i> (yellow box), <i>Eucalyptus tereticornis</i> (blue gum), <i>Eucalyptus albens</i> (white box)	
Shrubs:	
Native shrub cover (%):	4
Typical shrub species: <i>Cassinia laevis</i> (wild rosemary), <i>Acacia</i> spp., <i>Exocarpos cupressiformis</i> (native cherry)	
Ground cover (%):	
Native perennial grass cover (%):	45
Organic litter cover (%):	21
Typical ground cover species: <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Poa labillardierei</i> var. <i>labillardierei</i> (tussock grass), <i>Themeda triandra</i> (kangaroo grass)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	592
Non-native plant cover	0
Typical non-native species: <i>Lantana camara</i> [^] , <i>Gomphocarpus physocarpus</i> (balloon cottonbush)	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus melanophloia +/- E. crebra, E. tereticornis, Corymbia tessellaris woodland on Cainozoic igneous rocks

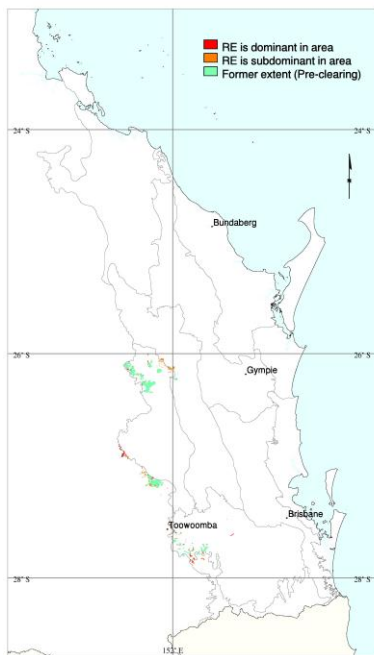


Dan Ferguson

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	7
Shrub:	5
Grass:	12
Forbs and other:	27
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	19
Tree canopy cover (%):	48
Tree sub-canopy	
Tree sub-canopy median height (m):	10
Tree sub-canopy cover (%):	20
Large trees	
Large eucalypt tree dbh threshold (cm):	38
Number of large eucalypt trees per hectare:	24
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus melanophloia</i> (silver-leaved ironbark), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus tereticornis</i> (blue gum), <i>Corymbia tessellaris</i> (Moreton Bay ash), <i>Corymbia intermedia</i> (pink bloodwood)	
Shrubs:	
Native shrub cover (%):	5
Typical shrub species: <i>Alphitonia excelsa</i> (soap tree), <i>Psyrdrax odorata</i> (shiny-leaved canthium), <i>Acacia</i> spp., <i>Exocarpos cupressiformis</i> (native cherry)	
Ground cover (%):	
Native perennial grass cover (%):	32
Organic litter cover (%):	21
Typical ground cover species: <i>Heteropogon contortus</i> (black speargrass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Themeda triandra</i> (kangaroo grass), <i>Bothriochloa decipiens</i>	
Coarse woody debris: Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare:	234
Non-native plant cover	0
Typical non-native species: <i>Dichanthium aristatum</i> (angleton grass), <i>Lantana camara</i> ^, <i>Passiflora</i> spp., <i>Bidens</i> spp.	
Benchmark based on: 3 reference sites, 1 Corveg site and expert opinion	Benchmark reliability ranking: moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Semi-evergreen vine thicket with *Brachychiton rupestris* on Cainozoic igneous rocks. Usually southern half of bioregion

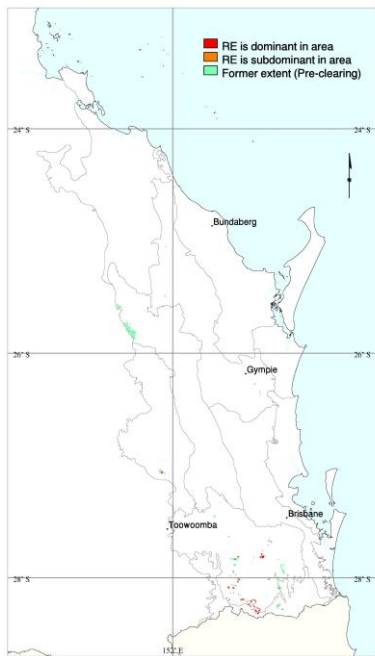


Bill McDonald

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	16
	Shrub:	13
	Grass:	1
	Forbs and other:	10
Trees:	Tree canopy	
	Tree canopy median height (m):	13
	Tree canopy cover (%):	47
	Tree sub-canopy	
	Tree sub-canopy median height (m):	9
	Tree sub-canopy cover (%):	50
	Large trees	
	Large eucalypt tree dbh threshold (cm):	36
	Number of large eucalypt trees per hectare:	10
	Large non-eucalypt tree dbh threshold (cm):	86
	Number of large non-eucalypt trees per hectare:	20
Typical tree species: <i>Eucalyptus orgadophila</i> (mountain coolibah), <i>Brachychiton rupestris</i> (bottle tree)		
Shrubs:	Native shrub cover (%):	49
Ground cover (%):	Native perennial grass cover (%):	8
	Organic litter cover (%):	44
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:		1080
Non-native plant cover		0
Typical non-native species: <i>Opuntia tomentosa</i> ^ (velvety tree pear)		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

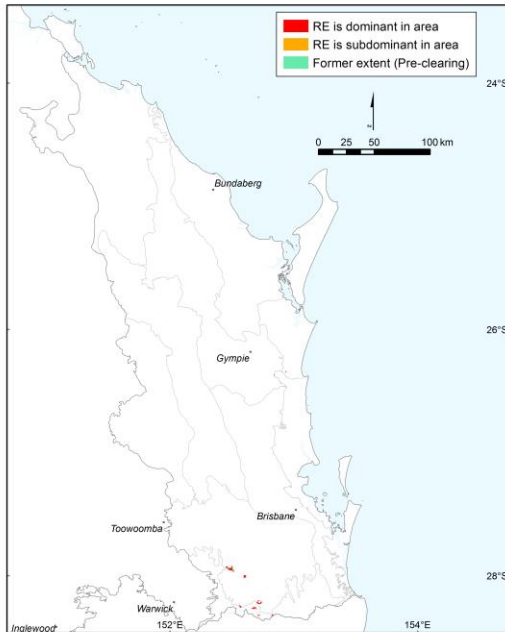
Corymbia citriodora subsp. variegata open-forest on Cainozoic igneous rocks especially trachyte



BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	7
Shrub:	7
Grass:	13
Forbs and other:	28
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	27
Tree canopy cover (%):	53
Tree sub-canopy	
Tree sub-canopy median height (m):	11
Tree sub-canopy cover (%):	24
Large trees	
Large eucalypt tree dbh threshold (cm):	42
Number of large eucalypt trees per hectare:	25
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Corymbia citriodora</i> subsp. <i>variegata</i> , <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus moluccana</i> (gum-topped box)	
Shrubs:	
Native shrub cover (%):	7
Typical shrub species: <i>Alphitonia excelsa</i> (soap tree), <i>Psydrax odorata</i> (shiny-leaved canthium), <i>Acacia</i> spp.	
Ground cover (%):	
Native perennial grass cover (%):	8
Organic litter cover (%):	32
Typical ground cover species: <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Desmodium rhytidophyllum</i> (hairy trefoil), <i>Themeda triandra</i> (kangaroo grass)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	764
Non-native plant cover	0
Typical non-native species: <i>Lantana montevidensis</i> (creeping lantana), <i>Passiflora suberosa</i> [^] (corky passion flower), <i>Lantana camara</i> [^] , <i>Melinis repens</i> [^] (red natal grass)	
Benchmark based on: 3 reference sites and expert opinion	Benchmark reliability ranking: moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated ([^]).

