

Cooplacurripa Nature Repair Market – Year 1 Planting Area

SITE ASSESSMENT REPORT

MAY 2025



SILVA CAPITAL PTY LTD

Authorised Representative of
C6 Investment Management Pty Ltd
ACN 651 228 849
holder of Australian Financial Services
Licence 539816 ('C6')

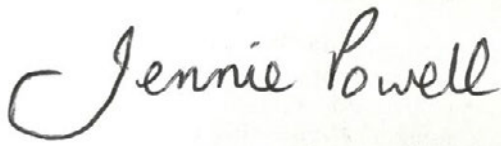
Level 4, 11 Young Street
Sydney NSW 2000
ACN 666 501 846

silvacapital.com.au


Contents

1. Suitably Qualified Persons	3
2. Site Details	5
2.1 Details of the proposed project area	5
2.2 Requirements for activity area	7
3. Starting State Assessment and Sampling Plots	9
3.1 Starting state assessment	9
3.2 Sampling plots	10
3.3 Photos of permanent sampling plots	16
4. Starting Ecosystem Condition State	18
4.1 Calculating species number (richness)	18
4.2 Starting ecosystem condition state	18
4.3 Ecosystem scores	18
5. Assigning a Reference Ecosystem	19
6. Benchmark Values for Reference Ecosystem in Activity Areas	21
6.1 Benchmark values for indicators of ecosystem condition	21
7. Starting Values for Ecosystem Condition Indicators	23
8. Threats to the Project	24
9. Historic Drivers of Change	25
10. Other Relevant Features	26
10.1 Threatened species and ecological communities	26
10.2 Natural regeneration	28
10.3 Climate change impact	28

1. Suitably Qualified Persons

Full name of suitably qualified person	Jennie Powell			
Contact details	info@niche-eh.com			
Prepared or certified	Prepared report:	<input checked="" type="checkbox"/>	Certified:	Jennie is the suitably qualified person who was responsible for the field survey for the Starting State Assessment and certifying the Site Assessment Report.
Relevant qualifications or experience	<p>Please refer attached CV.</p> <p>Jennie Powell is an accredited Biodiversity Assessment Method (BAM) assessor, with over 20 years' experience specialising in Natural Resource Management. Throughout her career, she has held positions in both the private sector and local and state government. Jennie's areas of expertise include policy development, biodiversity offsetting, and ecological assessment, with a particular emphasis on achieving positive outcomes for nature in New South Wales. In her previous role, Jennie served as a regulator for the NSW state government, responsible for overseeing the review and approval process of Biodiversity Stewardship Agreement (BSA) applications for generating biodiversity credits.</p>			
Signature				
Signature date	07/05/2025			

Full name of suitably qualified person	Cuong Tran			
Contact details	enquire@covalentland.au			
Prepared or certified	Prepared report:	<input checked="" type="checkbox"/>	Certified:	Cuong is a suitably qualified person who supervised the team that delivered the Starting State Assessment. The Site Assessment Report contributed and certified by C Tran

Relevant qualifications or experience	<p>Please refer attached CV.</p> <p>Relevant experience: Research Academic in Fire & Landscape Ecology – Griffith University (2001-2009), SME for the Qld Audit Office – review of state bushfire preparedness and implementation of 2009 Black Saturday Bushfire Royal Commission (2014, QAO Report 10: 2014-15), SME for Qld Fire Regime Guidelines for the QPWS (2012-2013), Healthy Land & Water Science Committee Member (2023-current).</p>
Signature	
Signature date	<p>07/05/2025</p>

2. Site Details

2.1 Details of the proposed project area

Name and address of the property or properties		326 Eaglehawk Trail, Nowendoc, NSW, 2354 and 1202 Kangaroo Tops Road, Cooplacurripa, NSW, 2424		
Lot and file numbers	No	Folio identifier	Lot	Deposited Plan
	1.	20/1193088	20	1193088
	2.	Auto Consol 15205-162	1	249103
	3.	Auto Consol 15205-162	2	249103
	4.	Auto Consol 15205-162	1	249108
	5.	Auto Consol 15205-162	2	249108
	6.	Auto Consol 15205-162	3	249108
	7.	Auto Consol 15205-162	4	249108
	8.	Auto Consol 15205-162	5	249108
	9.	6/249108	6	249108
	10.	61/753703	61	753703
	11.	62/753703	62	753703
	12.	132/753703	132	753703
	13.	133/753703	133	753703
	14.	Auto Consol 15153-64	144	753703
	15.	36/753710	36	753710
	16.	37/753710	37	753710
	17.	Auto Consol 9583-59	64	753710
	18.	Auto Consol 9583-59	65	753710
	19.	97/753710	97	753710
	20.	3/1193084	3	1193084
	21.	Auto Consol 8464-73	5	753698
	22.	Auto Consol 8464-73	18	753698
	23.	7/753704	7	753704
	24.	Auto Consol 8464-73	8	753704

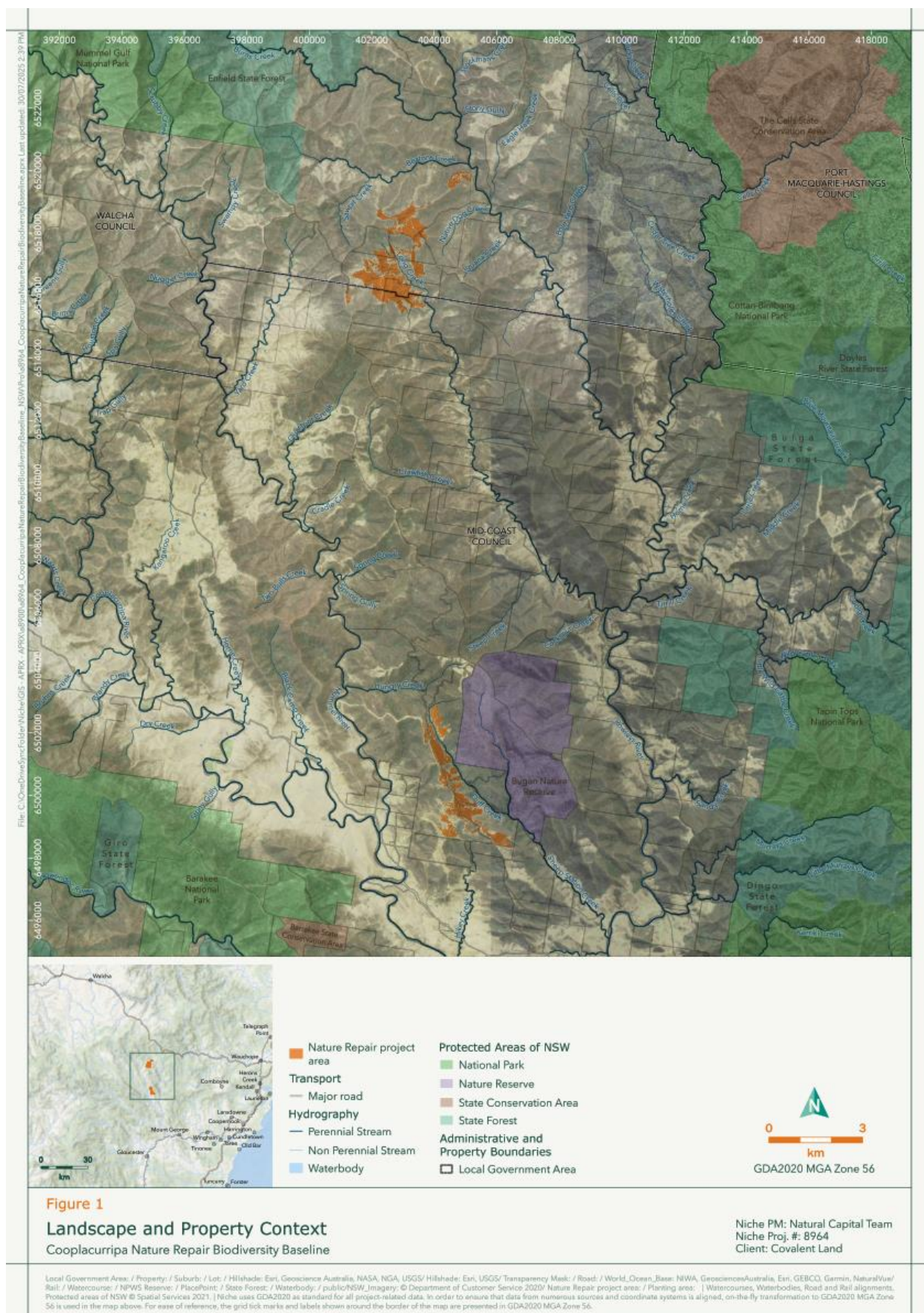


Figure 1: Map of the proposed project area, activity areas and sub areas

2.2 Requirements for activity area

Table 1: Details of how activity areas meets the requirements of section 22 of the method

Requirements for each activity area	Details on how the activity area meets the specific requirements
Each activity area only consists of eligible land in line with section 19 of the method	<p>The nominated activity areas across Cooplacurripa qualify as 'eligible land' under the Nature Repair Market's (Replanting Native Forest and Woodland Ecosystems) Methodology Determination 2025 via:</p> <ul style="list-style-type: none"> • Cooplacurripa was first established as a pastoral / livestock station since the late 1840's (1846 according to the Bicentennial Plaque located at the main homestead). • The areas have been cleared and operated as grazing paddocks since the end of the Second World War, with these agricultural practices continuing till the end of 2024, when Silva acquired the property (September 2024). • The land was comprehensively cleared more than 15 years prior to the application date, and the canopy layer of native trees has been removed/cleared from at least 90% of the land defined at a 10 metre x10 metre scale. Majority of this clearing occurred prior to 1985 and therefore there are limitations in providing evidentiary support such as satellite imagery. • Prior to comprehensively clearing, the land supported native woody vegetation that provided forest cover across the entirety of the activity area and still has forest cover potential. • In the past three years prior to the application date there has been no damaged or destroyed native vegetation in the activity area. • Some existing woody biomass was identified in each activity area as specified in Table 18. In each instance regenerating stems were reviewed against section 19, part 8 of the method to ensure it could be retained within activity areas by fulfilling the species, stem diameter and density requirements.
The project proponent proposes to carry out environmental plantings in the activity area as part of the replanting project	The activity areas overlap with the Cooplacurripa Environmental Planting Project (Phase 1), Project ID: ERF201057. Refer to section 10 of the Project Plan which has a description of the environmental plantings that are proposed to be carried out in the activity areas.
Activity area must not include any 10m x 10m area of land within the area: for which no environmental plantings are proposed for the purposes of the replanting project, that has forest cover, that does not have forest cover potential and that is excluded water	Activity areas have been stratified to align with the Carbon Estimation Areas (CEA) for the environmental plantings project using high quality imagery to exclude areas of forest, including individual trees that are already above 2 metre height, or does not have forest cover potential, or for any areas of land for which no environmental planting project is proposed.
Activity area is a single contiguous area, or multiple disconnected areas.	Each activity area comprises of a single contiguous area, or multiple disconnected areas.
Activity area or sub-area must be at least 0.2 hectares, and the activity areas together must be at least 5 hectares	All activity areas are greater than 2 hectares and collectively all activity areas are greater than 400 hectares.
Activity area has an average width of at least 30m, measured on the narrowest side in any 900m ² section, unless the activity area or group of contiguous activity areas directly	This has been reviewed through spatial analysis in detail across all three activity areas. Ground verification was undertaken through supervised sampling by Niche and Covalent in November 2024, January 2025 and March 2025.

Requirements for each activity area	Details on how the activity area meets the specific requirements
adjoins inland water, native forest, or an area that has been planted and has forest potential, the average width must be an average of at least 10m measured on the narrowest side in any 900m ² section.	<p>Following the field survey (during the starting state assessment) and resulting activity area boundary mapping, our spatial team completed a quality assurance review to ensure the project area was compliant with section 22. The determinations as relates to application of the rules to the validated activity areas analysis was as follows:</p> <ul style="list-style-type: none"> • Determine for each individual activity area polygon if the 10 metre or 30 metre rule applied using a combination of: <ul style="list-style-type: none"> – visual inspection of aerial photography to see if part of the activity area polygons were contiguous with native vegetation or isolated and/or – review of land use category • Assign an average width to the activity areas whereby the average width of each polygon was calculated by a python script, this process was iterative and included cutting polygons with narrow sections or edges into 900 square/metre sections and recalculating the width on just those 900 square/metre sections • Using the average width and rule criteria determine if an activity area was compliant with the relevant rule <p>We also conducted visual inspection with the assistance of a 10 metre grid across the activity areas to provide a visual check of the results and fed back any additional analysis required. To support this process, during pre-submission consultation with the CER we looked to clarify this rule using examples and please find attached correspondence relating to how to treat contiguous areas which also informed our analysis.</p>
Undivided activity area has the same reference ecosystem.	Undivided activity areas have the same reference ecosystem.
If there are sub- areas within the activity area, they must have the same reference ecosystem from the same major vegetation group	Activity areas 1 & 2 have sub-areas which have reference ecosystems from the same major vegetation groups as detailed in table 9 and 10.
Activity area has the same starting ecosystem condition state	Each activity area has a consistent starting ecosystem condition state. This was confirmed through field survey and plot work.
Activity area is the subject of proposed environmental plantings with the same nominated restoration target.	Each activity area has one nominated restoration target. Refer to table 1 of the Project Plan for more information.

3. Starting State Assessment and Sampling Plots

3.1 Starting state assessment

As required by the method the starting state assessment was undertaken at, or as close as practical to, the time of optimal plant growth for the region. This was determined through reviewing regional natural resource management plans, average day length and level of precipitation that supports plant growth.

Source: Midcoast Council. 2021. Climate Change Strategy. Available from <https://www.midcoast.nsw.gov.au/Your-Council/About-MidCoast-Council/Plans-strategies-and-policies/Other-strategic-plans/Climate-Change-Strategy> Accessed on 10/6/25

Source: NSW Local Land Service. 2022. Hunter Region Natural Resource Management Plan. Available from <https://www.lls.nsw.gov.au/regions/hunter/projects-and-programs/NRM-biodiversity> Accessed on 18/6/25

Source: NSW Local Land Service. 2022. Northern Tablelands Region Natural Resource Management Plan. Available from https://www.lls.nsw.gov.au/_data/assets/pdf_file/0010/1552771/Northern-Tablelands-Natural-Resource-Management-Plan-2022-2027.pdf Accessed on 18/6/25

3.2 Sampling plots

In preparation for the field survey in November 2025, the Niche project team completed a desktop review of the property which involved analysing the pre-1750 NSW State Vegetation Type Mapping (SVTM) and the NSW Land Use mapping (v1.5 2017) then based on reference ecosystems sub-divided the likely activity areas in equal proportions. Over all of the project area we applied a grid overlay and randomly selected sampling plot locations then added these as points in Field Maps for the team to go to when in the field. PLANR was also used to check reference ecosystems mapped across the property and this was compared against SVTM mapping.

