

Bio-condition Site 12	
Forbs and Others	<i>Adiantum aethiopicum, Ajuga australis, Cheilanthes seiberi, Cyanthillium cinereum, Cymbidium madidum, Desmodium rhytidophyllum, Dianella caerulea, Dianella nervosa, Drynaria rigidula, Eleutheroglossum fellowsii, Flemingia parviflora, Gahnia aspera, Geitonoplesium cymosum, Hibbertia longifolia, Hypericum gramineum, Lomandra multiflora, Lepidosperma laterale, Parsonsia rotata, Plectranthus parviflora, Pterocaulon redolens, Rostellularia adscendens, Scleria mackaviensis, Thelychiton jonesii subsp. jonesii, Thysanotus tuberosus, Trachyrhizum argrostophyllum, Widelia spilanthoides, Xerochrysum bracteatum.</i>
Non-native species	<i>Praxelis clematidea, Crassocephalum crepidioides.</i>
Threatened Flora	<i>Eleutheroglossum fellowsii</i>

Table 14 Bio-condition Site 13

Bio-condition Site 13				
Date:	25-05-2020			
Plot Origin:	Zone: 55K	Lat: 17.20323	Long: 145.40465	Elevation: 1083m
Plot Centre:	Zone: 55K	Lat: 17.20279	Long: 145.40471	Elevation: 1087m
Plot Bearing:	W	Plot Alignment:	Steep mid-slope, following contour	
				
North		East		

Bio-condition Site 13



South

West

Habitat Description:	Open woodland with a canopy (12m) dominated by <i>Eucalyptus drepanophylla</i> , <i>Corymbia intermedia</i> and <i>Lophostemon grandiflorus</i> . Understorey of <i>Allocasuarina torulosa</i> and canopy associates (5-8). Sparse shrub layer (3m) contains <i>Acacia aulococarpa</i> . Grassy understorey (<1.0m) of <i>Themeda triandra</i> and <i>Mnesithea rottboellioides</i> and <i>Capillipedium spicigerum</i> .		
Regional Ecosystem (Mapped):	7.12.34 <i>Eucalyptus portuensis</i> and/or <i>E. drepanophylla</i> , +/- <i>C. intermedia</i> +/- <i>C. citriodora</i> , +/- <i>E. granitica</i> open woodland to open forest on uplands on granite.		
Vegetation Attributes:	Recruitment of Dominant Canopy Species (%):		100%
	Native plant species richness:	Trees:	4
		Shrubs:	16
		Grasses:	9
		Forbs/Other:	28
	Tree Canopy	Median Height (m)	12
		Tree Canopy Cover (%)	28.1
	Tree Sub-canopy	Tree sub-canopy median Height (m)	6.5
		Tree Sub-canopy Cover	5.7
	Large Trees	Large Eucalypt tree DBH threshold (cm)	30
		Large Eucalypt trees per hectare	20
		Large non-eucalypt trees threshold (cm)	30
		Large non-eucalypt trees per hectare	2
	Shrubs	Native Shrub Cover (%)	3.3
	Ground Cover	Native Perennial Grass Cover (%)	62
		Forbs and Non-grass (%)	9
Shrubs (%)		3	
Organic litter cover (%)		25	