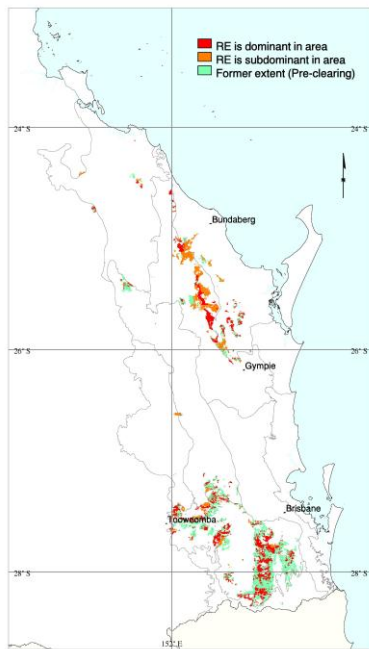
Open forest with *Eucalyptus acmenoides* or *E. helidonica* on Cainozoic igneous rocks especially trachyte



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:	Tree:	7
	Shrub:	3
	Grass:	4
	Forbs and other:	9
Trees:	Emergent canopy	Tree emergent canopy median height (m): na Tree emergent canopy cover (%): na
	Tree canopy	Tree canopy median height (m): 23 Tree canopy cover (%): 62
Tree sub-canopy	Tree sub-canopy median height (m):	10
	Tree sub-canopy cover (%):	21
Large trees	Large eucalypt tree dbh threshold (cm):	44
	Number of large eucalypt trees per hectare:	22
	Large non-eucalypt tree dbh threshold (cm):	25
	Number of large non-eucalypt trees per hectare:	1
Typical tree species: <i>Eucalyptus acmenoides</i> (white mahogany), <i>Eucalyptus helidonica</i> , <i>Eucalyptus eugenioides</i> , <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus propinqua</i> (small-fruited grey gum)		
Shrubs:	Native shrub cover (%):	8
Typical shrub species: <i>Acacia leiocalyx</i> , <i>Lomatia silaifolia</i> , <i>Acacia maidenii</i> , <i>Breynia oblongifolia</i>		
Ground cover (%):	Native perennial grass cover (%):	1
	Organic litter cover (%):	1
Typical ground cover species: <i>Heteropogon contortus</i> (black speargrass), <i>Imperata cylindrica</i> (blady grass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Cheilanthes</i> spp., <i>Themeda triandra</i> (kangaroo grass)		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare		469
Non-native plant cover		0
Typical non-native species: <i>Asclepias curassavica</i> , <i>Gomphrena celosioides</i> , <i>Lantana camara</i>		
Benchmark based on:	1 reference sites, a technical description, 3 checked Corveg sites and expert opinion.	Benchmark reliability ranking: moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Corymbia citriodora subsp. variegata +/- Eucalyptus crebra open-forest on sedimentary rocks

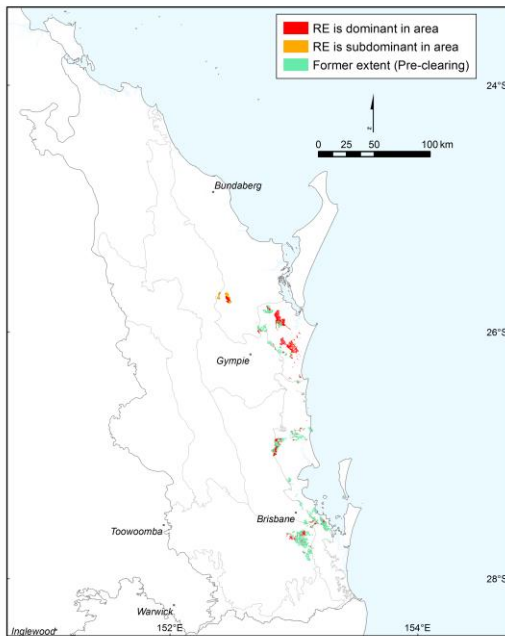


Annie Kelly

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	6
	Shrub:	7
	Grass:	7
	Forbs and other:	13
Trees:	Emergent canopy	Tree emergent canopy median height (m): na
		Tree emergent canopy cover (%): na
	Tree canopy	Tree canopy median height (m): 21
		Tree canopy cover (%): 64
	Tree sub-canopy	Tree sub-canopy median height (m): 12
		Tree sub-canopy cover (%): 20
	Large trees	Large eucalypt tree dbh threshold (cm): 38
		Number of large eucalypt trees per hectare: 38
		Large non-eucalypt tree dbh threshold (cm): na
		Number of large non-eucalypt trees per hectare: na
Typical tree species: <i>Corymbia citriodora</i> subsp. <i>variegata</i> , <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus tereticornis</i> (blue gum), <i>Corymbia intermedia</i> (pink bloodwood), <i>Eucalyptus moluccana</i> (gum-topped box)		
Shrubs:	Native shrub cover (%):	6
Typical shrub species: <i>Lophostemon confertus</i> (brush box), <i>Allocasuarina</i> spp., <i>Acacia</i> spp., <i>Alphitonia excelsa</i> (soap tree), <i>Pultenaea euchila</i> (orange pultenaea)		
Ground cover (%):	Native perennial grass cover (%):	21
	Organic litter cover (%):	48
Typical ground cover species: <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Themeda triandra</i> (kangaroo grass), <i>Imperata cylindrica</i> (blady grass), <i>Aristida</i> spp., <i>Entolasia stricta</i> (wiry panic)		
Coarse woody debris:	Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	506
Non-native plant cover		0
Typical non-native species: <i>Lantana camara</i> [^] , <i>Lantana montevidensis</i> (creeping lantana), <i>Opuntia</i> spp., <i>Melinis repens</i> [^] (red natal grass)		
Benchmark based on:	4 reference sites, 13 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus racemosa subsp. racemosa woodland on sedimentary rocks

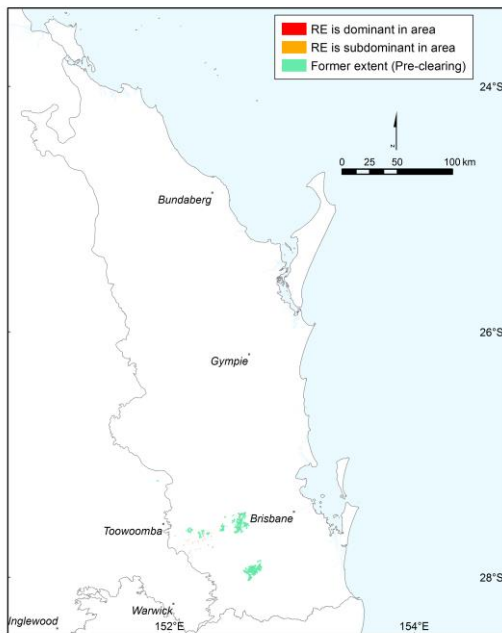


John Neldner

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	6
Shrub:	8
Grass:	6
Forbs and other:	18
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	24
Tree canopy cover (%):	45
Tree sub-canopy	
Tree sub-canopy median height (m):	13
Tree sub-canopy cover (%):	15
Large trees	
Large eucalypt tree dbh threshold (cm):	51
Number of large eucalypt trees per hectare:	30
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus racemosa</i> subsp. <i>racemosa</i> (scribbly gum), <i>Angophora leiocarpa</i> (rusty gum), <i>Eucalyptus seeana</i> , <i>Eucalyptus siderophloia</i> (grey ironbark), <i>Corymbia intermedia</i> (pink bloodwood)	
Shrubs:	
Native shrub cover (%):	10
Typical shrub species: <i>Allocasuarina littoralis</i> (black sheoak), <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Alphitonia excelsa</i> (red ash), <i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i> , <i>Banksia integrifolia</i> subsp. <i>compar</i>	
Ground cover (%):	
Native perennial grass cover (%):	27
Organic litter cover (%):	40
Typical ground cover species: <i>Entolasia stricta</i> (wiry panic), <i>Lomandra multiflora</i> subsp. <i>multiflora</i> , <i>Alloteropsis semialata</i> (cockatoo grass), <i>Themeda triandra</i> (kangaroo grass), <i>Cyanthillium cinereum</i>	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare	432
Non-native plant cover	0
Typical non-native species: <i>Cinnamomum camphora</i> , <i>Ochna serrulata</i>	
Benchmark based on: 20 CorVeg sites, an equivalent RE benchmark and expert opinion	
Benchmark reliability ranking:	moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpha*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (*).