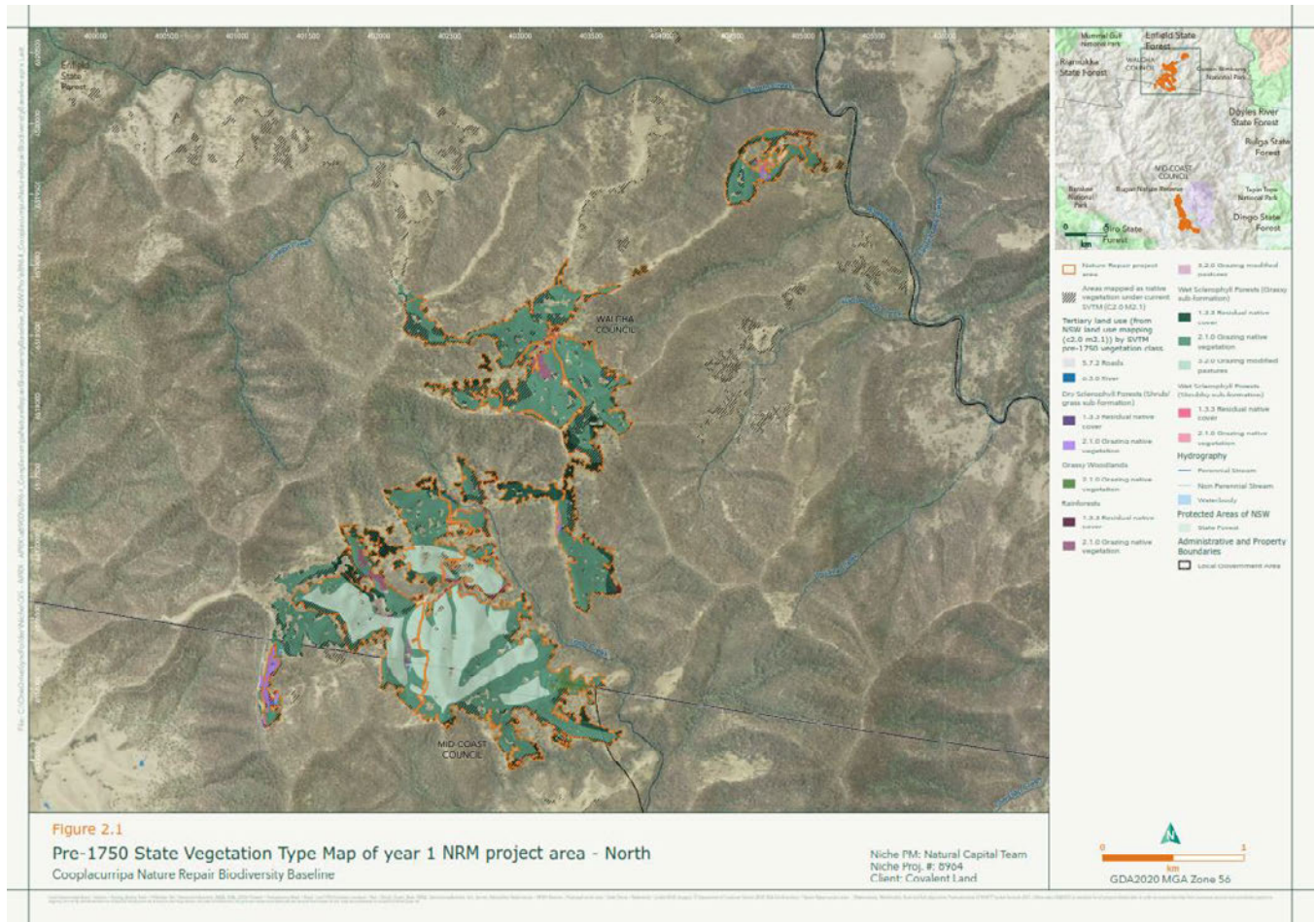


Figure 2: Pre-1750 State Vegetation Type Map of NRM project area - North

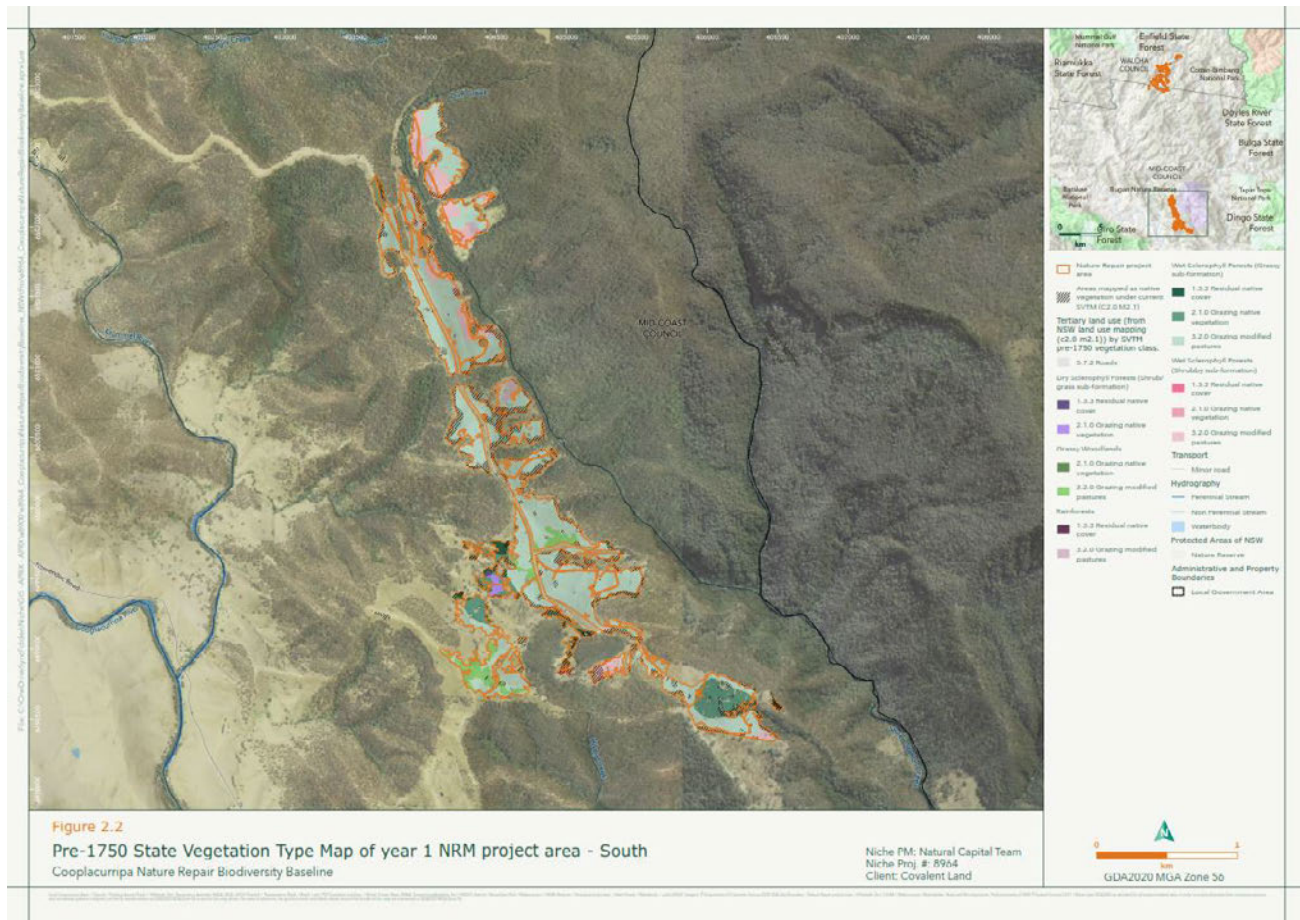


Figure 3: Pre-1750 State Vegetation Type Map of NRM project area - South

When the team were in the field it was immediately obvious that the desktop SVTM and land use mapping was not accurate (as detailed in Section 6) and so a process to determine suitable plot locations was undertaken to revise the extent and stratification of activity areas.

The reference ecosystem was confirmed based on the presence of dominant tree species occurring as isolated paddock trees or patches of regrowth located immediately outside the activity area and to a lesser extent specific native species in the groundcover – albeit modified through long-term grazing. Other physical elements such as landscape position, aspect and soils were relied upon in the determination of the reference ecosystem.

Stratification of the activity areas based on starting condition was determined using the proportion of native vs non-endemic plant species in the groundcover. Non endemic species comprised both pasture improved species such as *Paspalum dilatatum* or weedy species such as *Senecio madagascariensis* (Fireweed). Dominant native groundcover species were generally *Imperata cylindrica* (Blady Grass), *Pteridium esculentum* (Common Bracken) or a mixture of native grasses. Starting condition was stratified as broadly native or exotic dominated groundcover. The extent of the native vs. exotic dominated groundcover was confirmed by assessing the groundcover species assemblage at numerous locations recorded as Rapid Data Points (RDP) and extrapolating across the broader landscape using a visual assessment of the texture and colour of the groundcover aided by binoculars where necessary. It is noted that smaller patches of groundcover in different condition occurred within the broader stratification unit e.g. patches of Blady Grass occurred within an exotic dominated groundcover unit but these were not stratified separately due to relatively small area.

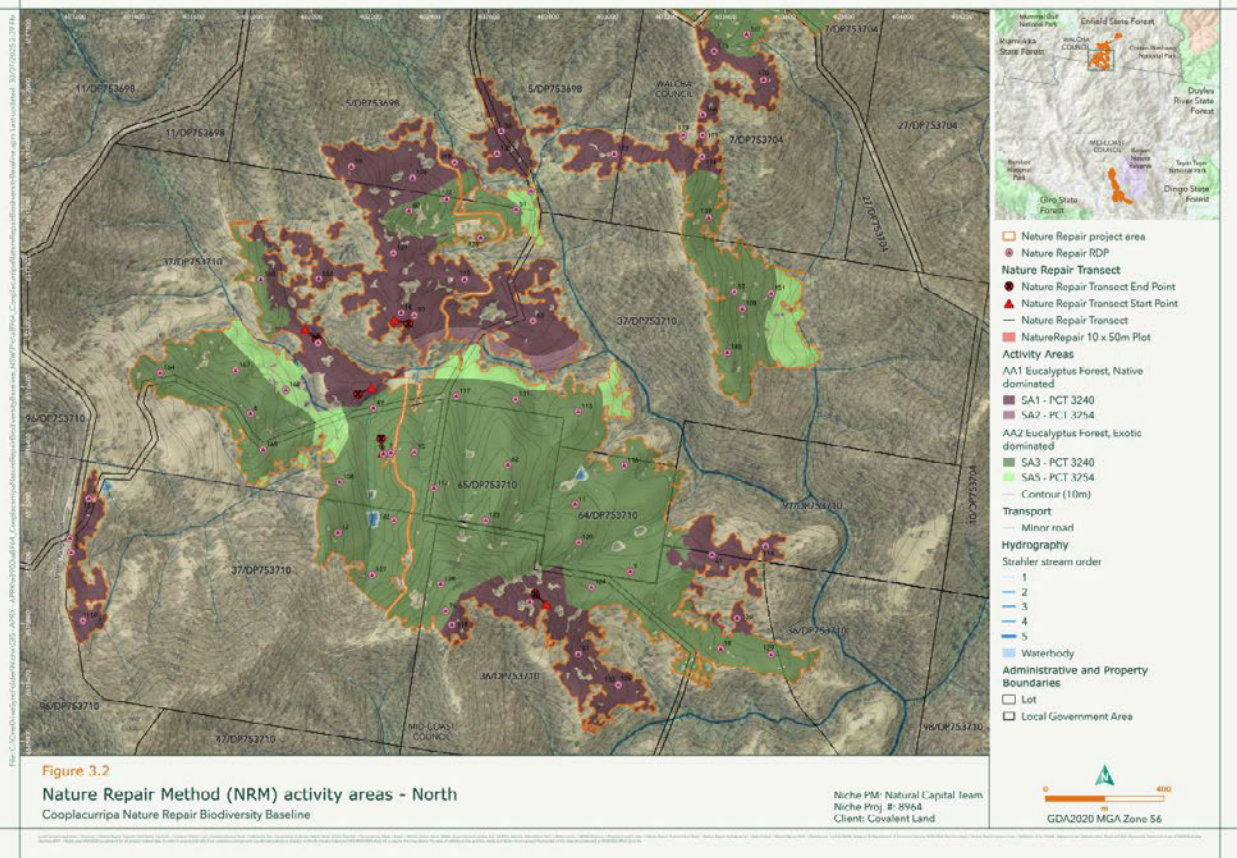
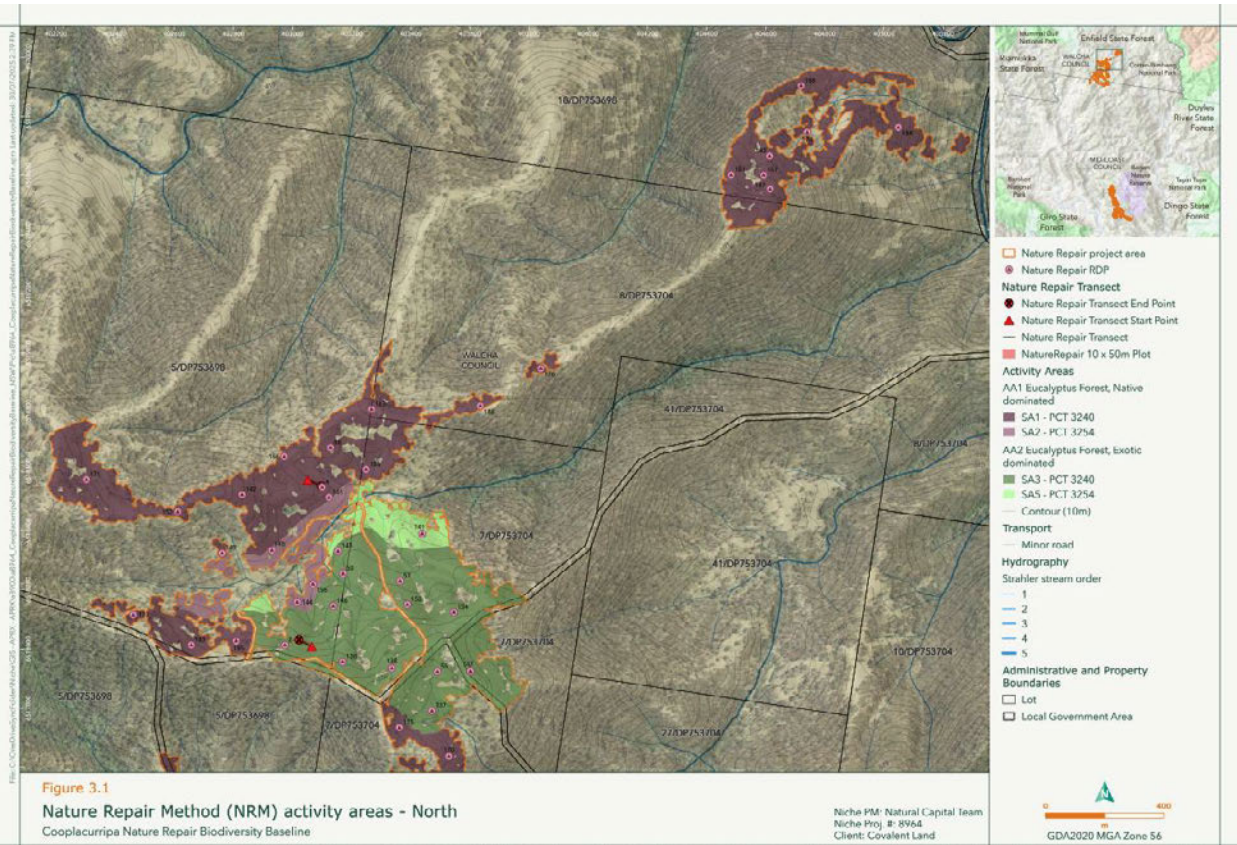
Once the extent and stratification of the activity areas was revised in the field, the suitability of the of the randomly selected desktop plot locations in Field Maps was reviewed and plot data collected. Data was collected from new plot locations where the randomly selected desktop locations did not align with the revised activity areas. New plot locations were selected to a achieve a reasonable coverage of the activity area and to avoid activity area boundaries and small patches of groundcover in different condition to the broader activity area.

The field team also did not manage to assess all of the planned survey areas (year 1 planting areas) due to track work not yet being completed on parts of the site and time restraints, so this was also taken into account when determining number and location of sampling plots.

Following the field survey an updated spatial survey was completed to obtain higher resolution imagery of the activity area. This survey provided further information regarding eligibility and planting areas so the project and activity areas were revised to ensure compliance with section 22 requirements of the method.

Table 2: Summary of project area, activity areas and sub-areas

	Area size (hectares)
Project area	462.46
Excluded area	23.92 (of which 0.66ha of this was non-viable areas due to minimum width requirements of Section 22).
Activity areas (AA) & Sub-areas (SA)	
AA1 – SA1	180.68
AA1 – SA2	20.05
Total AA1	200.73
AA2 – SA3	202.10
AA2 – SA4	15.43
AA2 – SA5	18.35
Total AA2	235.88
AA3	1.93
Total Activity Area	438.54



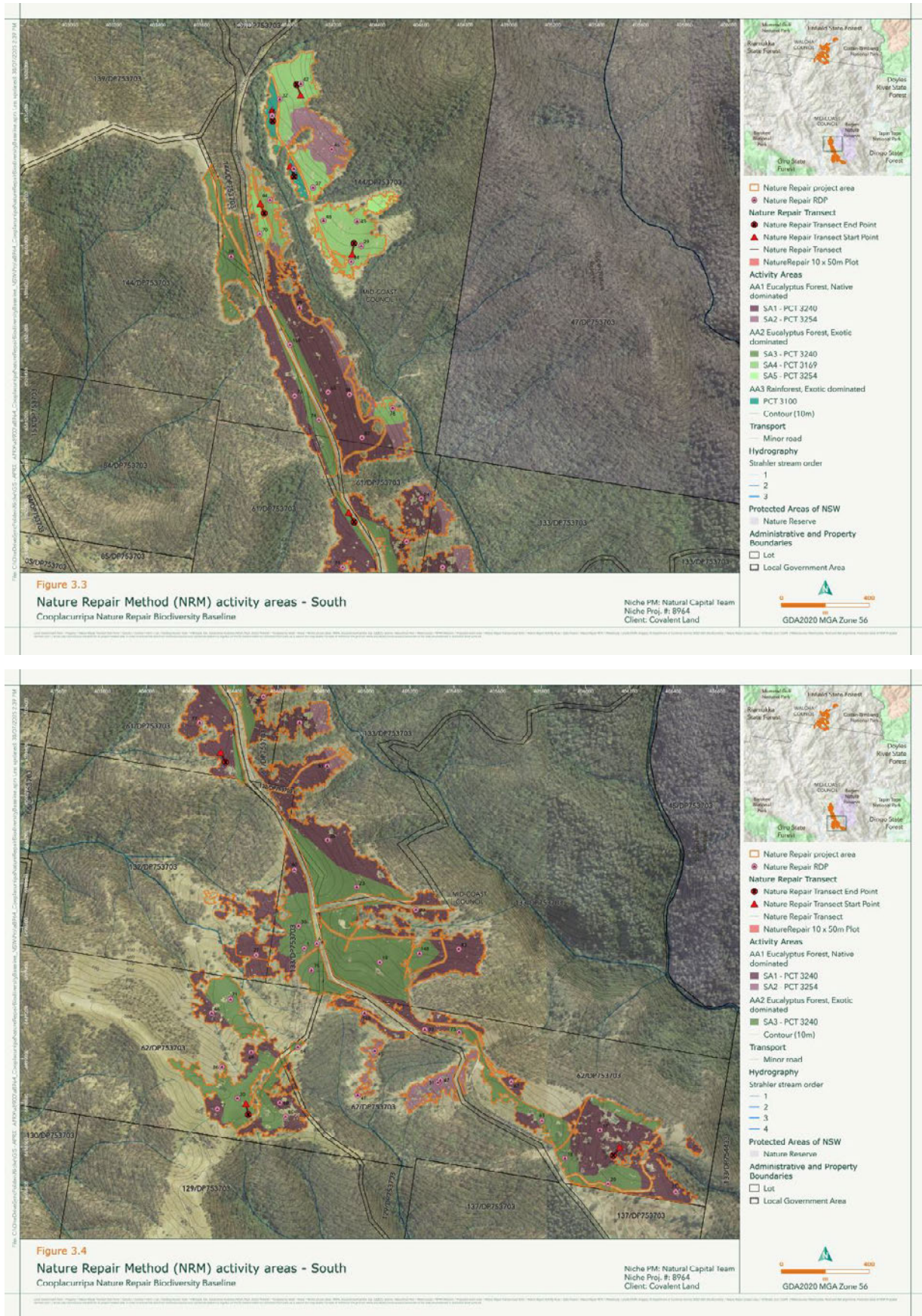


Figure 4: Maps of the project area, activity areas and sub-areas

Table 3: Details of permanent sampling plots

Activity area ID	Sub-area	Sampling plot ID	Location of sampling plot including GPS coordinates	Location of permanent markers/centre lines including GPS coordinates (easting/northing)	How plot locations were determined
AA2	SA3	N1	Provided in spatial files	Start: 403065.05, 6518008.06 End: 403022.32, 6518030.44	See description above under section 4 Sampling Plots
AA1	SA1	N2		Start: 403051.05, 6518570.54 End: 403097.7, 6518550.87	
AA2	SA3	N3		Start: 402240.17, 6516376.12 End: 402236.04, 6516425.01	
AA1	SA1	N4		Start: 402793.66, 6515864.85 End: 402756.06, 6515899.94	
AA1	SA1	N6		Start: 402280.87, 6516826.43 End: 402327.66, 6516812.72	
AA1	SA1	N7		Start: 402203.51, 6516596.44 End: 402157.02, 6516575.45	
AA1	SA1	N9		Start: 401978.26, 6516793.43 End: 402017.54, 6516760.97	
AA1	SA1	S1		Start: 406156.26, 6498597.83 End: 406126.8, 6498560.06	
AA2	SA3	S3		Start: 404269.66, 6500782.7 End: 404294.28, 6500738.7	
AA2	SA3	S4		Start: 404452.94, 6498796.17 End: 404464.38, 6498746.86	
AA2	SA4	S5		Start: 403867.86, 6502190.14 End: 403885.15, 6502145.18	
AA2	SA4	S7		Start: 404285.74, 6501958.58 End: 404293.43, 6502007.66	
AA2	SA4	S8		Start: 404051.6, 6502683.94 End: 404033.19, 6502730.89	
AA3	N/A	S9		Start: 404003.61, 6502359.86 End: 404020.63, 6502311.71	