Bio-condition Site 13			
		Rock (%)	0
		Bare Ground (%)	0
		Cryptograms (%)	0
		Non-native plant cover (%)	<1
		Total Non-native species richness	1
	Coarse Woody Debris (CWD)	Total length >10cm width and >1m length (m)	111
Native Species Richness:	Trees	<i>Eucalyptus drepanophylla, Corymbia intermedia, Allocasuarina torulosa, Lophostemon grandiflorus</i>	
	Shrubs	<i>Acacia aulococarpa, Alphitonia excelsa, Breynia oblongifolia, Dodonea lanceolata, Hakea plurinervia, Hibiscus meraukensis, Indigofera bancroftii, Lophostemon suaveolens, Persoonia falcata, Platysace valida, Plectranthus amoenus, Pomaderris argyrophylla, Psychotria loniceroides, Trema tomentosum, Xanthorrhoea johnsonii</i>	
	Grasses	<i>Capillipedium spicigerum, Digitaria spp., Dimeria ornithopoda, Mnesithia rottboellioides, Panicum effusum, Schyzacharium fragile, Sarga plumosum, Themeda triandra, Tripogon loliiformis.</i>	
	Forbs and Others	<i>Adiantum aethiopicum, Cheilanthes sieberi, Chelanthus distans, Croton brevis, Cyathium cinereum, Cymbidium madidum, Desmodium rhytidophyllum, Dianella nervosa, Drynaria rigidula, Eustrephus latifolius, Fimbristylis acicularis, Fimbristylis dichotoma, Flemingia parviflora, Gahnia aspera, Hyperanicum gramineum, Hybanthus stellarioides, Lepidosperma laterale, Lomandra multiflora, Phyllanthus simplex, Platycerium bifurcatum, Poranthera microphylla, Pseudoranthemum variable, Rostellularia adscendens, Scleria mackaviensis, Spermacocce brachystema, Thelychiton jonesii subsp. jonesii, Widelia spilanthis, Xerochrysum bracteatum.</i>	
Non-native Species		<i>Gynura crepidioides, Praxelis clematidea,</i>	
Threatened Flora		<i>Plectranthus amoenus</i>	

Table 15 Bio-condition Site 14

Bio-condition Site 14				
Date:	10-04-2019			
Plot Origin:	Zone: 55K	Lat: 17.20341	Long: 145.40645	Elevation: 1114m
Plot Centre:	Zone: 55K	Lat: 17.20336	Long: 145.40688	Elevation: 1120m
Plot Bearing:	E	Plot Alignment:	Near to top of ridgeline, following contour	

Bio-condition Site 14



North



East



South



West

Habitat Description:

Open woodland with a canopy (10m) dominated by *Corymbia intermedia* and/or *Eucalyptus drepanophylla* and *Syncarpia glomulifera*. Understorey of *Allocasuarina torulosa* and canopy associates (5-8). Sparse shrub layer (3m) contains *Acacia aulococarpa*. Grassy understorey (<1.0m) of *Themeda triandra* and *Mnesithea rottboellioides* and *Capillipedium spicigerum*

Regional Ecosystem (Mapped):

7.12.29a *Corymbia intermedia*, *Eucalyptus tereticornis*, *E. drepanophylla* open forest to low open forest and woodland with *Allocasuarina torulosa*, *A. littoralis*, *Lophostemon suaveolens*, *Acacia cincinnata*, *A. flavescens*, *Banksia aquilonia* and *Xanthorrhoea johnsonii*. Uplands, on granite and rhyolite.

Vegetation Attributes:





Recruitment of Dominant Canopy Species (%):		100%
Native plant species richness:	Trees:	3
	Shrubs:	18
	Grasses:	7
	Forbs/Other:	18
Tree Canopy	Median Height (m)	11

Bio-condition Site 14			
		Tree Canopy Cover (%)	56.8
	Tree Sub-canopy	Tree sub-canopy median Height (m)	4
		Tree Sub-canopy Cover	7.6
	Large Trees	Large Eucalypt tree DBH threshold (cm)	20
		Large Eucalypt trees per hectare	20
		Large non-eucalypt trees threshold (cm)	20
		Large non-eucalypt trees per hectare	2
	Shrubs	Native Shrub Cover (%)	15
	Ground Cover	Native Perennial Grass Cover (%)	54
		Forbs and Non-grass (%)	5
		Shrubs (%)	23
		Organic litter cover (%)	18
		Rock (%)	0
		Bare Ground (%)	0
		Cryptograms (%)	0
		Non-native plant cover (%)	<1
		Total Non-native species richness	2
	Coarse Woody Debris (CWD)	Total length >10cm width and >1m length (m)	13
Native Species Richness:	Trees	<i>Eucalyptus drepanophylla, Corymbia intermedia, Syncarpia glomulifera</i>	
	Shrubs	<i>Acacia aulococarpa, Acacia implexa, Allocasuarina littoralis, Allocasuarina torulosa, Alphitonia excelsa, Hakea plurinervia, Acrothamnus spathacea, Acrotriche aggregata, Banksia aquilonia, Bursaria spinosa, Glochidion sumatranum, Hibiscus meraukenensis, Hovea densivillosa, Lophostemon suaveolens, Notolaea venosa, Trema aspera, Pomaderris argyrophylla, Xanthorrhoea johnsonii,</i>	
	Grasses	<i>Arundinella setosa, Capillipedium spicigerum, Entolosa stricta, Eriachne spp., Mnesithia rottboellioides, Panicum effusum, Themeda triandra.</i>	
	Forbs and Others	<i>Cyanthium cinereum, Desmodium rhytidophyllum, Dianella caerulea, Drynaria rigidula, Eustrephus latifolius, Flemingia parviflora, Glycine clandestina, Lomandra multiflora, Plectranthus parviflorus, Pseuderanthemum variable, Pteridium esculentum, Rostellularia adscendens, Rubus moluccana, Scleria mackaviensis, Smilax australis, Thelychiton jonesii subsp. jonesii, Xerochrysum bracteatum, Widelia spilanthoides,</i>	