Acacia harpophylla open forest on sedimentary rocks

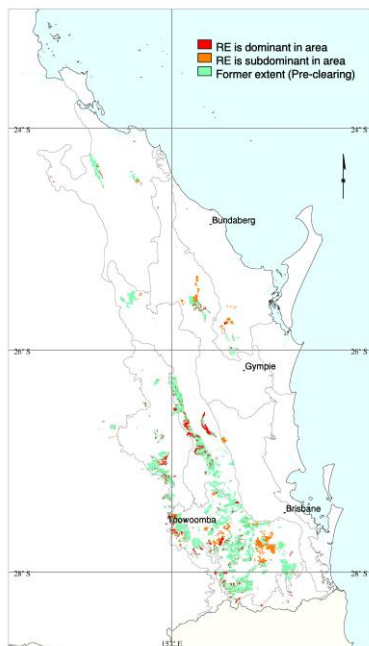


Brooke Corrick

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	12
Shrub:	8
Grass:	5
Forbs and other:	9
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	26
Tree canopy cover (%):	54
Tree sub-canopy	
Tree sub-canopy median height (m):	12
Tree sub-canopy cover (%):	27
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	31
Number of large non-eucalypt trees per hectare:	31
Typical tree species: <i>Acacia harpophylla</i> (brigalow), <i>Casuarina cristata</i> (belah), <i>Flindersia collina</i> (broad-leaved leopard tree)	
Shrubs:	
Native shrub cover (%):	13
Typical shrub species: <i>Carissa ovata</i> (currantbush), <i>Alectryon diversifolius</i> (scrub boonaree)	
Ground cover (%):	
Native perennial grass cover (%):	14
Organic litter cover (%):	52
Typical ground cover species: <i>Paspalidium caespitosum</i> (brigalow grass), <i>Ancistrachne uncinulata</i> (hooky grass)	
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare:	467
Non-native plant cover	0
Typical non-native species: <i>Lantana camara</i> [^] (lantana), <i>Megathyrsus maximus</i> var. <i>maximus</i> , <i>Asparagus africanus</i> [^] (asparagus fern), <i>Dolichandra unguis-cati</i>	
Benchmark based on: 7 reference sites and expert opinion	
Benchmark reliability ranking:	high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated ([^]).

Eucalyptus crebra +/- E. tereticornis, Corymbia tessellaris, Angophora spp., E. melanophloia woodland on sedimentary rocks

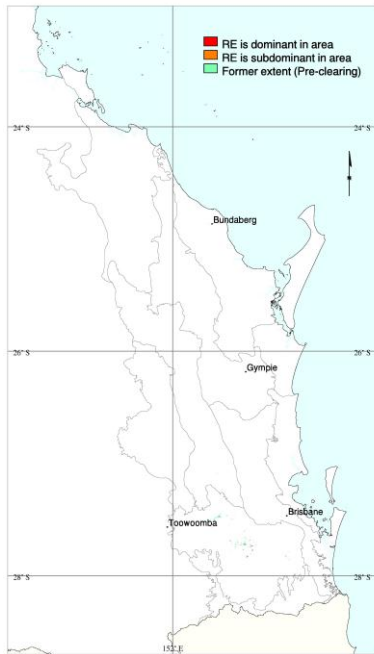


Melanie Venz

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	3
	Shrub:	5
	Grass:	8
	Forbs and other:	26
Trees:	Emergent canopy	Tree emergent canopy median height (m): na
		Tree emergent canopy cover (%): na
	Tree canopy	Tree canopy median height (m): 21
		Tree canopy cover (%): 40
	Tree sub-canopy	Tree sub-canopy median height (m): 10
		Tree sub-canopy cover (%): 8
	Large trees	Large eucalypt tree dbh threshold (cm): 39
		Number of large eucalypt trees per hectare: 18
		Large non-eucalypt tree dbh threshold (cm): na
		Number of large non-eucalypt trees per hectare: na
	Typical tree species: Eucalyptus crebra (narrow-leaved red ironbark), Eucalyptus tereticornis (blue gum), Corymbia tessellaris (Moreton Bay ash), Angophora leiocarpa (rusty gum), Corymbia clarksoniana (grey bloodwood)	
Shrubs:	Native shrub cover (%):	3
	Typical shrub species: Acacia spp., Alphitonia excelsa (soap tree)	
Ground cover (%):	Native perennial grass cover (%):	61
	Organic litter cover (%):	20
	Typical ground cover species: Themeda triandra (kangaroo grass), Cymbopogon refractus (barbed-wire grass), Heteropogon contortus (black speargrass), Chloris divaricata, Bothriochloa decipiens	
Coarse woody debris:	Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	272
Non-native plant cover		0
	Typical non-native species: Lantana camara [^] , Opuntia spp., Digitaria didactyla (Queensland blue couch), Dichanthium aristatum (angleton grass), Lantana montevidensis (creeping lantana)	
Benchmark based on:	3 reference sites, 6 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera Eucalyptus, Corymbia, Angophora, Lophostemon and Syncarpia. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Melaleuca irbyana low open-forest on sedimentary rocks

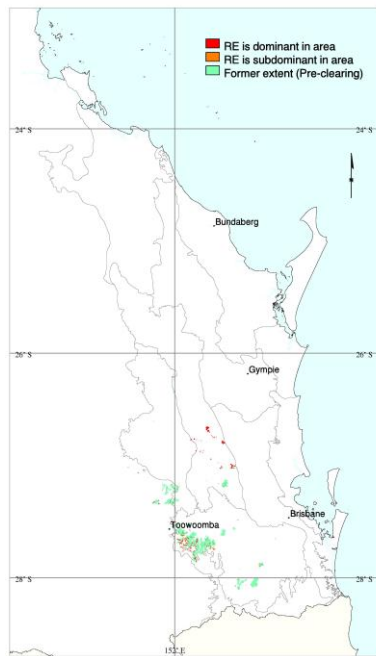


Liz Gould, SEQ catchments

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	3
Shrub:	2
Grass:	12
Forbs and other:	26
Trees:	
Tree canopy	
Tree canopy median height (m):	9
Tree canopy cover (%):	74
Tree sub-canopy	
Tree sub-canopy median height (m):	4
Tree sub-canopy cover (%):	7
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	24
Number of large non-eucalypt trees per hectare:	105
Typical tree species: <i>Melaleuca irbyana</i> (bush house paperbark), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus tereticornis</i> (blue gum), <i>Eucalyptus moluccana</i> (gum-topped box), <i>Corymbia citriodora</i> subsp. <i>variegata</i> (spotted gum)	
Shrubs:	
Native shrub cover (%):	2
Typical shrub species: <i>Alphitonia excelsa</i> (soap tree), <i>Alstonia constricta</i> (bitterbark), <i>Melaleuca irbyana</i> (bush house paperbark), <i>Acacia concurrens</i> (curracabah)	
Ground cover (%):	
Native perennial grass cover (%):	29
Organic litter cover (%):	26
Typical ground cover species: <i>Paspalidium distans</i> (shotgrass), <i>Themeda triandra</i> (kangaroo grass), <i>Enteropogon unispiceus</i> , <i>Digitaria breviglumis</i> , <i>Bothriochloa decipiens</i> (pitted bluegrass)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	223
Non-native plant cover	0
Typical non-native species: <i>Megathyrsus maximus</i> (guinea grass), <i>Bryophyllum</i> spp., <i>Lantana camara</i> [^] , <i>Lantana montevidensis</i> (creeping lantana)	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Semi-evergreen vine thicket with *Brachychiton rupestris* on sedimentary rocks

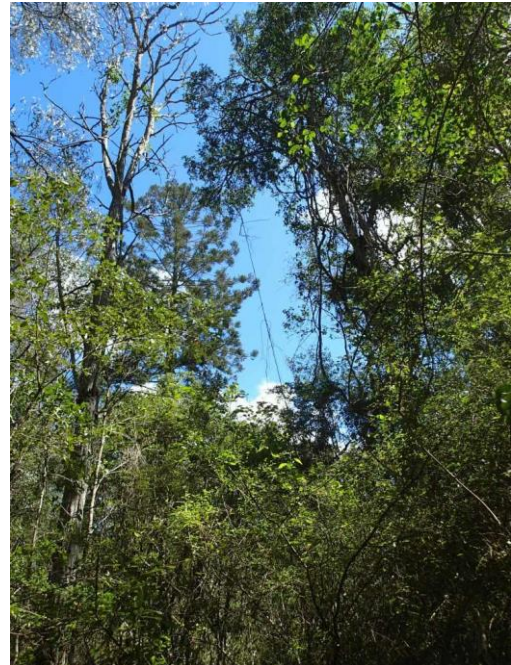
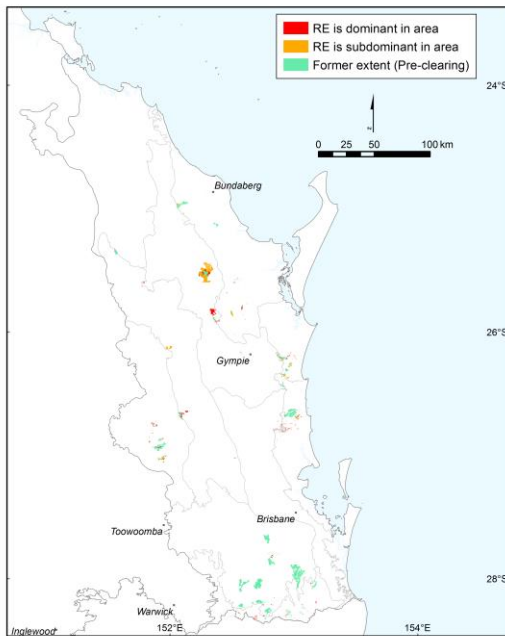