Activity area ID	Sub-area	Sampling plot ID	Location of sampling plot including GPS coordinates	Location of permanent markers/centre lines including GPS coordinates (easting/northing)	How plot locations were determined
AA3	N/A	S10		Start: 403920.26, 6502615.34 End: 403923.38, 6502565.8	
AA1	SA1	S11		Start: 404337.53, 6500396.72 End: 404360.43, 6500352.03	

3.3 Photos of permanent sampling plots

Table 4: Details of photo point data

Side	Photo point & File name
S1 – Start	F –S1_Start_Forward.jpg, R – S1_Start_Right.jpg, L – S1_Start_Left.jpg
S1 – End	F –S1_End_Forward.jpg, R – S1_End_Right.jpg, L – S1_End_Left.jpg
S3 – Start	F –S3_Start_Forward.jpg, R – S3_Start_Right.jpg, L – S3_Start_Left.jpg
S3 – End	F –S3_End_Forward.jpg, R – S3_End_Right.jpg, L – S3_End_Left.jpg
S4 – Start	F –S4_Start_Forward.jpg, R – S4_Start_Right.jpg, L – S4_Start_Left.jpg
S4 – End	F –S4_End_Forward.jpg, R – S4_End_Right.jpg, L – S4_End_Left.jpg
S5 – Start	F –S5_Start_Forward.jpg, R – S5_Start_Right.jpg, L – S5_Start_Left.jpg
S5 – End	F –S5_End_Forward.jpg, R – S5_End_Right.jpg, L – S5_End_Left.jpg
S7 – Start	F –S7_Start_Forward.jpg, R – S7_Start_Right.jpg, L – S7_Start_Left.jpg
S7 – End	F –S7_End_Forward.jpg, R – S7_End_Right.jpg, L – S7_End_Left.jpg
S8 – Start	F –S8_Start_Forward.jpg, R – S8_Start_Right.jpg, L – S8_Start_Left.jpg
S8 – End	F –S8_End_Forward.jpg, R – S8_End_Right.jpg, L – S8_End_Left.jpg
S9 – Start	F –S9_Start_Forward.jpg, R – S9_Start_Right.jpg, L – S9_Start_Left.jpg
S9 – End	F –S9_End_Forward.jpg, R – S9_End_Right.jpg, L – S9_End_Left.jpg
S10 – Start	F –S10_Start_Forward.jpg, R – S10_Start_Right.jpg, L – S10_Start_Left.jpg
S10 – End	F –S10_End_Forward.jpg, R – S10_End_Right.jpg, L – S10_End_Left.jpg
S11 – Start	F –S11_Start_Forward.jpg, R – S11_Start_Right.jpg, L – S11_Start_Left.jpg
S11 – End	F –S11_End_Forward.jpg, R – S11_End_Right.jpg, L – S11_End_Left.jpg

Side	Photo point & File name
N1 – Start	F –N1_Start_Forward.jpg, R – N1_Start_Right.jpg, L – N1_Start_Left.jpg
N1 – End	F –N1_End_Forward.jpg, R – N1_End_Right.jpg, L – N1_End_Left.jpg
N2 – Start	F –N2_Start_Forward.jpg, R – N2_Start_Right.jpg, L – N2_Start_Left.jpg
N2 – End	F –N2_End_Forward.jpg, R – N2_End_Right.jpg, L – N2_End_Left.jpg
N3 – Start	F –N3_Start_Forward.jpg, R – N3_Start_Right.jpg, L – N3_Start_Left.jpg
N3 – End	F –N3_End_Forward.jpg, R – N3_End_Right.jpg, L – N3_End_Left.jpg
N4 – Start	F –N4_Start_Forward.jpg, R – N4_Start_Right.jpg, L – N4_Start_Left.jpg
N4 – End	F –N4_End_Forward.jpg, R – N4_End_Right.jpg, L – N4_End_Left.jpg
N6 – Start	F –N6_Start_Forward.jpg, R – N6_Start_Right.jpg, L – N6_Start_Left.jpg
N6 – End	F –N6_End_Forward.jpg, R – N6_End_Right.jpg, L – N6_End_Left.jpg
N7 – Start	F –N7_Start_Forward.jpg, R – N7_Start_Right.jpg, L – N7_Start_Left.jpg
N7 – End	F –N7_End_Forward.jpg, R – N7_End_Right.jpg, L – N7_End_Left.jpg
N9 – Start	F –N9_Start_Forward.jpg, R – N9_Start_Right.jpg, L – N9_Start_Left.jpg
N9 – End	F –N9_End_Forward.jpg, R – N9_End_Right.jpg, L – N9_End_Left.jpg

4. Starting Ecosystem Condition State

Table 5: Overall cover percentage

Activity area ID	% of A1 plants	% of A2 plants	% of A3 plants	% of A4 plants	% of A5 plants
AA1	59.03	14.26	7.15	19.57	0.00
AA2	16.79	5.91	0.89	76.41	0.00
AA3	4.17	3.58	7.88	84.37	0.00

4.1 Calculating species number (richness)

Table 6: Number of category A and subcategory A plant species

Activity area ID	No. of A1 species	No. of A2 species	No. of A3 species	No. of A4 species	No. of A5 species	Total no. of category A species
AA1	21	22	4	35	0	82
AA2	19	20	2	33	0	74
AA3	5	6	3	18	0	32

4.2 Starting ecosystem condition state

Table 7: Starting ecosystem condition state

Activity area ID	Starting ecosystem condition state
AA1	Starting state B (10)
AA2	Starting state C (11)
AA3	Starting state C (11)

4.3 Ecosystem scores

Table 8: Ecosystem scores

Activity area ID	Starting ecosystem condition score	Forecast ecosystem condition score	Starting contribution to biodiversity persistence score	Forecast contribution to biodiversity persistence score
AA1	0.45	0.55	32.44	39.72
AA2	0.35	0.45	29.58	38.34
AA3	0.35	0.45	0.52	0.67
Aggregate scores for the project:	0.36	0.45	58.97	74.91

5. Assigning a Reference Ecosystem

As detailed under section 4, in a desktop assessment the project area was overlaid with the Pre-1750 SVTM and NSW Land use mapping (v1.5 2017). The Pre 1750 SVTM assisted the team to understand the likely original reference ecosystem and its extent. The National Vegetation Information System (NVIS) and IUCN Global Ecosystem Typology was reviewed prior to, and during field work to confirm which Functional Group, Major Vegetation Group (MVG) and Sub-group (MVS) best fit reference ecosystems as required under section 46 of the method. Land use mapping was used to identify areas that were likely to be native versus exotic through examination of the following ‘tertiary land use’ attribution:

- 1.3.3 Residual native cover (considered likely to be remnant native vegetation with or without canopy cover)
- 2.1.0 Grazing native vegetation (considered likely to be native dominated pasture)
- 3.2.0 Grazing modified pasture (considered likely to be exotic dominated pasture).

The desktop assessment carried out a preliminary stratification of activity areas based on reference ecosystem and starting condition. The activity areas were mapped in ArcGIS Field Maps, a mobile field app for use in the field assessment.

During field work, the team assessed the project area against the desktop assessment to validate and where required, revise the activity area (and sub-area) stratification. Field validation of the PCTs included identification of dominant tree species in close vicinity to the activity areas and to a lesser extent the groundcover species assemblage in combination with landscape position, aspect and soils. Site observations indicated two distinctive canopy associations in the wet sclerophyll forest (WSF) grassy vegetation, one WSF shrubby, and one subtropical rainforest. The reference ecosystem was confirmed based on the presence of dominant tree species occurring as isolated paddock trees or patches of regrowth located immediately outside the activity area and to a lesser extent specific native species in the groundcover – albeit modified through long-term grazing. Other physical elements such as landscape position, aspect and soils were relied upon in the determination of the reference ecosystem.

The quantity of non-native (exotic) vegetation or native vegetation was a crucial element for determining the assignment of AA1 and AA2. The species richness captured in the quadrat data of each transect supported this determination (i.e. non-native or native coverage).

Table 9: Activity area classifications – IUCN and NVIS

Activity area	IUCN	NVIS, MVG & MVS
AA1 and AA2	T2.5 Temperate pyric humid forests	MVG 2: Eucalypt Tall Open Forests MVS 5: Eucalyptus open forests with a grassy understorey
AA3	T1.1 Tropical/Subtropical lowland rainforests	MVG 1: Rainforests and Vine Thickets MVS 2: Tropical or sub-tropical rainforest

Table 10: Reference ecosystem details for each activity area and sub-area

Activity or Sub area ID	Reference ecosystem & description	Detail what data was used to assign the reference ecosystem	Detail how the process was undertaken to identify the reference ecosystem
AA1 – SA1 & AA2 – SA3	PCT3240: Lower North Escarpment Red Gum Grassy Forest	Data taken from the field surveys including Rapid Data Points, as well as several transects and quadrat assessments that were conducted.	As detailed above plus additional canopy association and landform relationships: Eucalyptus. biturbinata, E. tereticornis, E. eugenioides, Angophora. subvelutina on less moist upper to mid slopes and hillcrests.
AA1 – SA2 & AA2 – SA5	PCT3254: Northern Hinterland Tallowood-Forest Oak Grassy Forest	Field data was then reviewed against NSW BAM PCT and Bionet data for vegetation classes and formations to determine which IUCN and NVIS categories.	As detailed above plus additional canopy association and landform relationships: E. saligna, E. acmenoides: E. microcorys on moister mid to lower slopes.
AA2 – SA4	PCT3169: Northern Hinterland Tallowood-Brush Box Wet Forest	PCT report summary has been attached.	As detailed above plus additional canopy association and landform relationships: E. saligna with mesic shrub/small tree layer, on lower foot slopes with soils of high fertility, depth and moisture.
AA3	PCT3100: Northern Hinterland Baloghia-Dendrocnide Subtropical Rainforest		As detailed above plus additional canopy association and landform relationships: Occurrence of Dendrocnide excelsa in rainforest on alluvial flats and terraces.

6. Benchmark Values for Reference Ecosystem in Activity Areas

6.1 Benchmark values for indicators of ecosystem condition

Benchmarking for NSW PCTs is done at the Vegetation Class level specific to each IBRA region or Catchment Management Authority (CMA). The values provided are from the Keith vegetation classes appropriate for the site which would fall under the broader relevant IUCN and NVIS categorisations. https://vegetation.bionet.nsw.gov.au/Static/Keith_Forms-Classes.pdf

Benchmark values have been determined for each activity area for the project and detailed in tables 11 to 13. Sub-area 5 which corresponds to reference ecosystem PCT 3254 has no transects, however, as it is the same benchmark values as PCT 3240 as detailed in table 11 it will not impact ecosystem condition values for the activity area.

Table 11: Benchmark values for indicators of ecosystem condition

Activity area ID: AA1 & AA2: SA1, SA2, SA3 & SA5 - Benchmarks for Northern Hinterland Wet Sclerophyll Forests Keith Class (NSW North Coast IBRA; Northern Rivers CMA) which encompasses 3240 & 3254 have been used.	
Indicator	Benchmark value
canopy height of native vegetation (in metres)	20m
crown cover from native plants in the canopy layer (as a percentage)	32.5%
crown cover from native plants in the mid-storey layer (as a percentage)	25%
crown cover from plants in the canopy layer provided by non-native plants (as a percentage)	0%
crown cover from plants in the mid-storey layer provided by non-native plants (as a percentage)	0%
ground cover from sub-category A1, A2 and A3 plants as a proportion of total ground cover from category A plants	100%
ground cover from sub-category A4 and A5 plants as a proportion of total ground cover from category A plants	0%
native species richness index by life form (native tree, shrub, vine, grass and herbaceous vascular plant species other than grasses)	Trees 10 Shrubs 11 Vines 9 Grass 9 Herbaceous 11 Total 50

Table 12: Benchmark values for each indicator and sub-indicator for the activity area

Activity area ID: AA2: SA4 - Benchmarks for North Coast Wet Sclerophyll Forests Keith Class (NSW North Coast; Northern Rivers CMA) which encompasses PCT 3169 have been used.	
Indicator	Benchmark value
canopy height of native vegetation (in metres)	20m

crown cover from native plants in the canopy layer (as a percentage)	55%
crown cover from native plants in the mid-storey layer (as a percentage)	52.5%
crown cover from plants in the canopy layer provided by non-native plants (as a percentage)	0%
crown cover from plants in the mid-storey layer provided by non-native plants (as a percentage)	0%
ground cover from sub-category A1, A2 and A3 plants as a proportion of total ground cover from category A plants	100%
ground cover from sub-category A4 and A5 plants as a proportion of total ground cover from category A plants	0%
native species richness index by life form (native tree, shrub, vine, grass and herbaceous vascular plant species other than grasses)	<div> <div>Trees</div> <div>13</div> </div> <div> <div>Shrubs</div> <div>14</div> </div> <div> <div>Vines</div> <div>13</div> </div> <div> <div>Grass</div> <div>5</div> </div> <div> <div>Herbaceous</div> <div>11</div> </div> <div> <div>Total</div> <div>56</div> </div>

Table 13: Benchmark values for indicators of ecosystem condition

Activity area ID: AA3 - Benchmarks for Subtropical Rainforests Keith Class (NSW North Coast; Northern Rivers CMA) which encompasses PCT 3100 have been used.	
Indicator	Benchmark value
canopy height of native vegetation (in metres)	32.5m
crown cover from native plants in the canopy layer (as a percentage)	65%
crown cover from native plants in the mid-storey layer (as a percentage)	50%
crown cover from plants in the canopy layer provided by non-native plants (as a percentage)	0%
crown cover from plants in the mid-storey layer provided by non-native plants (as a percentage)	0%
ground cover from sub-category A1, A2 and A3 plants as a proportion of total ground cover from category A plants	100%
ground cover from sub-category A4 and A5 plants as a proportion of total ground cover from category A plants	0%
native species richness index by life form (native tree, shrub, vine, grass and herbaceous vascular plant species other than grasses)	<div> <div>Trees</div> <div>19</div> </div> <div> <div>Shrubs</div> <div>10</div> </div> <div> <div>Vines</div> <div>14</div> </div> <div> <div>Grass</div> <div>2</div> </div> <div> <div>Herbaceous</div> <div>13</div> </div> <div> <div>Total</div> <div>58</div> </div>

7. Starting Values for Ecosystem Condition Indicators

For each activity area, the starting values for each ecosystem indicator must be calculated in accordance with the process in section 10 of schedule 5 of the method.

Table 14: Starting values for ecosystem indicators

	Indicators	Starting value		
		AA1	AA2	AA3
A	canopy height of native vegetation (in metres)	0	0	0
B	crown cover from native plants in the canopy layer (as a percentage)	0	0	0
C	crown cover from native plants in the mid-storey layer (as a percentage)	0	0	0
D	crown cover from plants in the canopy layer provided by non-native plants (as a percentage)	0	0	0
E	crown cover from plants in the mid-storey layer provided by non-native plants (as a percentage)	0	0	0
F	ground cover from sub-category A1, A2 and A3 plants as a proportion of total ground cover from category A plants	80.43%	23.59%	15.63%
G	ground cover from sub-category A4 and A5 plants as a proportion of total ground cover from category A plants	19.57%	76.41%	84.37%
H	native species richness index by life form	24.14 (48.29%)	13.57 (26.29%*)	7.5 (12.93%)

*Native species richness index by lifeform for AA2 was calculated by averaging the index values for SA3 and SA4.

8. Threats to the Project

Threats to the project have been observed during the Starting State Assessment and by subsequent Covalent during site visits. Records of pest/weed treatment over past ten years have not been collected or reviewed due to recent acquisition of the property from previous owner.