Bio-condition Site 14

Non-native Species	<i>Praxelis clematidea, Melinis minutiflora</i>
Threatened Flora	Nil

Table 16 Bio-condition Site 15

Bio-condition Site 15				
Date:	11-04-2019			
Plot Origin:	Zone: 55K	Lat: 17.19982	Long: 145.40669	Elevation: 1056m
Plot Centre:	Zone: 55K	Lat: 17.19999	Long: 145.40713	Elevation: 1055m
Plot Bearing:	NE	Plot Alignment:	Mid-slope very steep slope following contour	
				
North		East		
				
South		West		
Habitat Description:	Open shrubland (<3m) dominated by <i>Corymbia abergiana</i> , <i>Eucalyptus lockyeri</i> and <i>Syncarpia glomulifera</i> . Grassy understorey (<1.0m) of <i>Themeda triandra</i> and <i>Mnesithea rottboellioides</i> and <i>Capillipedium spicigerum</i>			
Regional Ecosystem (Mapped):	7.12.57a Shrubland and low woodland mosaic with <i>Syncarpia glomulifera</i> , <i>Corymbia abergiana</i> , <i>Eucalyptus portuensis</i> , <i>Allocasuarina littoralis</i> and <i>Xanthorrhoea johnsonii</i> . Uplands and highlands on granite and rhyolite, of the moist and dry rainfall zones.			
Vegetation Attributes:	Recruitment of Dominant Canopy Species (%):			N/A
	Native plant species richness:	Trees:	0	
		Shrubs:	13	

Bio-condition Site 15			
		Grasses:	9
		Forbs/Other:	22
	Tree Canopy	Median Height (m)	N/A
		Tree Canopy Cover (%)	0
	Tree Sub-canopy	Tree sub-canopy median Height (m)	N/A
		Tree Sub-canopy Cover	0
	Large Trees	Large Eucalypt tree DBH threshold (cm)	N/A
		Large Eucalypt trees per hectare	0
		Large non-eucalypt trees threshold (cm)	N/A
		Large non-eucalypt trees per hectare	0
	Shrubs	Native Shrub Cover (%)	27.0
	Ground Cover	Native Perennial Grass Cover (%)	45
		Forbs and Non-grass (%)	3
		Shrubs (%)	17
		Organic litter cover (%)	12.5
		Rock (%)	16
		Bare Ground (%)	1.5
		Cryptograms (%)	0
		Non-native plant cover (%)	<1
		Total Non-native species richness	2
Coarse Woody Debris (CWD)	Total length >10cm width and >1m length (m)	Nil	
Native Species Richness:	Trees	Nil (shrubland)	
	Shrubs	<i>Acacia calyculata, Acrothamnus spathaceus, Allocasuarina littoralis, Bursaria incana, Corymbia abergiana, Eucalyptus drepanophylla, Eucalyptus lockyeri, Hakea plurinervia, Lophostemon suaveolens, Platysace valida, Pomaderris argyrophylla, Syncarpia glomulifera, Xanthorrhoea johnsonii.</i>	
	Grasses	<i>Aristida spp., Capillipedium spicigerum, Cheleistochloa subjuncea, Eragrostis cumingii, Mnesithia rottboellioides, Panicum simile, Schyzacharium fragile, Themeda triandra, Tripogon loliiformis.</i>	
	Forbs and Others	<i>Cheilanthes brownii, Cheilanthes seiberi, Coronidium newcastleanum, Crotalaria brevis, Crotalaria montana, Cyanthillium cinereum, Desmodium rhytidophyllum, Dianella nervosa, Evolvulus alsinoides, Hibbertia longifolia, Hovea nana, Hypericum gramineum, Lepidosperma laterale,</i>	