Paul Grimshaw

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	30
	Shrub:	16
	Grass:	2
	Forbs and other:	23
Trees:	Tree canopy	
	Tree canopy median height (m):	18
	Tree canopy cover (%):	56
	Tree sub-canopy	
	Tree sub-canopy median height (m):	17
	Tree sub-canopy cover (%):	55
	Large trees	
	Large eucalypt tree dbh threshold (cm):	na
	Number of large eucalypt trees per hectare:	na
	Large non-eucalypt tree dbh threshold (cm):	26
	Number of large non-eucalypt trees per hectare:	120
Typical tree species: <i>Flindersia australis</i> (crow's ash), <i>Flindersia xanthoxyla</i> (yellow-wood), <i>Atalaya salicifolia</i> (whitewood), <i>Strychnos psilosperma</i> (strychnine tree), <i>Vitex lignum-vitae</i> (lignum vitae)		
Shrubs:	Native shrub cover (%):	56
Typical shrub species: <i>Jasminum simplicifolium</i> subsp. <i>australiense</i> (stiff jasmine), <i>Olea paniculata</i> (native olive), <i>Passiflora aurantia</i> (native passion flower), <i>Ficus coronata</i> (creek sandpaper fig), <i>Archontophoenix cunninghamiana</i> (piccabeen palm)		
Ground cover (%):	Native perennial grass cover (%):	4
	Organic litter cover (%):	55
Typical ground cover species: <i>Adiantum formosum</i> (giant maidenhair), <i>Adiantum aethiopicum</i> (maidenhair fern), <i>Asplenium attenuatum</i> (walking fern), <i>Oplismenus imbecillis</i> , <i>Adiantum hispidulum</i> (rough maidenhair fern)		
Coarse woody debris:	Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	1080
Non-native plant cover		0
Typical non-native species: <i>Opuntia tomentosa</i> [^] (velvety tree pear), <i>Anredera cordifolia</i> [^] (Madeira vine)		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

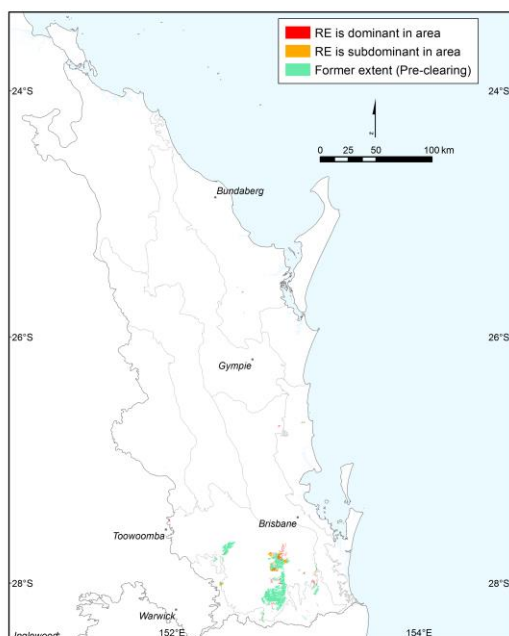
Araucarian microphyll to notophyll vine forest on Cainozoic and Mesozoic sediments



BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	19
Shrub:	21
Grass:	1
Forbs and other:	17
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	28
Tree emergent canopy cover (%):	5
Tree canopy	
Tree canopy median height (m):	16
Tree canopy cover (%):	66
Tree sub-canopy	
Tree sub-canopy median height (m):	8
Tree sub-canopy cover (%):	50
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	30
Number of large non-eucalypt trees per hectare:	75
Typical tree species: <i>Argyrodendron</i> sp. (Kin Kin W.D.Francis AQ81198), <i>Araucaria cunninghamii</i> , <i>Agathis robusta</i> (kauri pine), <i>Backhousia myrtifolia</i> , <i>Cupaniopsis parvifolia</i>	
Shrubs:	
Native shrub cover (%):	50
Typical shrub species: <i>Capparis arborea</i> (brush caper berry), <i>Carissa ovata</i> , <i>Acalypha capillipes</i> (small-leaved acalypha), <i>Cleistanthus cunninghamii</i> , <i>Diospyros australis</i>	
Ground cover (%):	
Native perennial grass cover (%):	1
Organic litter cover (%):	55
Typical ground cover species: <i>Ancistrachne uncinulata</i> (hooky grass), <i>Oplismenus aemulus</i> (creeping shade grass), <i>Solanum stelligerum</i> , <i>Harnieria hygrophiloides</i> , <i>Pellaea paradoxa</i>	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare	379
Non-native plant cover	0
Typical non-native species: <i>Rivina humilis</i> (coral berry), <i>Lantana camara</i> , <i>Solanum seaforthianum</i> (Brazilian nightshade)	
Benchmark based on: 1 reference site, 8 Corveg sites and expert opinion	
Benchmark reliability ranking:	high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

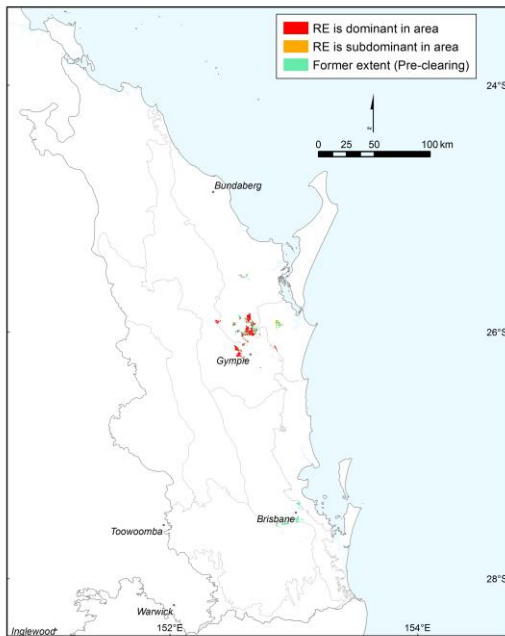
Lophostemon spp. dominated open forest on sedimentary rocks



BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	13
Shrub:	13
Grass:	5
Forbs and other:	31
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	27
Tree canopy cover (%):	85
Tree sub-canopy	
Tree sub-canopy median height (m):	13
Tree sub-canopy cover (%):	27
Large trees	
Large eucalypt tree dbh threshold (cm):	43
Number of large eucalypt trees per hectare:	37
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: Lophostemon confertus (brush box), Lophostemon suaveolens (swamp box), Eucalyptus microcorys (tallowood), Eucalyptus major (mountain grey gum), Eucalyptus propinqua (small-fruited grey gum)	
Shrubs:	
Native shrub cover (%):	12
Typical shrub species: Alphotonia excelsa, Acacia spp., Euroschinus falcatus, Allocasuarina torulosa (forest sheoak), Psychotria loniceroides	
Ground cover (%):	
Native perennial grass cover (%):	11
Organic litter cover (%):	45
Typical ground cover species: Oplismenus aemulus (creeping shade grass), Themeda triandra (kangaroo grass), Doodia aspera (prickly rasp fern), Lomandra spp., Adiantum spp.	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare	553
Non-native plant cover	0
Typical non-native species: Lantana camara [^] , Ochna serrulata	
Benchmark based on: 2 reference sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera Eucalyptus, Corymbia, Angophora, Lophostemon and Syncarpia. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