Table 15: Threats to the project by activity area

Activity area ID	Description of threats to project outcome
AA1 and AA2	Blackberry was observed and mapped across both the north and south sections of the property, it had a scattered occurrence on mid to lower slopes and along drainage lines. If not controlled, blackberry will out-compete the planted native species and natural regeneration. Overall threat levels are considered low to typical of the overall landscape when risk mitigations are applied.
AA3	This activity area is located on lower floodplain nutrient rich alluvial soils. Introduced fast growing groundcover species such as <i>Cenchrus clandestinus</i> (Kikuyu Grass) may be a threat to planted areas by out-competing planted native species and natural regeneration.
AA1, AA2 and AA3	There are a range of other invasive weed species across the activity area. These invasive weed species, if not controlled, can out-compete planted native species and natural regeneration. Overall threat levels are considered low to typical of the overall landscape when risk mitigations are applied.
	Pigs not sighted but activity evident in the form of ground rooting in wet areas across both the north and south sections of the property. Hares have been observed during subsequent site visits. Both animals pose an herbivory threat to the planted species. Overall threat levels are considered low to typical of the overall landscape, when risk mitigations are applied.
	Bushfire will be a threat if the fire is severe and extensive. Overall threat level of bushfire risk is considered low to medium, when risk mitigations are applied.

9. Historic Drivers of Change

Beyond disturbance related to the impacts of pig as detailed in section 9 of this report, during the survey efforts there was no other significant disturbance noted across the site.

Table 16: Significant disturbances in activity areas

Activity Area ID	Details of disturbances
All Activity Areas	Cooplacurripa has been an intensively managed pastoral station since the late 1840's. This long history as a working farm would likely indicate the use of herbicides and fertilisers to support farming operations. The presence of improved pasture grasses – Kikuyu (<i>Cenchrus clandestinus</i>), Blady Grass (<i>Imperata cylindrica</i>) in the open grazing areas, and the presence of Bracken Fern (<i>Pteridium esculentum</i>) near the edge of the forest are clear indicators of frequent disturbance resulting from grazing activities.

Table 17: Historic drivers of change in the project area

Historic driver	Details of the historic driver
Bushfire	The entire Mid-Coast Region, including Cooplacurripa, was impacted by the 2019-2020 bushfire event, known as the Black Summer Bushfires, that affected much of Australia at the time. NSW NPWS fire severity mapping clearly shows large tracts of the site affected by high severity and high intensity bushfire in the higher elevations where bushfires used the steeper topography to exhibit adverse fire behaviour.
Soil decompaction	Across the Activity Areas (1-3), decompaction of the soil using dozers fitted with rippers was undertaken during the summer months to break up the soil and grassy layer. This had created wide-spaced decompaction (rip-lines) following the contour of the landscapes, to maximise plant establishment success.

10. Other Relevant Features

10.1 Threatened species and ecological communities

As part of preparing the site assessment report, the Commonwealth Protected Matters Search Tool was used to determine what threatened species and ecological communities might occur within the project area. Three threatened ecological communities and 49 threatened species were reported as 'may occur' in the project area. It was confirmed that AA3 aligned with the threatened ecological community: *Lowland Rainforest of Subtropical Australia*, whereas no threatened species were identified on site during surveys. However, survey effort did not focus on threatened species detection and so does not confer that species listed are not present on the site and numerous species could occur.

Many of the threatened fauna listed below which are mobile and wide ranging could occur at the site from time to time (e.g. Glossy Black Cockatoos were reported to occur by members of the Covalent team) and certain fauna may be resident within adjacent areas.

Threatened flora from the below list are unlikely to have gone undetected unless they were rare and/or cryptic across the area assessed.

There were no hydrological features of significance identified through the Commonwealth Protected Matters Search Tool (and as defined by the method in section 32) in the project area.

Listed threatened ecological communities – community likely to occur within area:

- Lowland Rainforest of Subtropical Australia
- New England Peppermint (*Eucalyptus nova-anglica*) Grassy Woodlands
- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions

Listed threatened species – species or species habitat likely to occur within area:

- *Anthochaera phrygia* Regent Honeyeater [82338]
- *Atrichornis rufescens* Rufous Scrub-bird [655]
- *Botaurus poiciloptilus* Australasian Bittern [1001]
- *Calidris acuminata* Sharp-tailed Sandpiper [874]
- *Calidris ferruginea* Curlew Sandpiper [856]
- *Calyptorhynchus lathami lathami* South-eastern Glossy Black-Cockatoo [67036]
- *Climacteris picumnus victoriae* Brown Treecreeper (south-eastern) [67062]
- *Erythrorhynchus radiatus* Red Goshawk [942]
- *Falco hypoleucos* Grey Falcon [929]
- *Gallinago hardwickii* Latham's Snipe, Japanese Snipe [863]
- *Grantiella picta* Painted Honeyeater [470]
- *Hirundapus caudacutus* White-throated Needletail [682]
- *Lathamus discolor* Swift Parrot [744]
- *Melanodryas cucullata cucullata* South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]
- *Neophema chrysostoma* Blue-winged Parrot [726]
- *Rostratula australis* Australian Painted Snipe [77037]

- *Stagonopleura guttata* Diamond Firetail [59398]
- *Litoria daviesae* Davies' Tree Frog [78964]
- *Mixophyes balbus* Stuttering Frog, Southern Barred Frog (in Victoria) [1942]
- *Phyloria sphagnicola* Sphagnum Frog [59709]
- *Chalinolobus dwyeri* Large-eared Pied Bat, Large Pied Bat [183]
- *Dasyurus maculatus maculatus* (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]
- *Notamacropus parma* Parma Wallaby [89289]
- *Petauroides volans* Greater Glider (southern and central) [254]
- *Petaurus australis australis* Yellow-bellied Glider (south-eastern) [87600]
- *P. hascolarctos cinereus* (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]
- *Potorous tridactylus tridactylus* Long-nosed Potoroo (northern) [66645]
- *Pseudomys novaehollandiae* New Holland Mouse, Pookila [96]
- *Pseudomys oralis* Hastings River Mouse, Koontoo [98] *Pteropus poliocephalus* Grey-headed Flying-fox [186]
- *Arthraxon hispidus* Hairy-joint Grass [9338]
- *Callistemon pungens* [55581]
- *Coleus nitidus* listed as *Plectranthus nitidus* Nightcap Plectranthus, Silver Plectranthus [91380]
- *Cryptostylis hunteriana* Leafless Tongue-orchid [19533]
- *Cynanchum elegans* White-flowered Wax Plant [12533]
- *Dichanthium setosum* bluegrass [14159]
- *Eucalyptus glaucina* Slaty Red Gum [5670]
- *Eucalyptus nicholii* Narrow-leaved Peppermint, Narrowleaved Black Peppermint [20992]
- *Euphrasia arguta* [4325]
- *Haloragis exalata* subsp. *velutina* Tall Velvet Sea-berry [16839]
- *Persicaria elatior* Knotweed, Tall Knotweed [5831]
- *Rhodamnia rubescens* Scrub Turpentine, Brown Malletwood [15763]
- *Rhodomyrtus psidioides* Native Guava [19162]
- *Syzygium paniculatum* Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]
- *Thesium australe* Austral Toadflax, Toadflax [15202]
- *Vincetoxicum woollsii* listed as *Tylophora woollsii* [40080]
- *Coeranoscincus reticulatus* Three-toed Snake-tooth Skink [59628]
- *Myuchelys purvisi* Purvis' Turtle [89459]
- *Saltuarius moritzi* New England Leaf-tailed Gecko, Moritz's Leaf-tailed Gecko [89490]

10.2 Natural regeneration

During the starting state assessment, natural regeneration was surveyed across the project area to identify any existing woody biomass across each activity area. Some existing woody biomass was identified in each activity area as specified in Table 18. In each instance regenerating stems were reviewed against section 19, part 8 of the method to ensure it could be retained within activity areas by fulfilling the species, stem diameter and density requirements.

10.3 Climate change impact

A review of national and regional projections indicate that the whole project area will be vulnerable to the impacts of climate change. All reference ecosystems are identified to be impacted by anticipated warmer average temperatures, increased extreme rainfall events and increased fire risk.

Source: CSIRO and Bureau of Meteorology. 2025. Projection Tools - Regional Climate Change Explorer – East Coast Slopes. Available from <https://www.climatechangeinaustralia.gov.au/en/projections-tools/regional-climate-change-explorer/sub-clusters/?current=ECSC&tooltip=true&popup=true> Accessed 2/6/25.

Source: NSW Government. 2024. Adapt NSW – Interactive climate change projections map. Available from <https://www.climatechange.environment.nsw.gov.au/projections-map> Accessed 2/6/25.

Source: NSW Local Land Service. 2022. Hunter Region Natural Resource Management Plan. Available from <https://www.lls.nsw.gov.au/regions/hunter/projects-and-programs/NRM-biodiversity> Accessed on 18/6/25

Source: NSW Local Land Service. 2022. Northern Tablelands Region Natural Resource Management Plan. Available from https://www.lls.nsw.gov.au/_data/assets/pdf_file/0010/1552771/Northern-Tablelands-Natural-Resource-Management-Plan-2022-2027.pdf Accessed on 18/6/25

Table 18: Details of relevant features in activity areas

Activity area ID	Hydrological features of significance	Threatened species and ecological communities	Natural regeneration	Covenants and legal encumbrances in the project area
AA1	<p>While there were no hydrological features of significance, the following streams are present.</p> <p>A number of non-perennial and perennial streams (Strahler order 1 and 2) flow across the activity areas as shown in Figure 3.1 and 3.2 in the north of the property and Figure 3.3 and 3.4 in the south of the property.</p>	<p>Vegetation observed in AA1 does not align to a Threatened Ecological Community (TEC) listed under the <i>Biodiversity Conservation Act 2016</i> (BC Act) or the <i>Environmental Protection Biodiversity Conservation Act 1999</i> (EPBC Act).</p> <p>No threatened species were identified during on-site surveys.</p>	<p>Natural regeneration was rare and limited to scattered individuals of species and seedlings of <i>Eucalyptus tereticornis</i>, <i>E. saligna</i>, <i>E. acmenoides</i> and <i>Angophora subvelutina</i> with a cover of < 0.1%</p>	<p>AU512816 <i>Mortgage to Commonwealth Bank of Australia</i></p>

Activity area ID	Hydrological features of significance	Threatened species and ecological communities	Natural regeneration	Covenants and legal encumbrances in the project area
AA2	A number of non-perennial and perennial streams (Strahler order 1 and 2) flow across the activity areas as shown in Figure 3.1 and 3.2 in the north of the property and Figure 3.3 and 3.4 of the south of the property.	Vegetation observed in AA2 does not align to a TEC listed under the BC Act or the EPBC Act. No threatened species were identified during on-site surveys.	Natural regeneration was rare and limited to scattered individuals of species and seedlings of <i>Eucalyptus tereticornis</i> , <i>E. saligna</i> , <i>E. acmenoides</i> and <i>Angophora subvelutina</i> with a cover of < 0.1%	AU512816 <i>Mortgage to Commonwealth Bank of Australia</i>
AA3	A perennial stream is located on the southern tip of the activity area and there is a Strahler order 3 stream immediately to the west of the activity area as shown in Figure 3.4	Vegetation observed in AA3 aligns to Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregion listed as an Endangered Ecological Community (EEC) under the BC Act (partial match). Vegetation observed in AA3 aligns to Lowland Rainforest of Subtropical Australia listed as Critically Endangered under the EPBC Act. No threatened species were identified during starting state assessment.	Natural regeneration was very rare and limited to the occurrence of one or two <i>Acacia melanoxylon</i> individuals with a cover of < 0.1%	AU512816 <i>Mortgage to Commonwealth Bank of Australia</i>

Identification of covenants and other legal encumbrances were informed by:

- search of the applicable land title register;
- search of any applicable state or territory register relating to cultural heritage;
- search of the Register under the CFI Act 2011; and
- a signed statement from the owner of the land.

Appendix 1: **Suitably Qualified Persons**

Cuong Tran



CHIEF EXECUTIVE OFFICER

Covalent Land Australia | Brisbane, QLD

Cuong has over 20 years' experience in bushfire research and management and is a recognised expert in the field of fire management, ecology and planning. He has applied novel and new ways of thinking to traditional land management practices, particularly by incorporating environmental risk impacts such as bushfires. Cuong is a transformative leader and facilitator, nurturing his team to get their best. Leading cultural change improves business performance, Cuong loves playing a role in that.

SKILLS

Natural Resource Management
Subject Matter Expert Bushfire
Financial Acumen
Team Leadership
Project Planning
Accountability
Improving Efficiency
Risk Assessment
Strategy Into Practice

TECHNICAL SKILLS

Bushfire Behaviour
ArcGIS / Spatial Data
Landscape Ecologist
Project Management

EDUCATION

BACHELOR OF SCIENCE
(1st CLASS HONS)
Biology Major
Griffith University 1992–96
DOCTOR OF PHILOSOPHY
Fire Ecology & Flammability
Griffith University 2008

EXPERIENCE

CHIEF EXECUTIVE OFFICER

Covalent Land Australia | September 2024 – present

Support the scaling of high integrity land restoration projects through carbon financing, whilst enhancing natural and Cultural heritage and primary production values. Focused on building highly effective teams and nurturing a rich and diverse culture. Applying knowledge of landscape ecological fire regimes under a changing climate to reduce risk and enhance environmental values.

PRINCIPAL – SUSTAINABILITY & CLIMATE CHANGE

Aurecon – Market Advisory Group | 2022 – September 2024

Lead nature-based carbon abatement & sequestration programs, providing tailored solutions to reduce liabilities, presenting high integrity projects with identifiable co-benefits (such as biodiversity).

GENERAL MANAGER

Covalent Land Australia (renamed from Market Advisory Group – Project Services) | 2020 – September 2024

Lead delivery of programs for groups / corporations to establish as carbon market developers. Assist in solutioning, integrating natural resource management into existing and new programs.

EXECUTIVE MANAGER

Ten Rivers | 2017 – 2020

Led and transformed a significant repositioning of the business, without major disruption to service delivery. Identified new clients, and ensured continued high quality delivery across both consulting and delivery sectors of the business. Leading by example for bushfire management and mitigation programs.

continued....

PROFESSIONAL DEVELOPMENT

FIRE BEHAVIOR ANALYST
QFES Training, 2018

PLANNED BURN
SUPERVISOR
Fire Management
Training, 2018

CREW MEMBER – FIRE-
FIGHTER
Qld Dept. of Forestry, 1994

- Bushfire, risk and strategic landscape management planning for large land managers and owners
- Integrated land management planning, principally fire and weed management
- Business development, and extension of environmental services across the Broadspectrum group
- Increase revenue 10-15% year on year, highest staff retention in sector of parent company
- Returning bases to operation within two days. Total clean-up effort lasted six months, costs over 5M

NATIONAL MANAGER – ENVIRONMENTAL SERVICES

Broadspectrum | August 2017 – May 2019

Seconded role to lead and transform service delivery to Broadspectrum's largest contract, Defence Base Services for the Commonwealth Dept. of Defence. A challenging role, this was a client facing, deeply involved position, but I was proud to drive consistency of service delivery of Land Management programs across WA, SA, NT, VIC & TAS (over 3M hectares of land). Operating annual budget of >\$30M.

- Enhanced service delivery to save 10 – 20% on resources to land management deliverables
- Managed nine direct reports, service delivery at over fifty different locations across the country
- Led the clean-up effort following TC Marcus (in Darwin) in Feb 2019

NATIONAL SCIENCE LEAD BUSHFIRE MANAGEMENT SERVICES

Transfield Services (now Broadspectrum) | September 2012 – 2017

Developed and implemented new methods to analyse and record bushfire risk across Defence estates in WA, SA, and Victoria. Helped with creation of new entity (Ten Rivers) as a start-up venture. Client facing with challenging customer with varying expectations at the regional level. Increased service delivery by 20%

- Integrated and adaptive estate management for a diverse group of land managers, including local govt, resources industries, utility companies and Defence.
- Enhancing environmental outcomes by using smarter business-orientated techniques
- Created an external market for bushfire risk management opportunities

FIRE MANAGEMENT & ECOLOGY SPECIALIST**Serco Sodexo Defence Services / July 2009 – September 2012**

Developed and implemented robust measures of bushfire risk across the Defence Estate in NT, NW WA, North Qld, Northern NSW and the ACT. Evidence-based approach of risk management led to 30% increase in revenue for implementation of risk-reduction programs. Be sure to use job-specific keywords to catch your future employer's eye, and to get chosen by application tracking systems.

- Fire management planning across the Defence Estate
- Coordinating landscape management programs across the Defence Estate

ACADEMIC**School of Environmental Sciences, Griffith University | 2001 – 2009**

Developed new research theme in bushfire ecology and management at the School.

Refreshed and taught courses in Botany, Ecology and Wildlife Management. Coordinated the SEQ Fire & Biodiversity Consortium, servicing LGA, Qld Parks & Wildlife Service, Qld Fire & Emergency Services, & Forestry.

- Supervised five Honours (4 – 1st Class, 1 – 2nd Class Div. A) and 2 PhD students to completion.
- Organised the 2006 International Bushfire Conference: Translating Science into Practice, held in Brisbane in July 2006. Special Edition (Vol 115) of the Proceedings of the Royal Society of Queensland followed
- Recipient of Qld Safer Community Award for Bushfire Planning



CV

Jennie Powell

BNatRes, BAM Assessor

Manager - Natural Capital Conservation

“I have a comprehensive background in biodiversity conservation and environmental management. I manage teams and implement effective and complex project planning, with a focus on nature positive outcomes.”

- Project Leadership: Led multi-disciplinary teams effectively in fast-paced environments, ensuring effective and efficient project planning, execution, and completion within established timelines.
- Training and Capacity Building: Developed and delivered vocational training programs for internal staff and external accredited assessors, contributing to knowledge building.
- Biodiversity Conservation Management: Managed teams for biodiversity conservation projects, including Biodiversity Stewardship Agreements (BSAs), Biodiversity Offset Strategies and complex ecological impact assessments.
- Excellent internal and external consulting skills at all levels in high-profile and sensitive environments.