Bio-condition Site 15	
	<i>Lomandra multiflora</i> , <i>Melichrus adpressus</i> , <i>Melichrus urceolatus</i> , <i>Oxalis corniculatus</i> , <i>Poranthera microphylla</i> , <i>Rostellularia adscendens</i> , <i>Thysanotus tuberosa</i> , <i>Wahlenbergia queenslandica</i> , <i>Widelia spilanthoides</i> ,
Non-native Plant Species	<i>Praxelis clematidea</i> , <i>Melinis repens</i> .
Threatened Flora	Nil

Table 17 Bio-condition Site 16



Bio-condition Site 16				
Date:	26-05-2020			
Plot Origin:	Zone: 55K	Lat: 17.19669	Long: 145.39780	Elevation: 1036m
Plot Centre:	Zone: 55K	Lat: 17.19627	Long: 145.39784	Elevation: 1036m
Plot Bearing:	SE	Plot Alignment:	Top of ridge following contour	
				
North		East		
				
South		West		
Habitat Description:	Open shrubland to heathland (<2m) with occasional rock pavement outcrops			
Regional Ecosystem (Mapped):	7.12.57c Shrubland/low woodland (1.5-9m tall) mosaic with variable dominance, often including <i>Eucalyptus cloeziana</i> , <i>Corymbia abergiana</i> , <i>E. portuensis</i> , <i>E. reducta</i> , <i>E. lockyeri</i> , <i>C.</i>			

Bio-condition Site 16

	<p><i>leichhardtii</i>, <i>Callitris intratropica</i>, <i>E. atrata</i>, <i>E. pachycalyx</i>, <i>E. shirleyi</i>, <i>E. drepanophylla</i> and <i>Homoranthus porteri</i>, on rhyolite and granite. There is occasionally a very sparse to sparse secondary tree layer of <i>Corymbia abergiana</i> and/or <i>C. stockeri</i>. A very sparse to sparse tall shrub layer may be present and can include <i>Persoonia falcata</i>, <i>Exocarpos cupressiformis</i> and <i>Melaleuca viridiflora</i> var. <i>viridiflora</i>. A sparse to dense lower shrub layer may include <i>Jacksonia thesioides</i>, <i>Acacia calyculata</i>, <i>Coelospermum reticulatum</i>, <i>Xanthorrhoea johnsonii</i>, <i>Acacia humifusa</i>, <i>Dodonaea lanceolata</i> var. <i>subsessilifolia</i>, <i>Grevillea dryandri</i> subsp. <i>dryandri</i>, <i>Grevillea glossadenia</i>, <i>Acacia umbellata</i> and <i>Ericaceae</i> spp. The ground layer may be dominated by species such as <i>Themeda triandra</i>, <i>Xanthorrhoea johnsonii</i>, <i>Eriachne pallescens</i> var. <i>pallescens</i>, <i>Cleistochloa subjuncea</i>, <i>Borya septentrionalis</i>, and <i>Eriachne</i> spp. Includes open rocky dominated by herbs and grasses. This RE includes areas of 7.12.65k (rocky areas with shrubby/herbaceous cover) which are too small to map. Rocky slopes on granite and rhyolite.</p>		
Vegetation Attributes:	Recruitment of Dominant Canopy Species (%):	N/A	
	Native plant species richness:	Trees:	1
		Shrubs:	14
		Grasses:	7
		Forbs/Other:	8
	Tree Canopy	Median Height (m)	N/A
		Tree Canopy Cover (%)	0
	Tree Sub-canopy	Tree sub-canopy median Height (m)	1.3
		Tree Sub-canopy Cover	0
	Large Trees	Large Eucalypt tree DBH threshold (cm)	20
		Large Eucalypt trees per hectare	8
		Large non-eucalypt trees threshold (cm)	N/A
		Large non-eucalypt trees per hectare	0
	Shrubs	Native Shrub Cover (%)	11.4
	Ground Cover	Native Perennial Grass Cover (%)	33
		Forbs and Non-grass (%)	5
		Shrubs (%)	30
		Organic litter cover (%)	9
		Rock (%)	20
		Bare Ground (%)	1
Cryptograms (%)		1	
Non-native plant cover (%)		<1	
Total Non-native species richness			
Coarse Woody Debris (CWD)	Total length >10cm width and >1m length (m)	Nil	
Trees	<i>Eucalyptus portuensis</i>		