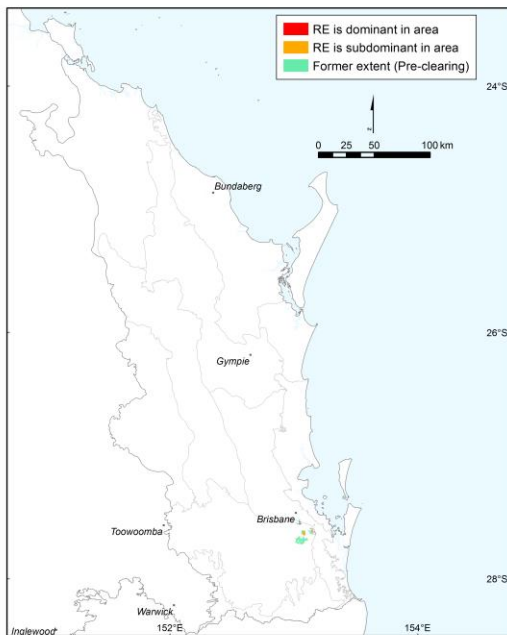
Corymbia citriodora subsp. variegata mixed open forest on Cainozoic and Mesozoic sediments



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:	Tree:	10
	Shrub:	5
	Grass:	6
	Forbs and other:	17
Trees:	Emergent canopy	Tree emergent canopy median height (m): na
		Tree emergent canopy cover (%): na
	Tree canopy	Tree canopy median height (m): 27
		Tree canopy cover (%): 52
	Tree sub-canopy	Tree sub-canopy median height (m): 15
		Tree sub-canopy cover (%): 31
	Large trees	Large eucalypt tree dbh threshold (cm): 46
		Number of large eucalypt trees per hectare: 30
		Large non-eucalypt tree dbh threshold (cm): na
		Number of large non-eucalypt trees per hectare: na
Typical tree species: <i>Corymbia citriodora</i> subsp. <i>variegata</i> (spotted gum), <i>Eucalyptus acmenoides</i> (white mahogany), <i>Angophora leiocarpa</i> (rusty gum), <i>Eucalyptus siderophloia</i> (grey ironbark), <i>Eucalyptus carnea</i> (Broad-leaved white mahogany)		
Shrubs:	Native shrub cover (%): 27	
	Typical shrub species: <i>Alphitonia excelsa</i> (red ash), <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Acacia leiocalyx</i>	
Ground cover (%):	Native perennial grass cover (%): 35	
	Organic litter cover (%): 55	
Typical ground cover species: <i>Entolasia stricta</i> (wiry panic), <i>Imperata cylindrica</i> (blady grass), <i>Panicum effusum</i> , <i>Themeda triandra</i> (kangaroo grass), <i>Brunoniella australis</i> (blue trumpet)		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare		401
Non-native plant cover		0
Typical non-native species: <i>Lantana camara</i> ^, <i>Passiflora suberosa</i> (corky passion flower), <i>Lantana montevidensis</i> , <i>Crassocephalum crepidioides</i>		
Benchmark based on: 2 reference sites, 5 Corveg sites, 4 other sites and expert opinion		Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

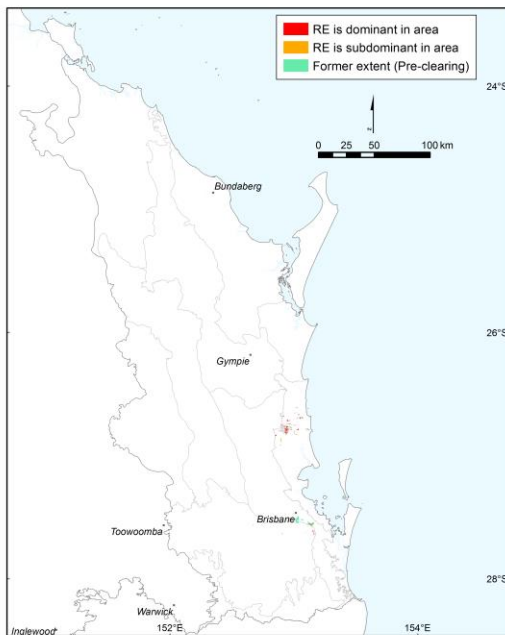
Eucalyptus carnea and/or E. tindaliae and/or E. helidonica open forest on Cainozoic and Mesozoic sediments



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	8
	Shrub:	12
	Grass:	5
	Forbs and other:	20
Trees:	Emergent canopy	
	Tree emergent canopy median height (m):	na
	Tree emergent canopy cover (%):	na
	Tree canopy	
	Tree canopy median height (m):	24
	Tree canopy cover (%):	57
	Tree sub-canopy	
	Tree sub-canopy median height (m):	11
	Tree sub-canopy cover (%):	33
	Large trees	
	Large eucalypt tree dbh threshold (cm):	44
	Number of large eucalypt trees per hectare:	27
	Large non-eucalypt tree dbh threshold (cm):	na
	Number of large non-eucalypt trees per hectare:	na
	Typical tree species: <i>Eucalyptus carnea</i> (Broad-leaved white mahogany), <i>Eucalyptus tindaliae</i> (Queensland white stringybark), <i>Corymbia citriodora</i> subsp. <i>variegata</i> (spotted gum), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus major</i> (mountain grey gum)	
	Shrubs:	
	Native shrub cover (%):	13
	Typical shrub species: <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Lophostemon confertus</i> (brush box), <i>Acacia implexa</i> (lightwood), <i>Allocasuarina littoralis</i> (black sheoak), <i>Acacia maidenii</i>	
	Ground cover (%):	
	Native perennial grass cover (%):	23
	Organic litter cover (%):	46
	Typical ground cover species: <i>Entolasia stricta</i> (wiry panic), <i>Themeda triandra</i> (kangaroo grass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Pteridium esculentum</i> (common bracken), <i>Lomandra filiformis</i>	
	Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare	469
	Non-native plant cover	0
	Typical non-native species: <i>Lantana camara</i> [^] , <i>Gomphocarpus physocarpus</i> (balloon cottonbush), <i>Opuntia tomentosa</i> [^] (velvety tree pear)	
Benchmark based on:	3 reference sites, 3 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

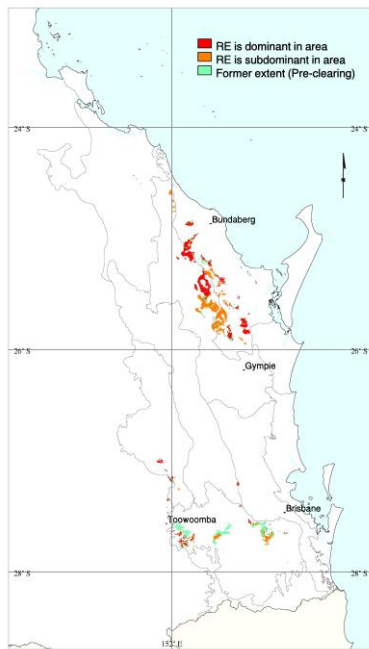
Open forest generally containing *Eucalyptus siderophloia*, *E. propinqua*, *Corymbia intermedia* on sedimentary rocks



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:	Tree:	8
	Shrub:	13
	Grass:	9
	Forbs and other:	17
Trees:	Emergent canopy	
	Tree emergent canopy median height (m):	na
	Tree emergent canopy cover (%):	na
Tree canopy	Tree canopy median height (m):	26
	Tree canopy cover (%):	65
Tree sub-canopy	Tree sub-canopy median height (m):	10
	Tree sub-canopy cover (%):	13
Large trees	Large eucalypt tree dbh threshold (cm):	40
	Number of large eucalypt trees per hectare:	45
	Large non-eucalypt tree dbh threshold (cm):	na
	Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus siderophloia</i> (grey ironbark), <i>Eucalyptus propinqua</i> (small-fruited grey gum), <i>Corymbia intermedia</i> (pink bloodwood), <i>Lophostemon confertus</i> (brush box), <i>Eucalyptus microcorys</i> (tallowood)		
Shrubs:	Native shrub cover (%):	5
	Typical shrub species: <i>Alphitonia excelsa</i> (red ash), <i>Breynia oblongifolia</i> , <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Glochidion ferdinandi</i>	
Ground cover (%):	Native perennial grass cover (%):	23
	Organic litter cover (%):	46
Typical ground cover species: <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Entolasia stricta</i> (wiry panic), <i>Imperata cylindrica</i> (blady grass), <i>Panicum effusum</i> , <i>Themeda triandra</i> (kangaroo grass)		
Coarse woody debris: Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare		439
Non-native plant cover		0
Typical non-native species: <i>Gomphocarpus fruticosus</i> , <i>Lantana camara</i> , <i>Passiflora suberosa</i> (corky passion flower)		
Benchmark based on: 2 reference sites, 7 Corveg sites and expert opinion		
Benchmark reliability ranking:		high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpha*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus fibrosa subsp. fibrosa woodland on sedimentary rocks