Career overview	<p>Jennie is the manager of Natural Capital Conservation with over 2 decades of experience in providing conservation expertise. She has planned and managed large, complex projects for a variety of clients.</p> <p>Jennie is an experienced project leader and consultant in biodiversity conservation and with a drive for nature positive outcomes. She has led multi-disciplinary teams, developed, and delivered vocational training programs, and managed complex ecological projects. Her career includes roles such as Manager and Principal Project Officer in the NSW Department of Climate Change Energy the Environment and Water, (DCCEEW) and Senior Consultant at Eco Logical Australia. Jennie has expertise in policy development, biodiversity credits management, and environmental impact assessment.</p>	
Employment history	2024-Present 2022-2024 2019-2022 2010-2019 1990-2010 1997-2015	Manager - Natural Capital Conservation, Niche Environment and Heritage Manager - BSA Co-ordination Team for the NSW Biodiversity Credits Supply Taskforce Principal Project Officer - Biodiversity Conservation Trust (BCT) BSA Co-ordination Team Senior Consultant - Eco Logical Australia Sydney Senior Project Officer and other roles - Warringah Council (Northern Beaches Council) Trainer (Part Time) - TAFE
Skills	<ul style="list-style-type: none">– Project planning and management– Developing processes, guidelines, and policies for statewide BSA management– Fast-Tracking Biodiversity Credits– BSA Application Assessment	<ul style="list-style-type: none">– Strategic Issues Management– Nature Positive Planning and Management– Training and Capacity Building

Appendix 2:

BioNet Vegetation Classification – Community Profile Reports

Appendix 2a:

Plant Community Type ID (PCT ID): 3100

BioNet Vegetation Classification - Community Profile Report

Plant Community Type ID (PCT ID): 3100

PCT Name: Northern Hinterland Baloghia-Dendrocnide Subtropical Rainforest

Classification Confidence Level: 2-High

Total Number of Replicates: 64

Number of Primary Replicates: 61

Number of Secondary Replicates: 3

Vegetation Description: Tall to very tall, mid-dense to dense rainforest, rarely with a very tall to extremely tall sparse sclerophyll canopy or emergents, which occurs on escarpment ranges from Gibraltar Range to Barrington Tops and on coastal ranges between Taree and Newcastle. The tree canopy composition is highly variable, however very frequently includes a high cover of Dendrocnide excelsa and Baloghia inophylla, commonly with Argirodendron actinophyllum, Diploglottis australis, Dysoxylum fraserianum and Planchonella australis, which only sometimes have a high cover. Where a taller sclerophyll stratum is present, the most frequent species are Eucalyptus saligna and Lophostemon confertus, however both occur rarely. The sub-canopy or mid-stratum very frequently includes Streblus brunonianus, Alectryon subcinereus and Pittosporum multiflorum. The vine Cissus antarctica is almost always present and occasionally locally abundant, however its abundance has likely been increased by past disturbance. The ferns Arthropteris tenella, Adiantum formosum and Asplenium australasicum are very frequently present and sometimes locally abundant. This PCT often occurs in gullies or sheltered slopes, however also at locations which are relatively exposed for rainforest. It is floristically related to PCT 3019 which overlaps in latitudinal range however occurs more to the north, in warmer and often more sheltered sites. In some areas, past disturbance has likely blurred the distinction between these two PCTs.

Vegetation Formation: Rainforests;

Vegetation Class: Subtropical Rainforests;

IBRA Bioregion(s): New England Tablelands; NSW North Coast; Sydney Basin;

IBRA Sub-region(s): Walcha Plateau; Barrington; Chaelundi; Dalmorton; Karuah Manning; Mummel Escarpment; Upper Hunter; Upper Manning; Hunter;

LGA: BELLINGEN; CESSNOCK; CLARENCE VALLEY; DUNGOG; KEMPSEY; MID-COAST; SINGLETON; TAMWORTH REGIONAL; WALCHA;

Elevation (m) (Min, Median, Max): 81.6 415.7 976.0

Annual Rainfall (mm) (Min, Median, Max): 878 1112 1521

Annual Mean Temperature (deg C) (Min, Median, Max): 12.46 15.54 16.92

Median Native Species Richness per plot: 45

TEC Assessed: Has associated TEC

TEC List: Listed BC Act,E: Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion (Part); Listed BC Act,E: Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions (Part); Listed EPBC Act,CE: Lowland Rainforest of Subtropical Australia (Part);

TEC Comments: (Comment TEC1) Relates to the NSW Lowland Rainforest TEC as it is associated with one of the SubAlliances (Primary) listed in paragraph 4 of the Final Determination. However it must still satisfy the elevation thresholds of less than 600 m asl in the NSW North Coast bioregion or less than 350 m asl in the Sydney Basin bioregion (IBRA Version 4.0) depending on the distribution of the PCT (paragraph 1). Candidate areas of the TEC may adjoin this PCT if they satisfy the requirements of one of the SubAlliances included in paragraph 5, subject to the same elevation thresholds by bioregion. The related PCTs are included in the interpretation of the relationships for this TEC. (Comment TEC2) Relates to the NSW Lowland Rainforest on Floodplain TEC but only applies where the PCT is situated within the NSW North Coast bioregion (IBRA Version 4.0) and on a floodplain as per paragraph 2 in the Final Determination. Floodplain is not defined in the Final Determination but users should be guided by the best available fine scale spatial data that represents alluvial deposits in the NSW North Coast bioregion (IBRA Version 4.0). (Comment TEC3) Relates to the Commonwealth Lowland Rainforest of Subtropical Australia TEC as it is associated with one of the SubAlliances listed in Section 6 of the Listing Advice. A patch must occur within the NSW North Coast bioregion (IBRA Version 6.1) at an elevation generally less than 300 m asl on soils derived from basalt or alluvium or enriched rhyolitic soils or basaltically enriched metasediments, and satisfy condition thresholds as per Section 5 of the Listing Advice.

PCT Percent Cleared: 7.01

PCT Definition Status: Approved

Species By Growth Form Group

Growth Form Group	Species	Median cover score	Frequency
Fern (EG)	Arthropteris tenella	2	87
Fern (EG)	Adiantum formosum	2	78
Fern (EG)	Asplenium australasicum	2	73
Fern (EG)	Pyrrosia confluens var. confluens	2	53
Fern (EG)	Dictymia brownii	1	50
Fern (EG)	Lastreopsis decomposita	3	50
Fern (EG)	Pellaea falcata	1	43

Fern (EG)	Doodia aspera	2	41
Fern (EG)	Lastreopsis microsora subsp. microsora	2	40
Fern (EG)	Microsorium scandens	2	38
Fern (EG)	Pteris umbrosa	2	38
Fern (EG)	Lastreopsis acuminata	2	35
Fern (EG)	Platynerium bifurcatum	1	28
Fern (EG)	Asplenium polyodon	1	20
Fern (EG)	Pyrrosia rupestris	2	19
Fern (EG)	Pellaea paradoxa	1	12
Fern (EG)	Adiantum hispidulum	2	10
Fern (EG)	Platynerium superbum	2	9
Fern (EG)	Adiantum silvaticum	2	7
Fern (EG)	Arthropteris beckeri	2	7
Fern (EG)	Diplazium assimile	1	7
Fern (EG)	Adiantum diaphanum	1	5
Fern (EG)	Blechnum spinulosum	1	5
Fern (EG)	Davallia solida var. pyxidata	1	5
Fern (EG)	Diplazium australe	1	5
Fern (EG)	Lastreopsis munita	2	5
Fern (EG)	Adiantum aethiopicum	1	4
Fern (EG)	Asplenium attenuatum	2	4
Fern (EG)	Asplenium flabellifolium	2	4
Fern (EG)	Blechnum patersonii	2	4
Fern (EG)	Grammitis billardi	2	4
Fern (EG)	Microsorium pustulatum subsp. pustulatum	2	4
Fern (EG)	Pteris tremula	1	4
Fern (EG)	Arachniodes aristata	1	2
Fern (EG)	Blechnum cartilagineum	1	2
Fern (EG)	Blechnum wattsii	1	2
Fern (EG)	Dennstaedtia davallioides	2	2
Fern (EG)	Doodia australis	1	2
Fern (EG)	Hymenophyllum cupressiforme	1	2
Fern (EG)	Lindsaea linearis	1	2
Fern (EG)	Polystichum proliferum	1	2
Fern (EG)	Vittaria elongata	1	2
Forb (FG)	Gymnostachys anceps	1	56
Forb (FG)	Dendrobium speciosum	1	35
Forb (FG)	Polia crispata	1	28
Forb (FG)	Aneilema acuminatum	1	23
Forb (FG)	Pseuderanthemum variabile	2	20
Forb (FG)	Alocasia brisbanensis	1	15
Forb (FG)	Peperomia tetraphylla	2	10
Forb (FG)	Elatostema reticulatum	2	9

Forb (FG)	<i>Urtica incisa</i>	1	9
Forb (FG)	<i>Alpinia caerulea</i>	1	5
Forb (FG)	<i>Commelina cyanea</i>	2	4
Forb (FG)	<i>Peperomia blanda</i> var. <i>floribunda</i>	2	4
Forb (FG)	<i>Aneilema biflorum</i>	1	2
Forb (FG)	<i>Australina pusilla</i>	2	2
Forb (FG)	<i>Calanthe triplicata</i>	2	2
Forb (FG)	<i>Dianella caerulea</i>	1	2
Forb (FG)	<i>Elatostema stipitatum</i>	2	2
Forb (FG)	<i>Galium binifolium</i>	1	2
Forb (FG)	<i>Hydrocotyle sibthorpioides</i>	1	2
Forb (FG)	<i>Nyssanthes erecta</i>	1	2
Forb (FG)	<i>Plectranthus graveolens</i>	2	2
Forb (FG)	<i>Plectranthus parviflorus</i>	2	2
Forb (FG)	<i>Pothos longipes</i>	2	2
Forb (FG)	<i>Senecio amygdalifolius</i>	2	2
Forb (FG)	<i>Senecio vagus</i>	1	2
Forb (FG)	<i>Solanum prinophyllum</i>	1	2
Forb (FG)	<i>Solanum pungetium</i>	1	2
Forb (FG)	<i>Tripladenia cunninghamii</i>	1	2
Forb (FG)	<i>Viola hederacea</i>	1	2
Grass & grasslike (GG)	<i>Lomandra spicata</i>	1	71
Grass & grasslike (GG)	<i>Oplismenus imbecillis</i>	1	17
Grass & grasslike (GG)	<i>Carex brunnea</i>	1	12
Grass & grasslike (GG)	<i>Cyperus tetraphyllus</i>	1	10
Grass & grasslike (GG)	<i>Oplismenus aemulus</i>	1	7
Grass & grasslike (GG)	<i>Carex hubbardii</i>	1	5
Grass & grasslike (GG)	<i>Gahnia aspera</i>	2	5
Grass & grasslike (GG)	<i>Carex longibrachiata</i>	3	2
Grass & grasslike (GG)	<i>Cyperus filipes</i>	1	2
Grass & grasslike (GG)	<i>Cyperus laevis</i>	2	2
Grass & grasslike (GG)	<i>Entolasia stricta</i>	1	2
Grass & grasslike (GG)	<i>Lomandra longifolia</i>	2	2
Grass & grasslike (GG)	<i>Poa queenslandica</i>	1	2
Other (OG)	<i>Cissus antarctica</i>	2	96
Other (OG)	<i>Gynochthodes jasminoides</i>	1	60
Other (OG)	<i>Parsonsia straminea</i>	1	55
Other (OG)	<i>Pandorea pandorana</i> subsp. <i>pandorana</i>	1	50
Other (OG)	<i>Trophis scandens</i> subsp. <i>scandens</i>	1	50
Other (OG)	<i>Parsonsia velutina</i>	1	46
Other (OG)	<i>Dioscorea transversa</i>	1	41
Other (OG)	<i>Tetrastigma nitens</i>	1	40
Other (OG)	<i>Embelia australiana</i>	1	35

Other (OG)	Dendrobium gracilicaule	1	33
Other (OG)	Sarcochilus falcatus	1	28
Other (OG)	Legnephora moorei	1	27
Other (OG)	Cissus hypoglauca	2	25
Other (OG)	Piper hederaceum var. hederaceum	1	25
Other (OG)	Ripogonum album	2	25
Other (OG)	Dendrobium pugioniforme	1	23
Other (OG)	Smilax australis	1	22
Other (OG)	Geitonoplesium cymosum	1	20
Other (OG)	Maclura cochinchinensis	1	20
Other (OG)	Austrosteenisia blackii var. blackii	1	19
Other (OG)	Palmeria scandens	1	19
Other (OG)	Aphanopetalum resinosum	1	15
Other (OG)	Dendrobium schoeninum	1	15
Other (OG)	Plectorrhiza tridentata	1	15
Other (OG)	Marsdenia rostrata	2	14
Other (OG)	Sarcopetalum harveyanum	1	14
Other (OG)	Marsdenia flavescens	1	12
Other (OG)	Melodinus australis	1	12
Other (OG)	Deeringia amaranthoides	1	10
Other (OG)	Dendrobium fairfaxii	1	10
Other (OG)	Calochlaena dubia	2	9
Other (OG)	Celastrus australis	1	9
Other (OG)	Cephalalaria cephalobotrys	1	9
Other (OG)	Ripogonum discolor	2	9
Other (OG)	Rubus moorei	1	9
Other (OG)	Tylophora paniculata	1	9
Other (OG)	Jasminum volubile	1	7
Other (OG)	Linospadix monostachyos	2	7
Other (OG)	Livistona australis	1	7
Other (OG)	Sarcochilus parviflorus	1	7
Other (OG)	Amylothea dictyophleba	1	5
Other (OG)	Archontophoenix cunninghamiana	1	5
Other (OG)	Cayratia clematidea	1	5
Other (OG)	Celastrus subspicata	1	5
Other (OG)	Clematis glycinoides	1	5
Other (OG)	Derris involuta	1	5
Other (OG)	Ripogonum fawcettianum	1	5
Other (OG)	Stephania japonica var. discolor	1	5
Other (OG)	Cestichis reflexa	1	4
Other (OG)	Clematis aristata	1	4
Other (OG)	Cordyline petiolaris	2	4
Other (OG)	Cyathea leichhardtiana	2	4

Other (OG)	Dendrobium mortii	1	4
Other (OG)	Dicksonia antarctica	1	4
Other (OG)	Marsdenia pleiadenia	1	4
Other (OG)	Sarcochilus spathulatus	1	4
Other (OG)	Cayratia eurynema	1	2
Other (OG)	Cordyline stricta	1	2
Other (OG)	Cyathea australis	1	2
Other (OG)	Cyathea cooperi	1	2
Other (OG)	Dendrobium teretifolium	1	2
Other (OG)	Hibbertia scandens	2	2
Other (OG)	Muellerina celastroides	2	2
Other (OG)	Pandorea jasminoides	2	2
Other (OG)	Papillilabium beckleri	1	2
Other (OG)	Parsonsia fulva	1	2
Other (OG)	Parsonsia purpurascens	2	2
Other (OG)	Parsonsia rotata	1	2
Other (OG)	Ripogonum elseyanum	1	2
Other (OG)	Sarcochilus hillii	1	2
Shrub (SG)	Pittosporum multiflorum	2	92
Shrub (SG)	Alectryon subcinereus	1	76
Shrub (SG)	Syzygium australe	2	60
Shrub (SG)	Ficus coronata	1	53
Shrub (SG)	Diospyros australis	1	50
Shrub (SG)	Capparis arborea	1	48
Shrub (SG)	Claoxylon australe	1	43
Shrub (SG)	Psychotria loniceroides	1	37
Shrub (SG)	Croton verreauxii	1	23
Shrub (SG)	Eupomatia laurina	1	23
Shrub (SG)	Wilkiea huegeliana	1	23
Shrub (SG)	Elaeodendron australe	1	20
Shrub (SG)	Sarcomelicope simplicifolia subsp. simplicifolia	1	20
Shrub (SG)	Stenocarpus salignus	1	20
Shrub (SG)	Tasmannia insipida	1	17
Shrub (SG)	Gossia acmenoides	1	14
Shrub (SG)	Myrsine variabilis	1	14
Shrub (SG)	Hymenosporum flavum	1	12
Shrub (SG)	Melicope micrococca	1	12
Shrub (SG)	Synoum glandulosum subsp. glandulosum	1	12
Shrub (SG)	Breynia oblongifolia	1	10
Shrub (SG)	Cryptocarya meissneriana	2	9
Shrub (SG)	Hibiscus heterophyllus subsp. heterophyllus	1	9
Shrub (SG)	Pittosporum undulatum	1	9
Shrub (SG)	Sambucus australasica	1	9