Bio-condition Site 16		
Native Species Richness:	Shrubs	<i>Acacia aulococarpa</i> , <i>Allocasuarina inophloia</i> , <i>Acacia calyculata</i> , <i>Astrotricha pterocarpan</i> , <i>Cheilanthes brownii</i> , <i>Leptospermum neglectum</i> , <i>Melaleuca uxorum</i> , <i>Platysace valida</i> , <i>Persoonia falcata</i> , <i>Phyllanthus dallachyanus</i> , <i>Sannantha angusta</i> , <i>Xanthorrhoea johnsonii</i>
	Grasses	<i>Aristida superpendens</i> , <i>Themeda triandra</i> , <i>Cymbopogon bombycinus</i> , <i>Eragrostis mucronata</i> , <i>Tripogon lolliformis</i> , <i>Mnesithea Formosa</i> , <i>Schizachyrium fragile</i>
	Forbs and Others	<i>Boronia bipinnata</i> , <i>Lepidosperma laterale</i> , <i>Melichrus urceolatus</i> , <i>Hibbertia longifolia</i> , <i>Hibbertia melanoides</i> , <i>Gonocarpus acanthocarpus</i> , <i>Borya septentrionalis</i> , <i>Cryptandra debilis</i>
Non-native Plant Species		Nil
Threatened Flora		<i>Melaleuca uxorum</i>

Table 18 Bio-condition Site 17

Bio-condition Site 17				
Date:	12-04-2019			
Plot Origin:	Zone: 55K	Lat: 17.19696	Long: 145.39706	Elevation: 1045m
Plot Centre:	Zone: 55K	Lat: 17.19702	Long: 145.39746	Elevation: 1045m
Plot Bearing:	SE	Plot Alignment:	Top of ridge following the contour	
				
North		East		

Bio-condition Site 17



South

West

Habitat Description:	Rhyolite rock pavement outcrops sloping on a SW aspect. Mosaic of rock pavement and heathland vegetation.		
Regional Ecosystem (Mapped):	<p>7.12.65k Granite and rhyolite rock outcrop, of dry western areas, associated with shrublands to closed forests of <i>Acacia spp.</i> and/or <i>Lophostemon spp.</i> and/or <i>Allocasuarina spp.</i> In the Mount Emerald area, shrubs may include <i>Acacia umbellata</i>, <i>Melaleuca borealis</i>, <i>Homoranthus porteri</i>, <i>Leptospermum neglectum</i>, <i>Melaleuca recurva</i>, <i>Melaleuca uxor</i>, <i>Grevillea glossadenia</i>, <i>Corymbia abergiana</i>, <i>Eucalyptus lockyeri</i>, <i>Sannantha angusta</i>, <i>Pseudanthus ligulatus subsp. ligulatus</i>, <i>Acacia aulacocarpa</i>, <i>Leptospermum amboinense</i>, <i>Xanthorrhoea johnsonii</i> and <i>Jacksonia thesioides</i>. Ground-cover species may include <i>Borya septentrionalis</i>, <i>Lepidosperma laterale</i>, <i>Eriachne spp.</i>, <i>Cleistochloa subjuncea</i>, <i>Boronia occidentalis</i>, <i>Cheilanthes spp.</i>, <i>Coronidium newcastlianum</i>, <i>Schizachyrium spp.</i>, <i>Tripogon loliiformis</i>, <i>Gonocarpus acanthocarpus</i> and <i>Eragrostis spp.</i> Dry western areas. Granite and rhyolite.</p>		
Vegetation Attributes:	Recruitment of Dominant Canopy Species (%):		N/A
	Native plant species richness:	Trees:	0
		Shrubs:	9
		Grasses:	9
		Forbs/Other:	8
	Tree Canopy	Median Height (m)	N/A
		Tree Canopy Cover (%)	0
	Tree Sub-canopy	Tree sub-canopy median Height (m)	N/A
		Tree Sub-canopy Cover	0
	Large Trees	Large Eucalypt tree DBH threshold (cm)	N/A
		Large Eucalypt trees per hectare	0
		Large non-eucalypt trees threshold (cm)	N/A
		Large non-eucalypt trees per hectare	0
Shrubs	Native Shrub Cover (%)	8.0	