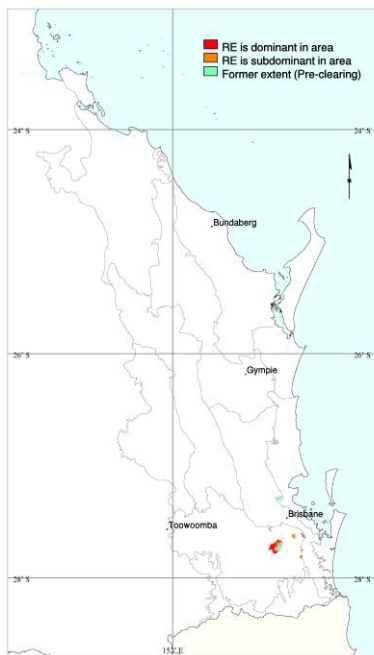


Queensland Herbarium

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	5
Shrub:	7
Grass:	11
Forbs and other:	14
Trees:	
Tree canopy	
Tree canopy median height (m):	28
Tree canopy cover (%):	55
Tree sub-canopy	
Tree sub-canopy median height (m):	9
Tree sub-canopy cover (%):	19
Large trees	
Large eucalypt tree dbh threshold (cm):	49
Number of large eucalypt trees per hectare:	66
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> (red ironbark), <i>Corymbia citriodora</i> subsp. <i>variegata</i> (spotted gum), <i>Eucalyptus portuensis</i> or <i>Eucalyptus acmenoides</i> , <i>Eucalyptus major</i> (mountain grey gum), <i>Lophostemon confertus</i> (brush box)	
Shrubs:	
Native shrub cover (%):	15
Typical shrub species: <i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i> (early-flowering black wattle), <i>Acacia dispartima</i> subsp. <i>dispartima</i> (southern salwood), <i>Jacksonia scoparia</i> (native broom), <i>Alphitonia excelsa</i> (soap tree), <i>Petalostigma pubescens</i> (quinine tree)	
Ground cover (%):	
Native perennial grass cover (%):	19
Organic litter cover (%):	55
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Pultenaea spinosa</i> , <i>Chrysopogon fallax</i> (golden beardgrass), <i>Eremochloa bimaculata</i> (poverty grass)	
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	299
Non-native plant cover	0
None listed	

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Corymbia henryi +/- Eucalyptus fibrosa subsp. fibrosa, Corymbia citriodora subsp. variegata open-forest on sedimentary rocks

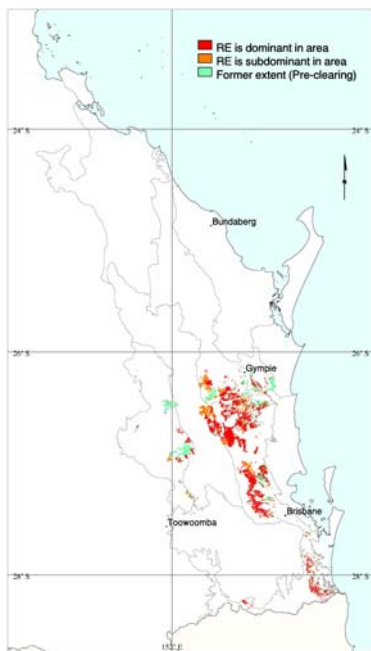


Jian Wang

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	4
Shrub:	6
Grass:	7
Forbs and other:	14
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	24
Tree canopy cover (%):	59
Tree sub-canopy	
Tree sub-canopy median height (m):	10
Tree sub-canopy cover (%):	22
Large trees	
Large eucalypt tree dbh threshold (cm):	44
Number of large eucalypt trees per hectare:	24
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Corymbia henryi</i> (large-leaved spotted gum), <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> (red ironbark), <i>Corymbia citriodora</i> subsp. <i>variegata</i> , <i>Eucalyptus siderophloia</i> (red ironbark), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark)	
Shrubs:	
Native shrub cover (%):	11
Typical shrub species: <i>Acacia</i> spp., <i>Alphitonia excelsa</i> (soap tree), <i>Jacksonia scoparia</i> (native broom), <i>Daviesia villifera</i> (prickly daviesia)	
Ground cover (%):	
Native perennial grass cover (%):	16
Organic litter cover (%):	53
Typical ground cover species: <i>Entolasia stricta</i> (wiry panic), <i>Eremochloa bimaculata</i> (poverty grass), <i>Panicum effusum</i> (hairy panic), <i>Aristida vagans</i> (three-awn spear grass), <i>Cymbopogon refractus</i> (barbed-wire grass)	
Coarse woody debris: Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare:	285
Non-native plant cover	0
Typical non-native species: <i>Gomphocarpus physocarpus</i> (balloon cottonbush), <i>Lantana camara</i> [^]	
Benchmark based on: 3 reference sites, 1 Corveg site and expert opinion	Benchmark reliability ranking: moderate

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus siderophloia, E. propinqua +/- E. microcorys, Lophostemon confertus, Corymbia intermedia, E. acmenoides open-forest on metamorphics +/- interbedded volcanics



Tim Ryan

BioCondition attribute **Benchmark**

Recruitment of dominant canopy species (%): 100

Native plant species richness:

	Tree:	6
	Shrub:	12
	Grass:	4
	Forbs and other:	21

Trees:	Tree canopy	Tree canopy median height (m):	25
		Tree canopy cover (%):	72
	Tree sub-canopy	Tree sub-canopy median height (m):	10
		Tree sub-canopy cover (%):	17
	Large trees	Large eucalypt tree dbh threshold (cm):	45
		Number of large eucalypt trees per hectare:	63
		Large non-eucalypt tree dbh threshold (cm):	na
		Number of large non-eucalypt trees per hectare:	na

Typical tree species: *Eucalyptus propinqua* (small-fruited grey gum), *Eucalyptus siderophloia* (red ironbark), *Eucalyptus microcorys* (tallow wood), *Eucalyptus acmenoides* (narrow-leaved white stringybark), *Corymbia intermedia* (pink bloodwood)

Shrubs: Native shrub cover (%): 21

Ground cover (%):

	Native perennial grass cover (%):	16
	Organic litter cover (%):	76

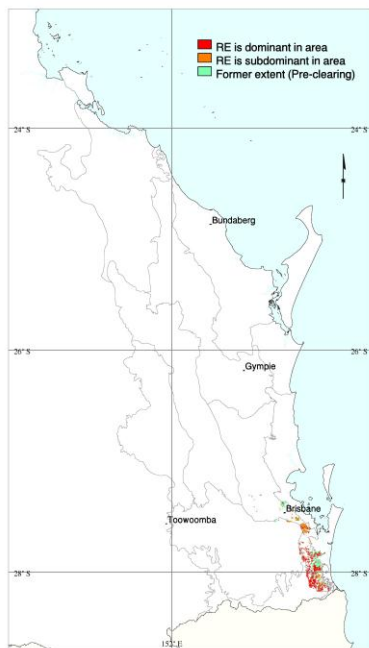
Coarse woody debris Total length (m) of debris ≥ 10 cm diameter and ≥ 0.5 m in length per hectare: 370

Non-native plant cover 0

None listed

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus tindaliae, E. carnea, Corymbia intermedia +/- E. siderophloia or E. crebra, Corymbia citriodora subsp. variegata woodland on metamorphics +/- interbedded volcanics