Shrub (SG)	<i>Acronychia oblongifolia</i>	1	7
Shrub (SG)	<i>Alchornea ilicifolia</i>	2	7
Shrub (SG)	<i>Alyxia ruscifolia</i>	1	7
Shrub (SG)	<i>Backhousia myrtifolia</i>	1	7
Shrub (SG)	<i>Guilfoylia monostylis</i>	2	7
Shrub (SG)	<i>Pittosporum revolutum</i>	1	7
Shrub (SG)	<i>Callistemon salignus</i>	2	5
Shrub (SG)	<i>Rhodamnia rubescens</i>	3	5
Shrub (SG)	<i>Tabernaemontana pandacaqui</i>	1	5
Shrub (SG)	<i>Alectryon subdentatus</i> f. <i>subdentatus</i>	1	4
Shrub (SG)	<i>Bursaria spinosa</i>	2	4
Shrub (SG)	<i>Cryptocarya williwilliana</i>	1	4
Shrub (SG)	<i>Denhamia celastroides</i>	1	4
Shrub (SG)	<i>Homalanthus populifolius</i>	1	4
Shrub (SG)	<i>Melaleuca styphelioides</i>	4	4
Shrub (SG)	<i>Rubus moluccanus</i>	2	4
Shrub (SG)	<i>Solanum stelligerum</i>	2	4
Shrub (SG)	<i>Acronychia pubescens</i>	1	2
Shrub (SG)	<i>Actephila lindleyi</i>	1	2
Shrub (SG)	<i>Atractocarpus benthamianus</i>	1	2
Shrub (SG)	<i>Backhousia leptopetala</i>	1	2
Shrub (SG)	<i>Callicoma serratifolia</i>	2	2
Shrub (SG)	<i>Commersonia fraseri</i>	1	2
Shrub (SG)	<i>Gonocarpus oreophilus</i>	2	2
Shrub (SG)	<i>Monococcus echinophorus</i>	2	2
Shrub (SG)	<i>Myrsine howittiana</i>	1	2
Shrub (SG)	<i>Ozothamnus rufescens</i>	2	2
Shrub (SG)	<i>Phyllanthus gunnii</i>	1	2
Shrub (SG)	<i>Rubus rosifolius</i>	1	2
Shrub (SG)	<i>Sambucus gaudichaudiana</i>	1	2
Shrub (SG)	<i>Solanum aviculare</i>	1	2
Shrub (SG)	<i>Solanum brownii</i>	2	2
Shrub (SG)	<i>Solanum inaequilaterum</i>	1	2
Shrub (SG)	<i>Syzygium oleosum</i>	1	2
Shrub (SG)	<i>Trema tomentosa</i> var. <i>aspera</i>	1	2
Shrub (SG)	<i>Zieria smithii</i>	1	2
Tree (TG)	<i>Dendrocnide excelsa</i>	3	94
Tree (TG)	<i>Streblus brunonianus</i>	2	86
Tree (TG)	<i>Diploglottis australis</i>	1	79
Tree (TG)	<i>Baloghia inophylla</i>	3	71
Tree (TG)	<i>Dysoxylum fraserianum</i>	2	71
Tree (TG)	<i>Planchonella australis</i>	2	61
Tree (TG)	<i>Brachychiton acerifolius</i>	2	58

Tree (TG)	Mischocarpus australis	1	50
Tree (TG)	Neolitsea dealbata	1	50
Tree (TG)	Elattostachys nervosa	2	48
Tree (TG)	Daphnandra micrantha	2	46
Tree (TG)	Guioa semiglauca	1	46
Tree (TG)	Acmena smithii	1	43
Tree (TG)	Argyrodendron actinophyllum	3	37
Tree (TG)	Daphnandra apatela	2	35
Tree (TG)	Alangium villosum subsp. polyosmoides	1	33
Tree (TG)	Diospyros pentamera	1	32
Tree (TG)	Cryptocarya obovata	1	28
Tree (TG)	Doryphora sassafras	2	28
Tree (TG)	Mallotus philippensis	2	28
Tree (TG)	Cryptocarya microneura	1	27
Tree (TG)	Pennantia cunninghamii	2	27
Tree (TG)	Citronella moorei	1	25
Tree (TG)	Cryptocarya glaucescens	2	23
Tree (TG)	Elaeocarpus obovatus	2	23
Tree (TG)	Clerodendrum tomentosum	1	22
Tree (TG)	Ehretia acuminata var. acuminata	1	22
Tree (TG)	Polyosma cunninghamii	1	22
Tree (TG)	Neolitsea australiensis	1	20
Tree (TG)	Pararchidendron pruinose var. pruinose	1	20
Tree (TG)	Backhousia sciadophora	3	17
Tree (TG)	Sloanea australis	2	17
Tree (TG)	Toona ciliata	3	17
Tree (TG)	Caldcluvia paniculosa	2	15
Tree (TG)	Drypetes deplanchei	1	15
Tree (TG)	Cryptocarya erythroxylon	3	14
Tree (TG)	Ficus obliqua	3	14
Tree (TG)	Rhysotoechia bifoliolata subsp. bifoliolata	1	14
Tree (TG)	Dysoxylum rufum	1	12
Tree (TG)	Endiandra muelleri	2	12
Tree (TG)	Notelaea longifolia	1	12
Tree (TG)	Sloanea woollsii	2	12
Tree (TG)	Cleistanthus cunninghamii	3	10
Tree (TG)	Dendrocnide photinophylla	1	10
Tree (TG)	Sarcopteryx stipata	2	10
Tree (TG)	Scolopia braunii	1	10
Tree (TG)	Symplocos thwaitesii	1	10
Tree (TG)	Cyclophyllum longipetalum	1	9
Tree (TG)	Emmenosperma alphonseoides	1	9
Tree (TG)	Eucalyptus saligna	3	9

Tree (TG)	<i>Olea paniculata</i>	3	9
Tree (TG)	<i>Polyscias elegans</i>	1	9
Tree (TG)	<i>Alphitonia excelsa</i>	3	7
Tree (TG)	<i>Brachychiton discolor</i>	1	7
Tree (TG)	<i>Cinnamomum oliveri</i>	1	7
Tree (TG)	<i>Endiandra discolor</i>	3	7
Tree (TG)	<i>Euroschinus falcatus</i> var. <i>falcatus</i>	3	7
Tree (TG)	<i>Ficus macrophylla</i> subsp. <i>macrophylla</i>	3	7
Tree (TG)	<i>Gmelina leichhardtii</i>	3	7
Tree (TG)	<i>Gossia bidwillii</i>	1	7
Tree (TG)	<i>Lophostemon confertus</i>	3	5
Tree (TG)	<i>Orites excelsus</i>	1	5
Tree (TG)	<i>Acradenia euodiiformis</i>	4	4
Tree (TG)	<i>Akania bidwillii</i>	2	4
Tree (TG)	<i>Cryptocarya foveolata</i>	1	4
Tree (TG)	<i>Cupaniopsis baileyana</i>	1	4
Tree (TG)	<i>Elaeocarpus kirtonii</i>	1	4
Tree (TG)	<i>Ficus fraseri</i>	3	4
Tree (TG)	<i>Ficus watkinsiana</i>	4	4
Tree (TG)	<i>Litsea reticulata</i>	1	4
Tree (TG)	<i>Polyscias murrayi</i>	3	4
Tree (TG)	<i>Syncarpia glomulifera</i>	3	4
Tree (TG)	<i>Acacia melanoxylon</i>	1	2
Tree (TG)	<i>Ackama paniculosa</i>	1	2
Tree (TG)	<i>Ailanthus triphysa</i>	1	2
Tree (TG)	<i>Argyrodendron trifoliolatum</i>	1	2
Tree (TG)	<i>Arytera divaricata</i>	1	2
Tree (TG)	<i>Casuarina cunninghamiana</i> subsp. <i>cunninghamiana</i>	3	2
Tree (TG)	<i>Celtis paniculata</i>	1	2
Tree (TG)	<i>Cinnamomum virens</i>	1	2
Tree (TG)	<i>Cryptocarya triplinervis</i>	1	2
Tree (TG)	<i>Daphnandra melasmena</i>	2	2
Tree (TG)	<i>Endiandra crassiflora</i>	1	2
Tree (TG)	<i>Endiandra sieberi</i>	1	2
Tree (TG)	<i>Eucalyptus pilularis</i>	2	2
Tree (TG)	<i>Eucalyptus resinifera</i>	2	2
Tree (TG)	<i>Jagera pseudorhus</i> var. <i>pseudorhus</i>	1	2
Tree (TG)	<i>Melia azedarach</i>	3	2
Tree (TG)	<i>Mischocarpus pyramidalis</i>	2	2
Tree (TG)	<i>Podocarpus elatus</i>	4	2
Tree (TG)	<i>Schizomeria ovata</i>	1	2
Tree (TG)	<i>Tristania collina</i>	2	2
Tree (TG)	<i>Trochocarpa laurina</i>	2	2

Tree (TG)	Vesselowskya rubifolia	1	2
Tree (TG)	Waterhousea floribunda	3	2

Appendix 2b:

Plant Community Type ID (PCT ID): 3169

BioNet Vegetation Classification - Community Profile Report

Plant Community Type ID (PCT ID): 3169

PCT Name: Northern Hinterland Tallowwood-Brush Box Wet Forest

Classification Confidence Level: 2-High

Total Number of Replicates: 115

Number of Primary Replicates: 101

Number of Secondary Replicates: 14

Vegetation Description: Very tall to extremely tall sclerophyll open forest with a sparse to dense sub-canopy or mid-stratum of small trees and vines, which occurs extensively on sheltered slopes in the coastal and lower escarpment ranges north from Karuah on the mid north coast. The canopy very frequently includes *Eucalyptus microcorys* and *Lophostemon confertus* with the highest foliage cover, commonly *Eucalyptus saligna* and *Eucalyptus acmenoides* (sometimes locally with high cover), and occasionally *Syncarpia glomulifera*. A range of other eucalypt species may also rarely occur. The sub-canopy or mid-stratum varies subject to fire history and other disturbance, and includes trees, shrubs and vines, any of which is occasionally locally abundant. Species very frequently include trees *Synoum glandulosum* and *Rhodamnia rubescens*, shrubs *Breynia oblongifolia* and *Psychotria loniceroides*, vines *Smilax australis*, *Cissus antarctica* and *Cissus hypoglauca*, commonly with trees *Cryptocarya rigida*, *Allocasuarina torulosa* and *Trochocarpa laurina*. The foliage cover of trees, shrubs and vines is high in areas which are infrequently burnt and sparse in more frequently burnt areas. The ground layer is a sparse to dense mix of ferns, forbs, graminoids and grasses, almost always including the fern *Doodia aspera* which is sometimes locally abundant, very frequently a low cover of the forb *Dianella caerulea*, and commonly the fern *Blechnum cartilagineum* and forb *Pseuderanthemum variabile*. This PCT occurs mainly in moderately warm, wet areas receiving 1090-1630 mm mean annual rainfall, at mid-elevations of 210-740 metres asl but local examples are found occasionally outside these ranges. It occurs in a mosaic with a wide range of other wet sclerophyll PCTs, depending on position of slope, exposure and elevation. For example, it may grade into PCT 3166 on more sheltered slopes, into PCT 3167 on slightly more exposed slopes at lower elevations and into PCT 3170 on more exposed slopes and ridges.

Vegetation Formation: Wet Sclerophyll Forests (Shrubby sub-formation);

Vegetation Class: North Coast Wet Sclerophyll Forests;

IBRA Bioregion(s): New England Tablelands; NSW North Coast; South Eastern Queensland;

IBRA Sub-region(s): Northeast Forest Lands; Chaelundi; Coffs Coast and Escarpment; Comboyne Plateau; Dalmorton; Karuah Manning; Macleay Hastings; Mummel Escarpment; Rocky River Gorge; Upper Manning; Washpool; Woodenbong;

LGA: ARMIDALE REGIONAL; BELLINGEN; CLARENCE VALLEY; COFFS HARBOUR; DUNGOG; GLEN INNES SEVERN; KEMPSEY; KYOGLE; MID-COAST; NAMBUCCA VALLEY; PORT MACQUARIE-HASTINGS; TENTERFIELD;

Elevation (m) (Min, Median, Max): 60.9 483.7 930.9

Annual Rainfall (mm) (Min, Median, Max): 917 1317 1826

Annual Mean Temperature (deg C) (Min, Median, Max): 12.35 15.30 17.42

Median Native Species Richness per plot: 56

TEC Assessed: No associated TEC

TEC List:

TEC Comments:

PCT Percent Cleared: 7.98

PCT Definition Status: Approved

Species By Growth Form Group

Growth Form Group	Species	Median cover score	Frequency
Fern (EG)	<i>Doodia aspera</i>	2	94
Fern (EG)	<i>Blechnum cartilagineum</i>	2	60
Fern (EG)	<i>Adiantum formosum</i>	2	42
Fern (EG)	<i>Pteridium esculentum</i>	1	37
Fern (EG)	<i>Lastreopsis decomposita</i>	2	26
Fern (EG)	<i>Platynerium bifurcatum</i>	1	25
Fern (EG)	<i>Pteris tremula</i>	1	25
Fern (EG)	<i>Adiantum hispidulum</i>	1	23
Fern (EG)	<i>Pellaea paradoxa</i>	1	16
Fern (EG)	<i>Adiantum aethiopicum</i>	2	14
Fern (EG)	<i>Asplenium australasicum</i>	1	13
Fern (EG)	<i>Pyrrosia rupestris</i>	1	13
Fern (EG)	<i>Lastreopsis microsora</i> subsp. <i>microsora</i>	2	12
Fern (EG)	<i>Davallia solida</i> var. <i>pyxidata</i>	1	10

Fern (EG)	<i>Pyrrosia confluens</i> var. <i>confluens</i>	1	9
Fern (EG)	<i>Pellaea falcata</i>	2	8
Fern (EG)	<i>Adiantum silvaticum</i>	1	6
Fern (EG)	<i>Hypolepis glandulifera</i>	3	6
Fern (EG)	<i>Dennstaedtia davallioides</i>	1	4
Fern (EG)	<i>Platycerium superbum</i>	2	3
Fern (EG)	<i>Pteris umbrosa</i>	1	3
Fern (EG)	<i>Cyclosorus dentatus</i>	1	2
Fern (EG)	<i>Dictymia brownii</i>	1	2
Fern (EG)	<i>Hypolepis muelleri</i>	1	2
Fern (EG)	<i>Arachniodes aristata</i>	2	1
Fern (EG)	<i>Arthropteris tenella</i>	1	1
Fern (EG)	<i>Diplazium australe</i>	1	1
Fern (EG)	<i>Grammitis billardi</i>	1	1
Fern (EG)	<i>Histiopteris incisa</i>	2	1
Fern (EG)	<i>Lastreopsis acuminata</i>	1	1
Fern (EG)	<i>Microsorium scandens</i>	1	1
Fern (EG)	<i>Polystichum formosum</i>	1	1
Fern (EG)	<i>Polystichum proliferum</i>	1	1
Forb (FG)	<i>Dianella caerulea</i>	1	87
Forb (FG)	<i>Pseuderanthemum variabile</i>	2	65
Forb (FG)	<i>Gymnostachys anceps</i>	1	59
Forb (FG)	<i>Viola hederacea</i>	1	55
Forb (FG)	<i>Plectranthus parviflorus</i>	1	42
Forb (FG)	<i>Tripladenia cunninghamii</i>	1	34
Forb (FG)	<i>Oxalis chnoodes</i>	1	32
Forb (FG)	<i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i>	1	31
Forb (FG)	<i>Alpinia caerulea</i>	2	30
Forb (FG)	<i>Lobelia purpurascens</i>	1	25
Forb (FG)	<i>Lobelia trigonocaulis</i>	2	19
Forb (FG)	<i>Senecio amygdalifolius</i>	2	17
Forb (FG)	<i>Geranium solanderi</i>	1	15
Forb (FG)	<i>Desmodium gunnii</i>	2	14
Forb (FG)	<i>Geranium homeanum</i>	1	14
Forb (FG)	<i>Commelina cyanea</i>	1	12
Forb (FG)	<i>Goodenia fordiana</i>	1	12
Forb (FG)	<i>Veronica plebeia</i>	1	12
Forb (FG)	<i>Hydrocotyle acutiloba</i>	1	11
Forb (FG)	<i>Hydrocotyle sibthorpioides</i>	1	10
Forb (FG)	<i>Aneilema acuminatum</i>	1	9
Forb (FG)	<i>Hackelia latifolia</i>	1	9
Forb (FG)	<i>Desmodium rhytidophyllum</i>	1	8
Forb (FG)	<i>Dichondra repens</i>	2	8

Forb (FG)	Geranium potentilloides	1	8
Forb (FG)	Vernonia cinerea	1	8
Forb (FG)	Galium leiocarpum	1	7
Forb (FG)	Solanum prinophyllum	1	7
Forb (FG)	Stellaria flaccida	1	7
Forb (FG)	Swainsona galegifolia	2	7
Forb (FG)	Alocasia brisbanensis	1	6
Forb (FG)	Galium binifolium	1	6
Forb (FG)	Hydrocotyle geraniifolia	1	6
Forb (FG)	Urtica incisa	2	5
Forb (FG)	Senecio bipinnatisectus	1	4
Forb (FG)	Ajuga australis	1	3
Forb (FG)	Alpinia arundelliana	1	3
Forb (FG)	Hydrocotyle pedicellosa	2	3
Forb (FG)	Phyllanthus similis	1	3
Forb (FG)	Plantago debilis	1	3
Forb (FG)	Poranthera microphylla	1	3
Forb (FG)	Senecio vagus	1	3
Forb (FG)	Solanum pungetium	1	3
Forb (FG)	Youngia japonica	1	3
Forb (FG)	Acomis acoma	2	2
Forb (FG)	Einadia hastata	1	2
Forb (FG)	Elatostema reticulatum	2	2
Forb (FG)	Gonocarpus humilis	1	2
Forb (FG)	Hydrocotyle tripartita	2	2
Forb (FG)	Lagenophora stipitata	2	2
Forb (FG)	Oxytes brachypoda	2	2
Forb (FG)	Plectranthus graveolens	1	2
Forb (FG)	Pollia crispata	1	2
Forb (FG)	Senecio linearifolius	2	2
Forb (FG)	Teucrium corymbosum	1	2
Forb (FG)	Typhonium brownii	1	2
Forb (FG)	Acaena novae-zelandiae	2	1
Forb (FG)	Acianthella amplexicaulis	1	1
Forb (FG)	Acianthus fornicatus	2	1
Forb (FG)	Aneilema biflorum	1	1
Forb (FG)	Arthropodium milleflorum	1	1
Forb (FG)	Brunoniella australis	1	1
Forb (FG)	Caladenia carnea	2	1
Forb (FG)	Centratherum riparium	1	1
Forb (FG)	Chiloglottis reflexa	1	1
Forb (FG)	Craspedia variabilis	1	1
Forb (FG)	Desmodium heterocarpon var. heterocarpon	1	1