Bio-condition Site 17			
	Ground Cover	Native Perennial Grass Cover (%)	8
		Forbs and Non-grass (%)	13
		Shrubs (%)	27
		Organic litter cover (%)	1
		Rock (%)	38
		Bare Ground (%)	8
		Cryptogams (%)	4
		Non-native plant cover (%)	<1
		Total Non-native species richness	1
	Coarse Woody Debris (CWD)	Total length >10cm width and >1m length (m)	Nil
Native Species Richness:	Trees	N/A	
	Shrubs	<i>Eucalyptus lockyeri, Acrothamnus spathaceus, Acacia aulococarpa, Acacia calyculata, Sannantha angusta, Leptospermum neglectum, Melaleuca uxorum</i>	
	Grasses	<i>Aristida superpendens, Aristida utilis, Themeda triandra, Eragrostis shultzii, Cymbopogon bombycinus, Eriachne ciliata, Frimbristylus dichotoma, Panicum simile, Chleistochoa subjuncea, Tripogon lilliformis</i>	
	Forbs and Others	<i>Borya septentrionalis, Dianella nervosa, Hyperanicum gramineum, Cheilanthes brownii, Gonocarpus acanthocarpus, Lepidosperma laterale, Phyllanthus dallachyana, Plectranthus amoenus</i>	
Non-native Plant Species		<i>Praxelis clematidea, Sonchus sp</i>	
Threatened Flora		<i>Melaleuca uxorum, Plectranthus amoenus</i>	

Table 19 Bio-condition Site 18

Bio-condition Site 18				
Date:	12-04-2019			
Plot Origin:	Zone: 55K	Lat: 17.19645	Long: 145.39725	Elevation: 1064m
Plot Centre:	Zone: 55K	Lat: 17.19612	Long: 145.39754	Elevation: 1058m
Plot Bearing:	SE	Plot Alignment:	Mid-slope running parallel to the hill contour	
				
North		East		
				
South		West		
Habitat Description:	Open forest (14m) dominated by <i>Eucalyptus reducta</i> . Grassy understorey (<1.0m) of <i>Themeda triandra</i> and <i>Mnesithea rottboellioides</i> combined with a low heathy shrub layer			
Regional Ecosystem (Mapped):	7.12.58 <i>Eucalyptus reducta</i> +/- <i>E. granitica</i> +/- <i>Corymbia dimorpha</i> +/- <i>C. citriodora</i> woodland to open forest on granite and rhyolite			
Vegetation Attributes:	Recruitment of Dominant Canopy Species (%):			100%
	Native plant species richness:	Trees:		2
		Shrubs:		17
		Grasses:		6
	Forbs/Other:		9	