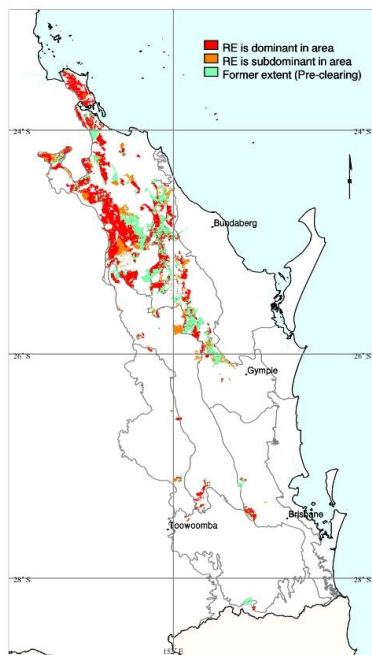


Adrian Borsboom

BioCondition attribute		Benchmark	
Recruitment of dominant canopy species (%):		100	
Native plant species richness:	Tree:	10	
	Shrub:	8	
	Grass:	9	
	Forbs and other:	17	
Trees:	Tree canopy	Tree canopy median height (m):	26
		Tree canopy cover (%):	72
	Tree sub-canopy	Tree sub-canopy median height (m):	10
		Tree sub-canopy cover (%):	43
	Large trees	Large eucalypt tree dbh threshold (cm):	46
		Number of large eucalypt trees per hectare:	33
		Large non-eucalypt tree dbh threshold (cm):	na
		Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Eucalyptus tindaliae</i> (Queensland white stringybark), <i>Eucalyptus carnea</i> (broad-leaved white mahogany), <i>Eucalyptus siderophloia</i> (red ironbark), <i>Corymbia intermedia</i> (pink bloodwood), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark)			
Shrubs:	Native shrub cover (%):	7	
	Typical shrub species: <i>Acacia concurrens</i> (curracabah), <i>Acacia disparrima</i> subsp. <i>disparrima</i> (southern salwood), <i>Lophostemon confertus</i> (brush box), <i>Alphitonia excelsa</i> (soap tree)		
Ground cover (%):	Native perennial grass cover (%):	39	
	Organic litter cover (%):	45	
	Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Imperata cylindrica</i> (blady grass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Eremochloa bimaculata</i> (poverty grass)		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		546	
Non-native plant cover		0	
Typical non-native species: <i>Lantana camara</i> [^] , <i>Melinis minutiflora</i> (molasses grass)			

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Corymbia citriodora subsp. variegata, Eucalyptus crebra woodland on metamorphics ± interbedded volcanics

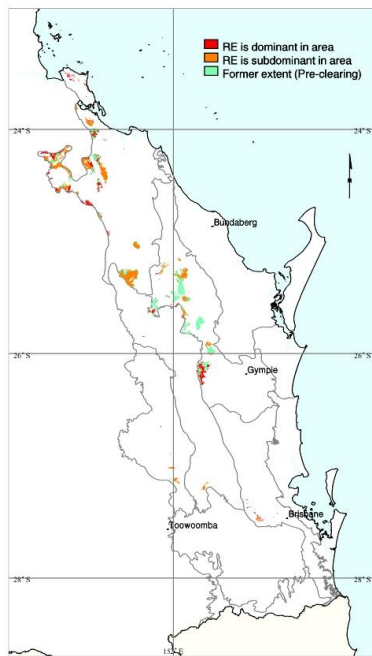


Tim Ryan

BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	4
Shrub:	6
Grass:	11
Forbs and other:	29
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	na
Tree emergent canopy cover (%):	na
Tree canopy	
Tree canopy median height (m):	21
Tree canopy cover (%):	32
Tree sub-canopy	
Tree sub-canopy median height (m):	11
Tree sub-canopy cover (%):	10
Large trees	
Large eucalypt tree dbh threshold (cm):	50
Number of large eucalypt trees per hectare:	12
Large non-eucalypt tree dbh threshold (cm):	na
Number of large non-eucalypt trees per hectare:	na
Typical tree species: <i>Corymbia citriodora</i> subsp. <i>variegata</i> , <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Eucalyptus acmenoides</i> , <i>Corymbia intermedia</i> (pink bloodwood)	
Shrubs:	
Native shrub cover (%):	12
Typical shrub species: <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Lophostemon confertus</i> (brush box), <i>Acacia leiocalyx</i> , <i>Acacia maidenii</i> , <i>Lophostemon suaveolens</i> (swamp box)	
Ground cover (%):	
Native perennial grass cover (%):	25
Organic litter cover (%):	45
Typical ground cover species: <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Themeda triandra</i> (kangaroo grass), <i>Arundinella nepalensis</i> (reedgrass), <i>Heteropogon contortus</i> (black speargrass), <i>Cyperus fulvus</i>	
Coarse woody debris: Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare:	320
Non-native plant cover	0
Typical non-native species: <i>Lantana camara</i> ^ (lantana)	
Benchmark based on: 12 reference sites and 41 Corvege sites and expert opinion	
Benchmark reliability ranking:	high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

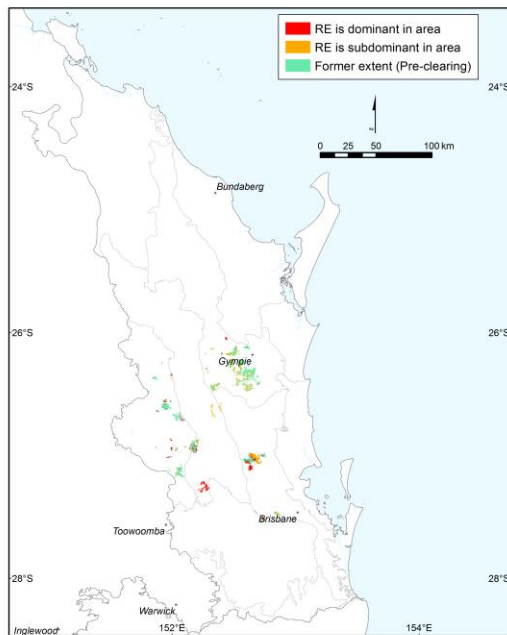
Eucalyptus crebra woodland on metamorphics ± interbedded volcanics



BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	4
	Shrub:	6
	Grass:	13
	Forbs and other:	36
Trees:	Emergent canopy	Tree emergent canopy median height (m): na
		Tree emergent canopy cover (%): na
	Tree canopy	Tree canopy median height (m): 18
		Tree canopy cover (%): 32
	Tree sub-canopy	Tree sub-canopy median height (m): 7
		Tree sub-canopy cover (%): 8
	Large trees	Large eucalypt tree dbh threshold (cm): 39
		Number of large eucalypt trees per hectare: 18
		Large non-eucalypt tree dbh threshold (cm): na
		Number of large non-eucalypt trees per hectare: na
	Typical tree species: <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Corymbia erythrophloia</i> , <i>Corymbia clarksoniana</i> , <i>Eucalyptus exserta</i> (Queensland peppermint)	
Shrubs:	Native shrub cover (%):	5
	Typical shrub species: <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Alphitonia excelsa</i> , <i>Lophostemon confertus</i> (brush box), <i>Acacia leiocalyx</i> , <i>Acacia maidenii</i>	
Ground cover (%):	Native perennial grass cover (%):	30
	Organic litter cover (%):	35
	Typical ground cover species: <i>Bothriochloa decipiens</i> var. <i>decipiens</i> , <i>Digitaria diffusa</i> , <i>Aristida personata</i> , <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Desmodium rhytidophyllum</i>	
Coarse woody debris:	Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare:	350
Non-native plant cover		0
	Typical non-native species: <i>Lantana camara</i> [^] (lantana), <i>Lantana montevidensis</i> [^] (creeping lantana)	
Benchmark based on:	11 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Araucarian microphyll vine forest on metamorphics +/- interbedded volcanics; usually southern half of bioregion



BioCondition attribute	Benchmark
Recruitment of dominant canopy species (%):	100
Native plant species richness:	
Tree:	44
Shrub:	37
Grass:	2
Forbs and other:	19
Trees:	
Emergent canopy	
Tree emergent canopy median height (m):	20
Tree emergent canopy cover (%):	5
Tree canopy	
Tree canopy median height (m):	17
Tree canopy cover (%):	79
Tree sub-canopy	
Tree sub-canopy median height (m):	10
Tree sub-canopy cover (%):	60
Large trees	
Large eucalypt tree dbh threshold (cm):	na
Number of large eucalypt trees per hectare:	na
Large non-eucalypt tree dbh threshold (cm):	29
Number of large non-eucalypt trees per hectare:	80
Typical tree species: Araucaria cunninghamii, Cupaniopsis parvifolia, Dendrocnide photinophylla (Shiny-leaved stinging tree), Rhodospaera rhodanthera (deep yellow wood), Flindersia australis (crow's ash)	
Shrubs:	
Native shrub cover (%):	30
Typical shrub species: Mallotus philippensis, Aphananthe philippinensis, Capparis arborea (brush caper berry), Arytera foveolata, Spartothamnella juncea	
Ground cover (%):	
Native perennial grass cover (%):	0.3
Organic litter cover (%):	72
Typical ground cover species: Ancistrachne uncinulata (hooky grass), Oplismenus aemulus (creeping shade grass), Oplismenus imbecillis, Pseuderanthemum variabile (pastel flower), Harnieria hygrophiloides	
Coarse woody debris: Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare	314
Non-native plant cover	0
Typical non-native species: Rivina humilis (coral berry), Lantana camara, Solanum seaforthianum (Brazilian nightshade)	
Benchmark based on: 3 reference sites and expert opinion	
Benchmark reliability ranking:	high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera Eucalyptus, Corymbia, Angophora, Lophostemon and Syncarpha. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Eucalyptus pilularis open-forest on coastal metamorphics and interbedded volcanics