Forb (FG)	Desmodium nemorosum	1	1
Forb (FG)	Dianella longifolia	1	1
Forb (FG)	Dianella revoluta	1	1
Forb (FG)	Drymophila moorei	2	1
Forb (FG)	Euchiton japonicus	1	1
Forb (FG)	Galium ciliare	2	1
Forb (FG)	Galium leptogonium	1	1
Forb (FG)	Gonocarpus teucrioides	2	1
Forb (FG)	Goodenia hederacea	2	1
Forb (FG)	Goodenia macbarronii	1	1
Forb (FG)	Hackelia suaveolens	2	1
Forb (FG)	Hydrocotyle laxiflora	2	1
Forb (FG)	Hypericum gramineum	1	1
Forb (FG)	Lysimachia japonica	2	1
Forb (FG)	Neptunia gracilis f. gracilis	1	1
Forb (FG)	Oxalis perennans	1	1
Forb (FG)	Peperomia blanda var. floribunda	2	1
Forb (FG)	Plectranthus suaveolens	1	1
Forb (FG)	Pterostylis nutans	1	1
Forb (FG)	Rumex brownii	1	1
Forb (FG)	Schenkia spicata	1	1
Forb (FG)	Senecio biserratus	1	1
Forb (FG)	Senecio glomeratus	1	1
Forb (FG)	Senecio prenanthoides	1	1
Forb (FG)	Solanum opacum	1	1
Forb (FG)	Swainsona fraseri	2	1
Forb (FG)	Trachymene incisa subsp. incisa	2	1
Forb (FG)	Viola betonicifolia	1	1
Grass & grasslike (GG)	Lomandra longifolia	2	68
Grass & grasslike (GG)	Oplismenus imbecillis	2	60
Grass & grasslike (GG)	Poa sieberiana	1	45
Grass & grasslike (GG)	Imperata cylindrica	2	38
Grass & grasslike (GG)	Cyperus tetraphyllus	1	26
Grass & grasslike (GG)	Entolasia stricta	1	26
Grass & grasslike (GG)	Gahnia melanocarpa	2	26
Grass & grasslike (GG)	Lepidosperma laterale	1	18
Grass & grasslike (GG)	Entolasia marginata	2	17
Grass & grasslike (GG)	Oplismenus aemulus	2	17
Grass & grasslike (GG)	Cyperus disjunctus	1	12
Grass & grasslike (GG)	Microlaena stipoides	1	11
Grass & grasslike (GG)	Lomandra spicata	1	8
Grass & grasslike (GG)	Poa labillardierei var. labillardierei	2	8
Grass & grasslike (GG)	Gahnia aspera	1	7

Grass & grasslike (GG)	Gahnia sieberiana	1	7
Grass & grasslike (GG)	Carex appressa	2	6
Grass & grasslike (GG)	Lomandra filiformis	2	6
Grass & grasslike (GG)	Lomandra multiflora subsp. multiflora	1	5
Grass & grasslike (GG)	Carex longibrachiata	1	3
Grass & grasslike (GG)	Cyperus enervis	2	3
Grass & grasslike (GG)	Cyperus gracilis	1	3
Grass & grasslike (GG)	Carex breviculmis	1	2
Grass & grasslike (GG)	Carex brunnea	1	2
Grass & grasslike (GG)	Cyperus filipes	2	2
Grass & grasslike (GG)	Digitaria parviflora	1	2
Grass & grasslike (GG)	Lomandra confertifolia	2	2
Grass & grasslike (GG)	Panicum pygmaeum	2	2
Grass & grasslike (GG)	Carex declinata	1	1
Grass & grasslike (GG)	Carex incommitata	1	1
Grass & grasslike (GG)	Carex inversa	1	1
Grass & grasslike (GG)	Cyperus flavidus	1	1
Grass & grasslike (GG)	Cyperus laevis	2	1
Grass & grasslike (GG)	Echinopogon ovatus	1	1
Grass & grasslike (GG)	Juncus usitatus	1	1
Grass & grasslike (GG)	Lepidosperma elatius	1	1
Grass & grasslike (GG)	Lomandra bracteata	1	1
Grass & grasslike (GG)	Poa queenslandica	3	1
Grass & grasslike (GG)	Rytidosperma longifolium	1	1
Grass & grasslike (GG)	Sorghum leiocladum	3	1
Grass & grasslike (GG)	Themeda triandra	2	1
Other (OG)	Smilax australis	2	88
Other (OG)	Cissus antarctica	2	84
Other (OG)	Cissus hypoglauca	2	74
Other (OG)	Dioscorea transversa	2	71
Other (OG)	Geitonoplesium cymosum	1	65
Other (OG)	Eustrephus latifolius	1	63
Other (OG)	Hibbertia scandens	1	60
Other (OG)	Calochlaena dubia	3	52
Other (OG)	Glycine clandestina	1	50
Other (OG)	Hibbertia dentata	1	46
Other (OG)	Pandorea pandorana subsp. pandorana	1	45
Other (OG)	Desmodium varians	2	42
Other (OG)	Clematis aristata	1	40
Other (OG)	Cordyline stricta	1	40
Other (OG)	Stephania japonica var. discolor	1	38
Other (OG)	Kennedia rubicunda	1	33
Other (OG)	Cayratia clematidea	1	32

Other (OG)	Tetrastigma nitens	1	31
Other (OG)	Clematis glycinoides	1	29
Other (OG)	Sarcopetalum harveyanum	1	29
Other (OG)	Celastrus subspicata	1	23
Other (OG)	Gynochthodes jasminoides	1	22
Other (OG)	Maclura cochinchinensis	1	19
Other (OG)	Parsonsia straminea	1	18
Other (OG)	Billardiera scandens	1	17
Other (OG)	Cymbidium suave	1	16
Other (OG)	Tylophora paniculata	1	16
Other (OG)	Neosachmandra cunninghamii	1	15
Other (OG)	Cephalalaria cephalobotrys	1	14
Other (OG)	Passiflora herbertiana subsp. herbertiana	1	13
Other (OG)	Ripogonum fawcettianum	1	13
Other (OG)	Rubus moorei	1	13
Other (OG)	Cordyline petiolaris	1	12
Other (OG)	Cyathea australis	2	12
Other (OG)	Livistona australis	2	11
Other (OG)	Smilax glyciphylla	1	11
Other (OG)	Lepidozamia peroffskyana	3	10
Other (OG)	Marsdenia flavescens	1	10
Other (OG)	Derris involuta	1	9
Other (OG)	Embelia australiana	1	8
Other (OG)	Clematicissus opaca	1	7
Other (OG)	Dendrobium aemulum	1	7
Other (OG)	Glycine microphylla	1	7
Other (OG)	Marsdenia lloydii	1	6
Other (OG)	Marsdenia rostrata	2	6
Other (OG)	Plectorrhiza tridentata	1	6
Other (OG)	Xanthorrhoea johnsonii	1	6
Other (OG)	Aphanopetalum resinosum	2	5
Other (OG)	Austrosteenisia blackii var. blackii	2	5
Other (OG)	Hardenbergia violacea	1	5
Other (OG)	Xanthorrhoea malacophylla	1	5
Other (OG)	Archontophoenix cunninghamiana	1	4
Other (OG)	Glycine tomentella	1	4
Other (OG)	Parsonsia induplicata	1	4
Other (OG)	Parsonsia lanceolata	1	4
Other (OG)	Cayratia eury nema	1	3
Other (OG)	Deeringia amaranthoides	1	3
Other (OG)	Macrozamia communis	4	3
Other (OG)	Macrozamia fawcettii	1	3
Other (OG)	Muellerina eucalyptoides	1	3

Other (OG)	Parsonsia velutina	1	3
Other (OG)	Ripogonum album	1	3
Other (OG)	Celastrus australis	1	2
Other (OG)	Dendrobium gracilicaule	1	2
Other (OG)	Macrozamia montana	5	2
Other (OG)	Parsonsia brownii	2	2
Other (OG)	Petermannia cirrosa	1	2
Other (OG)	Trophis scandens subsp. scandens	1	2
Other (OG)	Tylophora woollsii	1	2
Other (OG)	Amyema pendula	2	1
Other (OG)	Cestichis swenssonii	1	1
Other (OG)	Cordyline rubra	1	1
Other (OG)	Cyathea leichhardtiana	1	1
Other (OG)	Cymbidium madidum	1	1
Other (OG)	Dendrobium kingianum	2	1
Other (OG)	Dendrobium pugioniforme	1	1
Other (OG)	Dendrophthoe vitellina	1	1
Other (OG)	Galactia tenuiflora	2	1
Other (OG)	Glycine tabacina	1	1
Other (OG)	Linospadix monostachyos	1	1
Other (OG)	Marsdenia longiloba	1	1
Other (OG)	Melodinus australis	1	1
Other (OG)	Muehlenbeckia gracillima	1	1
Other (OG)	Muellerina celastroides	1	1
Other (OG)	Passiflora cinnabarina	1	1
Other (OG)	Piper hederaceum var. hederaceum	1	1
Other (OG)	Polymeria calycina	1	1
Other (OG)	Ripogonum brevifolium	1	1
Other (OG)	Ripogonum discolor	1	1
Other (OG)	Sarcochilus spathulatus	2	1
Other (OG)	Sicyos australis	1	1
Other (OG)	Tragia novae-hollandiae	2	1
Other (OG)	Tylophora barbata	1	1
Other (OG)	Tylophora grandiflora	1	1
Other (OG)	Xanthorrhoea glauca	1	1
Shrub (SG)	Breynia oblongifolia	1	81
Shrub (SG)	Psychotria loniceroides	2	80
Shrub (SG)	Synoum glandulosum subsp. glandulosum	2	73
Shrub (SG)	Rhodamnia rubescens	2	72
Shrub (SG)	Cryptocarya rigida	2	65
Shrub (SG)	Rubus moluccanus	1	59
Shrub (SG)	Eupomatia laurina	2	58
Shrub (SG)	Myrsine variabilis	1	49

Shrub (SG)	Rubus rosifolius	1	49
Shrub (SG)	Diospyros australis	2	45
Shrub (SG)	Pittosporum multiflorum	1	38
Shrub (SG)	Polyscias sambucifolia	1	35
Shrub (SG)	Solanum hapalum	1	33
Shrub (SG)	Denhamia silvestris	1	29
Shrub (SG)	Indigofera australis	2	29
Shrub (SG)	Acacia irrorata	2	27
Shrub (SG)	Pittosporum revolutum	1	25
Shrub (SG)	Elaeocarpus reticulatus	1	21
Shrub (SG)	Rubus parvifolius	1	21
Shrub (SG)	Tabernaemontana pandacaqui	1	20
Shrub (SG)	Trema tomentosa var. aspera	1	20
Shrub (SG)	Claoxylon australe	1	19
Shrub (SG)	Ozothamnus diosmifolius	1	17
Shrub (SG)	Pittosporum undulatum	1	15
Shrub (SG)	Alectryon subcinereus	1	14
Shrub (SG)	Phyllanthus gunnii	1	14
Shrub (SG)	Solanum stelligerum	1	14
Shrub (SG)	Wilkiea huegeliana	1	13
Shrub (SG)	Croton verreauxii	2	12
Shrub (SG)	Homalanthus populifolius	1	12
Shrub (SG)	Hibiscus heterophyllus subsp. heterophyllus	1	11
Shrub (SG)	Archirhodomyrtus beckleri	1	10
Shrub (SG)	Coronidium elatum	1	10
Shrub (SG)	Myrsine howittiana	1	10
Shrub (SG)	Acronychia oblongifolia	1	9
Shrub (SG)	Astrotricha latifolia	3	9
Shrub (SG)	Hymenosporum flavum	1	9
Shrub (SG)	Zieria smithii	1	9
Shrub (SG)	Ficus coronata	1	8
Shrub (SG)	Persoonia media	1	8
Shrub (SG)	Alyxia ruscifolia	1	6
Shrub (SG)	Commersonia fraseri	1	6
Shrub (SG)	Leucopogon lanceolatus	1	6
Shrub (SG)	Melicope micrococca	1	6
Shrub (SG)	Notelaea venosa	1	6
Shrub (SG)	Denhamia celastroides	1	5
Shrub (SG)	Gonocarpus oreophilus	1	5
Shrub (SG)	Goodia lotifolia	1	5
Shrub (SG)	Pimelea altior	2	5
Shrub (SG)	Syzygium oleosum	1	5
Shrub (SG)	Eupomatia bennettii	1	4

Shrub (SG)	Olearia nernstii	1	4
Shrub (SG)	Syzygium australe	1	4
Shrub (SG)	Callicoma serratifolia	2	3
Shrub (SG)	Cuttsia viburnea	2	3
Shrub (SG)	Dodonaea triquetra	1	3
Shrub (SG)	Duboisia myoporoides	2	3
Shrub (SG)	Elaeodendron australe	1	3
Shrub (SG)	Goodenia ovata	3	3
Shrub (SG)	Logania albiflora	1	3
Shrub (SG)	Melicope hayesii	1	3
Shrub (SG)	Persoonia linearis	1	3
Shrub (SG)	Pilidiostigma glabrum	1	3
Shrub (SG)	Psychotria daphnoides	2	3
Shrub (SG)	Santalum obtusifolium	1	3
Shrub (SG)	Solanum aviculare	1	3
Shrub (SG)	Solanum brownii	1	3
Shrub (SG)	Solanum inaequilaterum	1	3
Shrub (SG)	Abrophyllum ornans	1	2
Shrub (SG)	Abutilon oxycarpum	1	2
Shrub (SG)	Acacia fimbriata	4	2
Shrub (SG)	Acacia floribunda	2	2
Shrub (SG)	Acacia implexa	1	2
Shrub (SG)	Acacia longifolia	1	2
Shrub (SG)	Acalypha nemorum	2	2
Shrub (SG)	Callistemon salignus	2	2
Shrub (SG)	Clerodendrum floribundum var. floribundum	1	2
Shrub (SG)	Endiandra virens	3	2
Shrub (SG)	Exocarpos cupressiformis	1	2
Shrub (SG)	Hibbertia aspera	1	2
Shrub (SG)	Howittia trilocularis	1	2
Shrub (SG)	Ozothamnus rufescens	1	2
Shrub (SG)	Persoonia conjuncta	1	2
Shrub (SG)	Persoonia levis	2	2
Shrub (SG)	Pimelea latifolia	1	2
Shrub (SG)	Pimelea latifolia subsp. hirsuta	1	2
Shrub (SG)	Pimelea ligustrina	1	2
Shrub (SG)	Pimelea pauciflora	1	2
Shrub (SG)	Seringia arborescens	2	2
Shrub (SG)	Solanum campanulatum	1	2
Shrub (SG)	Acacia elongata	1	1
Shrub (SG)	Acacia falciformis	1	1
Shrub (SG)	Acacia tessellata	1	1
Shrub (SG)	Acalypha eremorum	1	1

Shrub (SG)	Alchornea ilicifolia	1	1
Shrub (SG)	Aristotelia australasica	1	1
Shrub (SG)	Astrotricha longifolia	1	1
Shrub (SG)	Atractocarpus benthamianus	1	1
Shrub (SG)	Backhousia leptopetala	3	1
Shrub (SG)	Backhousia myrtifolia	2	1
Shrub (SG)	Bursaria spinosa	1	1
Shrub (SG)	Callicarpa pedunculata	1	1
Shrub (SG)	Cassinia trinerva	1	1
Shrub (SG)	Coprosma quadrifida	2	1
Shrub (SG)	Daviesia wyattiana	1	1
Shrub (SG)	Dillwynia glaberrima	3	1
Shrub (SG)	Hibbertia obtusifolia	2	1
Shrub (SG)	Hibiscus splendens	1	1
Shrub (SG)	Hovea acutifolia	2	1
Shrub (SG)	Leucopogon juniperinus	1	1
Shrub (SG)	Myoporum betcheanum	1	1
Shrub (SG)	Myoporum montanum	1	1
Shrub (SG)	Notelaea sp. A	1	1
Shrub (SG)	Olearia alpicola	1	1
Shrub (SG)	Olearia cydoniifolia	1	1
Shrub (SG)	Olearia phlogopappa	1	1
Shrub (SG)	Ozothamnus obovatus	2	1
Shrub (SG)	Persoonia oleoides	2	1
Shrub (SG)	Persoonia stradbokensis	1	1
Shrub (SG)	Pimelea neo-anglica	1	1
Shrub (SG)	Pimelea strigosa	1	1
Shrub (SG)	Podolobium ilicifolium	1	1
Shrub (SG)	Pomaderris argyrophylla	1	1
Shrub (SG)	Pomaderris ligustrina	1	1
Shrub (SG)	Poranthera corymbosa	1	1
Shrub (SG)	Prostanthera incana	3	1
Shrub (SG)	Prostanthera lasianthos	2	1
Shrub (SG)	Rhodomyrtus psidioides	1	1
Shrub (SG)	Solanum cinereum	2	1
Shrub (SG)	Solanum vescum	1	1
Shrub (SG)	Tapeinosperma pseudojambosa	1	1
Shrub (SG)	Tasmannia insipida	1	1
Shrub (SG)	Wikstroemia indica	1	1
Tree (TG)	Eucalyptus microcorys	3	84
Tree (TG)	Lophostemon confertus	3	82
Tree (TG)	Allocasuarina torulosa	2	65
Tree (TG)	Trochocarpa laurina	2	63