Bio-condition Site 18			
	Tree Canopy	Median Height (m)	14
		Tree Canopy Cover (%)	34.9
	Tree Sub-canopy	Tree sub-canopy median Height (m)	5
		Tree Sub-canopy Cover	1.0
	Large Trees	Large Eucalypt tree DBH threshold (cm)	30
		Large Eucalypt trees per hectare	32
		Large non-eucalypt trees threshold (cm)	0
		Large non-eucalypt trees per hectare	0
	Shrubs	Native Shrub Cover (%)	37.9
	Ground Cover	Native Perennial Grass Cover (%)	34
		Forbs and Non-grass (%)	2
		Shrubs (%)	42
		Organic litter cover (%)	12
		Rock (%)	10
		Bare Ground (%)	0
		Cryptograms (%)	0
Non-native plant cover (%)		0	
	Total Non-native species richness	0	
Coarse Woody Debris (CWD)	Total length >10cm width and >1m length (m)	16m	
Native Species Richness:	Trees	<i>Eucalyptus reducta</i>	
	Shrubs	<i>Allocasuarina innophloia, Astrotricha pterocarpa, Acacia aulacocarpa, Leptospermum neglectum, Garnia aspera, Keraudrenia lanceolata, Xanthorrhoea johnsonii, Acrothamnus spathaceus, Pultanea millarii, Acacia calyculata, Platysace vallida, Phyllanthus dallachyana, Hakea plurinervia, Breynia oblongifolia.</i>	
	Grasses	<i>Themeda triandra, Panicum simile, Cheistochloa subjuncea, Schizachyrium fragile, Tripogon lilliformis, Eriachne sp.</i>	
	Forbs and Others	<i>Lepidosperma laterale, Pimelia linarifolia, Notelaea venosa, Dianella nervosa, Hibbertia melhanioides, Hibbertia longifolia, Hibiscus normanii, Cheilanthes brownii, Widelia spilanthoides</i>	
Non-native Flora	Nil		
Threatened Flora	Nil		

4.0 Discussion

The Mount Emerald offset site is a biodiversity offset that was gazetted in 2018 as a Nature Refuge under the *Nature Conservation Act 1992*. The site is well selected as an Offset property for the MEWF project which is the neighbouring property to the north. Vegetation communities present on the MEWF project site are represented as are the listed threatened species under both the *EPBC Act 1999* and the *NC Act 1992*. All are represented in healthy populations distributed widely across the site.

Within the 18 bio-condition permanent plots, a total of nine (9) sites contained listed threatened flora as listed under both state and federal legislation. Threatened species were mostly associated with drier and more structurally open regional ecosystems (7.12.30d and 7.12.57c and 7.12.65k). These regional ecosystems are the same as those represented on the MEWF project site where threatened species are clustered. All species that are present within the MEWF site are now included in this bio-condition assessment monitoring plan for the offset site with the exception of *Prostanthera clotteniana* and *Melaleuca sylvana*. An additional threatened species, *Eleutheroglossum fellowsii*, listed *Vulnerable* under the *Nature Conservation Act 1992* was recorded in two of the permanent bio-condition sites on this round of bio-condition monitoring. These individuals were found within regional ecosystem 7.12.34 and 7.12.26e. Conditions for this species are not considered favourable on the MEWF project site due to the prevailing drier and rockier conditions present within that property. There exist numerous locations for this species to occur throughout the high elevation forested peaks of the offset property and further incidental records are likely during the monitoring phase which is to continue biennially until 2028.

No evidence of phytophthora dieback or myrtle rust infection were recorded at any of the 18 bio-condition sites that is common in the lower eastern parts of the wet tropics bio-region. Non-native flora species were generally very low in abundance and/or absent from many of the sites. Common weeds included *Praxelis clematidae* and *Melinis repens* which are both present across similar habitat across much of the wet tropics due to the ability to wind disperse. Otherwise ground cover was between 0-1% for herbaceous weeds. No woody weeds have been detected in any of the 18 bio-condition plots. Feral digging was not present at any of the 18 bio-condition sites; however, it was recorded occasionally during site traverse between bio-condition plots.

Due to the lack of reference sites within the wet tropic's bioregion, a bio-condition score for each of the surveyed vegetation communities cannot be achieved currently. Once reference sites are collected and published by the Queensland Herbarium for the regional ecosystems present on the Offset property this may then occur. As was found in the field surveys for the initial site assessment (RPS, 2016) the condition of the offset site is considered in pristine ecological condition with low disturbance recorded and high abundance of threatened flora species. After the completion of two (2) biennial rounds of bio-condition monitoring, this remains the case. Continued biennial monitoring of the 18-permanent bio-condition plots will provide quantitative monitoring of threatened species health and distribution until 2028.

5.0 References

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