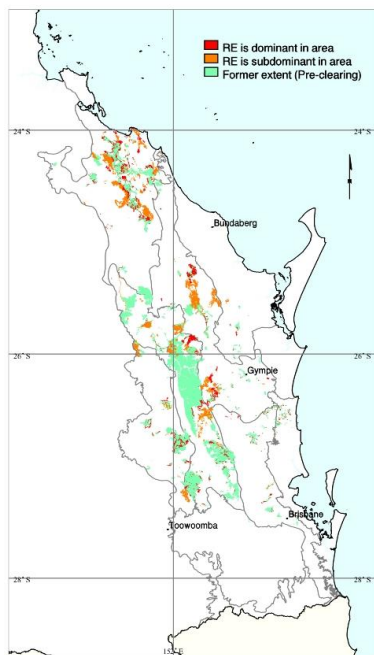


David Jinks

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	16
	Shrub:	11
	Grass:	4
	Forbs and other:	18
Trees:	Tree canopy	
	Tree canopy median height (m):	31
	Tree canopy cover (%):	50
	Tree sub-canopy	
	Tree sub-canopy median height (m):	10
	Tree sub-canopy cover (%):	11
	Large trees	
	Large eucalypt tree dbh threshold (cm):	47
	Number of large eucalypt trees per hectare:	28
	Large non-eucalypt tree dbh threshold (cm):	27
	Number of large non-eucalypt trees per hectare:	2
Typical tree species: <i>Eucalyptus pilularis</i> (blackbutt), <i>Eucalyptus tindaliae</i> (Queensland white stringybark), <i>Corymbia intermedia</i> (pink bloodwood)		
Shrubs:	Native shrub cover (%):	18
Typical shrub species: <i>Allocasuarina littoralis</i> (woolly oak), <i>Lophostemon confertus</i> (brush box)		
Ground cover (%):	Native perennial grass cover (%):	6
	Organic litter cover (%):	56
Typical ground cover species: <i>Themeda triandra</i> (kangaroo grass), <i>Entolasia stricta</i> (wiry panic), <i>Imperata cylindrica</i> (blady grass)		
Coarse woody debris	Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:	480
Non-native plant cover		0
Typical non-native species: <i>Lantana camara</i> [^] , <i>Senna pendula</i> var. <i>glabrata</i> [^] (Easter cassia)		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).

Eucalyptus tereticornis, Corymbia intermedia, E. crebra ± Lophostemon suaveolens woodland on Mesozoic to Proterozoic igneous rocks

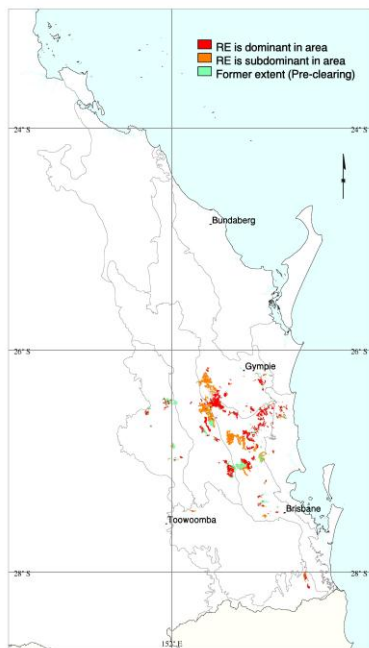


Tim Ryan

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	4
	Shrub:	3
	Grass:	9
	Forbs and other:	28
Trees:	Emergent canopy	Tree emergent canopy median height (m): na
		Tree emergent canopy cover (%): na
	Tree canopy	Tree canopy median height (m): 21
		Tree canopy cover (%): 31
	Tree sub-canopy	Tree sub-canopy median height (m): 11
		Tree sub-canopy cover (%): 12
	Large trees	Large eucalypt tree dbh threshold (cm): 45
		Number of large eucalypt trees per hectare: 60
		Large non-eucalypt tree dbh threshold (cm): na
		Number of large non-eucalypt trees per hectare: na
	Typical tree species: <i>Eucalyptus tereticornis</i> , <i>Corymbia intermedia</i> (pink bloodwood), <i>Eucalyptus crebra</i> (narrow-leaved red ironbark), <i>Lophostemon suaveolens</i> (swamp box)	
Shrubs:	Native shrub cover (%):	5
	Typical shrub species: <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Acacia leiocalyx</i> , <i>Lophostemon suaveolens</i> (swamp box), <i>Allocasuarina torulosa</i> , <i>Alphitonia excelsa</i>	
Ground cover (%):	Native perennial grass cover (%):	40
	Organic litter cover (%):	35
	Typical ground cover species: <i>Panicum effusum</i> , <i>Arundinella nepalensis</i> (reedgrass), <i>Cymbopogon refractus</i> (barbed-wire grass), <i>Cyanthillium cinereum</i> , <i>Glycine tabacina</i>	
Coarse woody debris:	Total length (m) of debris ≥ 10cm diameter and ≥0.5m in length per hectare:	500
Non-native plant cover		0
	Typical non-native species: <i>Lantana camara</i> [^] (lantana), <i>Gomphocarpus physocarpus</i> (balloon cottonbush), <i>Emilia sonchifolia</i>	
Benchmark based on:	21 Corveg sites and expert opinion	Benchmark reliability ranking: high

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Shrub and ground strata may contain recruiting canopy species. 'Eucalypt' refers to species belonging to the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* and *Syncarpia*. Users should refer to regional ecosystem technical descriptions for more complete lists of characteristic species. Common names can differ between regions. Declared pest species in Queensland are designated (^).

Corymbia intermedia +/- Eucalyptus propinqua, E. siderophloia, E. microcorys, Lophostemon confertus open-forest on Mesozoic to Proterozoic igneous rocks



Tim Ryan

BioCondition attribute		Benchmark
Recruitment of dominant canopy species (%):		100
Native plant species richness:		
	Tree:	8
	Shrub:	6
	Grass:	5
	Forbs and other:	17
Trees:	Tree canopy	
	Tree canopy median height (m):	24
	Tree canopy cover (%):	82
	Tree sub-canopy	
	Tree sub-canopy median height (m):	10
	Tree sub-canopy cover (%):	55
	Large trees	
	Large eucalypt tree dbh threshold (cm):	46
	Number of large eucalypt trees per hectare:	65
	Large non-eucalypt tree dbh threshold (cm):	26
	Number of large non-eucalypt trees per hectare:	15
Typical tree species: Eucalyptus propinqua (small-fruited grey gum), Corymbia intermedia (pink bloodwood), Eucalyptus siderophloia (red ironbark), Eucalyptus microcorys (tallow wood), Eucalyptus acmenoides (narrow-leaved white stringybark)		
Shrubs:	Native shrub cover (%):	5
Typical shrub species: Alphitonia excelsa (soap tree), Alpinia caerulea (wild ginger), Clerodendrum floribundum (thurkoo)		
Ground cover (%):	Native perennial grass cover (%):	23
	Organic litter cover (%):	65
Typical ground cover species: Themeda triandra (kangaroo grass), Imperata cylindrica (blady grass), Pteridium esculentum (common bracken), Doodia aspera (prickly rasp fern), Entolasia stricta (wiry panic)		
Coarse woody debris: Total length (m) of debris \geq 10cm diameter and \geq 0.5m in length per hectare:		613
Non-native plant cover		0
None listed		

Selected typical species are those that characterize the ecosystem, community or stratum at reference sites. Up to five frequently occurring species for each stratum are selected. Users should refer to the regional ecosystem description database (REDD) and/or the technical description for more complete lists of characteristic species. Only the most frequently used common name is given. Other common names may be used in other regions. Declared pest species in Queensland are designated (^).