Tree (TG)	<i>Eucalyptus saligna</i>	3	62
Tree (TG)	<i>Eucalyptus acmenoides</i>	3	52
Tree (TG)	<i>Syncarpia glomulifera</i>	3	44
Tree (TG)	<i>Cryptocarya microneura</i>	2	40
Tree (TG)	<i>Acacia maidenii</i>	1	33
Tree (TG)	<i>Clerodendrum tomentosum</i>	1	33
Tree (TG)	<i>Guioa semiglauca</i>	1	31
Tree (TG)	<i>Polyscias elegans</i>	1	28
Tree (TG)	<i>Notelaea longifolia</i>	1	27
Tree (TG)	<i>Acacia melanoxylon</i>	1	26
Tree (TG)	<i>Schizomeria ovata</i>	1	24
Tree (TG)	<i>Neolitsea dealbata</i>	1	18
Tree (TG)	<i>Corymbia intermedia</i>	2	17
Tree (TG)	<i>Denhamia bilocularis</i>	1	17
Tree (TG)	<i>Eucalyptus propinqua</i>	2	17
Tree (TG)	<i>Acmena smithii</i>	1	15
Tree (TG)	<i>Glochidion ferdinandi</i>	1	15
Tree (TG)	<i>Endiandra sieberi</i>	1	14
Tree (TG)	<i>Caldcluvia paniculosa</i>	1	13
Tree (TG)	<i>Alphitonia excelsa</i>	1	12
Tree (TG)	<i>Eucalyptus pilularis</i>	3	12
Tree (TG)	<i>Acacia binervata</i>	2	11
Tree (TG)	<i>Corymbia maculata</i>	3	11
Tree (TG)	<i>Diploglottis australis</i>	1	11
Tree (TG)	<i>Cryptocarya glaucescens</i>	2	10
Tree (TG)	<i>Eucalyptus carnea</i>	3	10
Tree (TG)	<i>Euroschinus falcatus</i> var. <i>falcatus</i>	1	10
Tree (TG)	<i>Mallotus philippensis</i>	1	10
Tree (TG)	<i>Endiandra muelleri</i>	1	9
Tree (TG)	<i>Sarcopteryx stipata</i>	1	9
Tree (TG)	<i>Cryptocarya obovata</i>	1	8
Tree (TG)	<i>Dysoxylum fraserianum</i>	1	8
Tree (TG)	<i>Toona ciliata</i>	1	8
Tree (TG)	<i>Ehretia acuminata</i> var. <i>acuminata</i>	1	7
Tree (TG)	<i>Scolopia braunii</i>	1	7
Tree (TG)	<i>Diospyros pentamera</i>	1	6
Tree (TG)	<i>Elaeocarpus obovatus</i>	2	6
Tree (TG)	<i>Eucalyptus campanulata</i>	3	6
Tree (TG)	<i>Drypetes deplanchei</i>	1	5
Tree (TG)	<i>Eucalyptus laevopinea</i>	2	5
Tree (TG)	<i>Neolitsea australiensis</i>	2	5
Tree (TG)	<i>Daphnandra apatela</i>	2	4
Tree (TG)	<i>Eucalyptus grandis</i>	3	4

Tree (TG)	Hedycarya angustifolia	1	4
Tree (TG)	Tristaniopsis collina	3	4
Tree (TG)	Dysoxylum rufum	1	3
Tree (TG)	Eucalyptus siderophloia	2	3
Tree (TG)	Ficus rubiginosa	1	3
Tree (TG)	Sloanea woollsii	1	3
Tree (TG)	Alangium villosum subsp. polyosmoides	1	2
Tree (TG)	Angophora floribunda	3	2
Tree (TG)	Brachychiton populneus	1	2
Tree (TG)	Cinnamomum virens	1	2
Tree (TG)	Cupaniopsis anacardioides	1	2
Tree (TG)	Cyclophyllum longipetalum	2	2
Tree (TG)	Daphnandra micrantha	1	2
Tree (TG)	Dendrocnide excelsa	1	2
Tree (TG)	Eucalyptus ancophila	3	2
Tree (TG)	Eucalyptus biturbinata	2	2
Tree (TG)	Eucalyptus resinifera	1	2
Tree (TG)	Gmelina leichhardtii	1	2
Tree (TG)	Litsea reticulata	3	2
Tree (TG)	Melia azedarach	1	2
Tree (TG)	Niemeyera whitei	2	2
Tree (TG)	Pennantia cunninghamii	1	2
Tree (TG)	Polyscias murrayi	2	2
Tree (TG)	Quintinia sieberi	2	2
Tree (TG)	Sloanea australis	1	2
Tree (TG)	Acacia elata	1	1
Tree (TG)	Acacia orites	1	1
Tree (TG)	Allocasuarina littoralis	1	1
Tree (TG)	Angophora costata	2	1
Tree (TG)	Arytera divaricata	2	1
Tree (TG)	Baloghia inophylla	1	1
Tree (TG)	Brachychiton acerifolius	1	1
Tree (TG)	Bridelia exaltata	1	1
Tree (TG)	Callitris macleayana	2	1
Tree (TG)	Cinnamomum oliveri	2	1
Tree (TG)	Corymbia gummifera	3	1
Tree (TG)	Daphnandra melasmena	1	1
Tree (TG)	Doryphora sassafras	3	1
Tree (TG)	Eucalyptus cameronii	2	1
Tree (TG)	Eucalyptus canaliculata	3	1
Tree (TG)	Eucalyptus eugenioides	2	1
Tree (TG)	Eucalyptus fusiformis	1	1
Tree (TG)	Eucalyptus largeana	3	1

Tree (TG)	Eucalyptus quadrangulata	2	1
Tree (TG)	Eucalyptus radiata	2	1
Tree (TG)	Eucalyptus umbra	4	1
Tree (TG)	Ficus watkinsiana	1	1
Tree (TG)	Flindersia schottiana	2	1
Tree (TG)	Geijera salicifolia	1	1
Tree (TG)	Hodgkinsonia ovatiflora	1	1
Tree (TG)	Ixora beckleri	1	1
Tree (TG)	Jagera pseudorhus var. pseudorhus	1	1
Tree (TG)	Olea paniculata	1	1
Tree (TG)	Planchonella australis	1	1
Tree (TG)	Polyosma cunninghamii	1	1
Tree (TG)	Rhysotoechia bifoliolata subsp. bifoliolata	1	1
Tree (TG)	Streblus brunonianus	2	1

Appendix 2c:

Plant Community Type ID (PCT ID): 3240

BioNet Vegetation Classification - Community Profile Report

Plant Community Type ID (PCT ID): 3240

PCT Name: Lower North Escarpment Red Gum Grassy Forest

Classification Confidence Level: 4-Low

Total Number of Replicates: 53

Number of Primary Replicates: 45

Number of Secondary Replicates: 8

Vegetation Description: A tall to very tall sclerophyll open forest with a mid-stratum of Allocasuarina and soft-leaved shrubs and a ground cover of grasses and graminoids on the escarpment of the lower north coast, primarily on the steep southern fall of Mount Royal and in the Manning River hinterland. The canopy very frequently includes stringybarks (commonly Eucalyptus eugenioides), apples (Angophora floribunda, Angophora subvelutina) and red gums (Eucalyptus tereticornis, Eucalyptus blakelyi, Eucalyptus amplifolia). Grey gums (Eucalyptus biturbinata or Eucalyptus canaliculata) are also occasionally present in localised areas. A small tree layer comprising she-oaks (Allocasuarina torulosa or Allocasuarina littoralis) is almost always present. The shrub layer is very sparse and very frequently includes scattered Breynia oblongifolia, Sigesbeckia orientalis subsp. orientalis and the scrambler Rubus parvifolius. The mid-dense ground layer typically includes graminoids, soft-leaved forbs and twiners. Lobelia purpurascens is almost always present with Imperata cylindrica, Desmodium varians, Dichondra repens, Cymbopogon refractus, Lomandra longifolia, Dianella caerulea and Hardenbergia violacea all very frequent. This PCT typically occurs warm, moist climate on mid to upper slopes up to an elevation of 790 metres asl on metasedimentary substrates. It overlaps floristically with PCT 3251 which differs in that mahoganies are very frequent, ironbarks are common and it occurs on coastal hills to the east of this PCT. It grades into wetter eucalypt open forests on more sheltered sites on the escarpment.

Vegetation Formation: Wet Sclerophyll Forests (Grassy sub-formation);

Vegetation Class: Northern Hinterland Wet Sclerophyll Forests;

IBRA Bioregion(s): New England Tablelands; NSW North Coast;

IBRA Sub-region(s): Walcha Plateau; Comboyne Plateau; Macleay Gorges; Mummel Escarpment; Tomalla; Upper Hunter;

LGA: ARMIDALE REGIONAL; DUNGOG; MID-COAST; SINGLETON; UPPER HUNTER; WALCHA;

Elevation (m) (Min, Median, Max): 230.0 557.7 920.8

Annual Rainfall (mm) (Min, Median, Max): 840 1017 1344

Annual Mean Temperature (deg C) (Min, Median, Max): 13.40 15.26 17.04

Median Native Species Richness per plot: 47

TEC Assessed: No associated TEC

TEC List:

TEC Comments:

PCT Percent Cleared: 18.17

PCT Definition Status: Approved

Species By Growth Form Group

Growth Form Group	Species	Median cover score	Frequency
Fern (EG)	Cheilanthes sieberi subsp. sieberi	1	49
Fern (EG)	Pellaea falcata	1	43
Fern (EG)	Pteridium esculentum	1	20
Fern (EG)	Cheilanthes distans	1	18
Fern (EG)	Adiantum aethiopicum	2	14
Fern (EG)	Pellaea paradoxa	1	14
Fern (EG)	Doodia aspera	1	12
Fern (EG)	Adiantum hispidulum	2	5
Fern (EG)	Asplenium flabellifolium	1	5
Fern (EG)	Botrychium australe	1	5
Fern (EG)	Cheilanthes austrotenuifolia	2	5
Fern (EG)	Pteris tremula	1	3
Fern (EG)	Pyrrosia confluens var. confluens	1	3
Fern (EG)	Pyrrosia rupestris	1	3
Forb (FG)	Lobelia purpurascens	2	92
Forb (FG)	Dichondra repens	2	83
Forb (FG)	Dianella caerulea	1	78
Forb (FG)	Sigesbeckia orientalis subsp. orientalis	2	78

Forb (FG)	Oxytes brachypoda	2	65
Forb (FG)	Vernonia cinerea	2	65
Forb (FG)	Plectranthus parviflorus	1	63
Forb (FG)	Desmodium rhytidophyllum	2	52
Forb (FG)	Plantago debilis	1	47
Forb (FG)	Solanum prinophyllum	1	40
Forb (FG)	Desmodium gunnii	2	34
Forb (FG)	Dianella revoluta	1	34
Forb (FG)	Lagenophora stipitata	2	29
Forb (FG)	Daucus glochidiatus	2	25
Forb (FG)	Euchiton sphaericus	1	25
Forb (FG)	Geranium solanderi	2	25
Forb (FG)	Hypericum gramineum	1	25
Forb (FG)	Veronica plebeia	1	25
Forb (FG)	Viola betonicifolia	1	23
Forb (FG)	Opercularia aspera	1	20
Forb (FG)	Ajuga australis	1	18
Forb (FG)	Galium leiocarpum	2	18
Forb (FG)	Opercularia diphylla	1	18
Forb (FG)	Oxalis chnoodes	1	18
Forb (FG)	Oxalis perennans	2	18
Forb (FG)	Wahlenbergia stricta	1	18
Forb (FG)	Arthropodium milleflorum	1	16
Forb (FG)	Hydrocotyle laxiflora	2	16
Forb (FG)	Poranthera microphylla	1	16
Forb (FG)	Brachyscome microcarpa	1	14
Forb (FG)	Brunoniella australis	2	14
Forb (FG)	Commelina cyanea	1	14
Forb (FG)	Crassula sieberiana	1	14
Forb (FG)	Galium gaudichaudii	1	14
Forb (FG)	Geranium potentilloides	2	14
Forb (FG)	Hydrocotyle sibthorpioides	1	14
Forb (FG)	Lagenophora gracilis	1	14
Forb (FG)	Ranunculus lappaceus	1	14
Forb (FG)	Rostellularia adscendens	1	14
Forb (FG)	Senecio prenanthoides	1	14
Forb (FG)	Arthropodium minus	2	12
Forb (FG)	Dianella longifolia	1	12
Forb (FG)	Einadia hastata	1	12
Forb (FG)	Geranium homeanum	2	12
Forb (FG)	Gonocarpus tetragynus	1	12
Forb (FG)	Urtica incisa	1	12
Forb (FG)	Wahlenbergia communis	2	12

Forb (FG)	Wahlenbergia gracilis	1	12
Forb (FG)	Cynoglossum australe	2	9
Forb (FG)	Euchiton involucrat	2	9
Forb (FG)	Euchiton japonicus	1	9
Forb (FG)	Galium ciliare	2	9
Forb (FG)	Hydrocotyle acutiloba	1	9
Forb (FG)	Mentha diemenica	1	9
Forb (FG)	Picris angustifolia	2	9
Forb (FG)	Senecio hispidulus	1	9
Forb (FG)	Stackhousia viminea	1	9
Forb (FG)	Viola hederacea	1	9
Forb (FG)	Arthropodium sp. South-east Highlands	2	7
Forb (FG)	Asperula conferta	2	7
Forb (FG)	Galium leptogonium	1	7
Forb (FG)	Gonocarpus teucroides	1	7
Forb (FG)	Hackelia latifolia	1	7
Forb (FG)	Mentha satureioides	1	7
Forb (FG)	Opercularia hispida	2	7
Forb (FG)	Oxalis exilis	2	7
Forb (FG)	Pseuderanthemum variabile	1	7
Forb (FG)	Rumex brownii	1	7
Forb (FG)	Scaevola albida	1	7
Forb (FG)	Solanum opacum	1	7
Forb (FG)	Wahlenbergia planiflora	1	7
Forb (FG)	Caladenia carnea	2	5
Forb (FG)	Centella asiatica	1	5
Forb (FG)	Desmodium brachypodum	1	5
Forb (FG)	Dichondra sp. Inglewood	2	5
Forb (FG)	Gonocarpus humilis	1	5
Forb (FG)	Hybanthus stellarioides	2	5
Forb (FG)	Hypericum japonicum	1	5
Forb (FG)	Lespedeza juncea subsp. sericea	2	5
Forb (FG)	Opercularia varia	1	5
Forb (FG)	Plectranthus graveolens	2	5
Forb (FG)	Podolepis neglecta	1	5
Forb (FG)	Senecio diaschides	2	5
Forb (FG)	Senecio pinnatifolius	2	5
Forb (FG)	Senecio quadridentatus	1	5
Forb (FG)	Stellaria flaccida	2	5
Forb (FG)	Veronica calycina	1	5
Forb (FG)	Vittadinia sulcata	1	5
Forb (FG)	Xerochrysum bracteatum	1	5
Forb (FG)	Acaena echinata	2	3

Forb (FG)	Acaena novae-zelandiae	1	3
Forb (FG)	Acaena ovina	2	3
Forb (FG)	Acianthus exsertus	2	3
Forb (FG)	Acianthus fornicatus	1	3
Forb (FG)	Aneilema acuminatum	1	3
Forb (FG)	Arrhenechthites mixta	1	3
Forb (FG)	Boerhavia dominii	2	3
Forb (FG)	Boronia polygalifolia	1	3
Forb (FG)	Brachyscome angustifolia	2	3
Forb (FG)	Brachyscome multifida	1	3
Forb (FG)	Brachyscome nova-anglica	1	3
Forb (FG)	Brachyscome spathulata	2	3
Forb (FG)	Calandrinia pickeringii	1	3
Forb (FG)	Calotis lappulacea	1	3
Forb (FG)	Centratherum riparium	1	3
Forb (FG)	Chrysocephalum apiculatum	2	3
Forb (FG)	Craspedia variabilis	1	3
Forb (FG)	Crotalaria montana var. angustifolia	1	3
Forb (FG)	Dianella tasmanica	2	3
Forb (FG)	Dysphania carinata	1	3
Forb (FG)	Epilobium billardierianum	1	3
Forb (FG)	Erodium crinitum	1	3
Forb (FG)	Galium binifolium	1	3
Forb (FG)	Glossocardia bidens	1	3
Forb (FG)	Hackelia suaveolens	1	3
Forb (FG)	Haloragis heterophylla	1	3
Forb (FG)	Hybanthus vernonii	1	3
Forb (FG)	Hydrocotyle geraniifolia	1	3
Forb (FG)	Hydrocotyle pedicellosa	2	3
Forb (FG)	Hydrocotyle tripartita	1	3
Forb (FG)	Lobelia pedunculata	2	3
Forb (FG)	Phyllanthus virgatus	1	3
Forb (FG)	Plantago varia	1	3
Forb (FG)	Polygala japonica	1	3
Forb (FG)	Pomax umbellata	1	3
Forb (FG)	Pterostylis longifolia	1	3
Forb (FG)	Pterostylis nutans	1	3
Forb (FG)	Pterostylis parviflora	2	3
Forb (FG)	Pterostylis pedunculata	1	3
Forb (FG)	Scutellaria humilis	1	3
Forb (FG)	Senecio bipinnatisectus	1	3
Forb (FG)	Senecio biserratus	1	3
Forb (FG)	Senecio minimus	2	3

Forb (FG)	Senecio tenuiflorus	1	3
Forb (FG)	Solanum pungetium	1	3
Forb (FG)	Stellaria pungens	1	3
Forb (FG)	Stylidium graminifolium	1	3
Forb (FG)	Swainsona galegifolia	1	3
Forb (FG)	Vittadinia cuneata	1	3
Forb (FG)	Vittadinia hispidula	2	3
Forb (FG)	Vittadinia tenuissima	1	3
Forb (FG)	Wahlenbergia littoricola	1	3
Forb (FG)	Wahlenbergia luteola	1	3
Forb (FG)	Zornia dyctiocarpa var. dyctiocarpa	1	3
Grass & grasslike (GG)	Imperata cylindrica	3	80
Grass & grasslike (GG)	Cymbopogon refractus	2	78
Grass & grasslike (GG)	Lomandra longifolia	2	76
Grass & grasslike (GG)	Microlaena stipoides	2	65
Grass & grasslike (GG)	Oplismenus aemulus	2	65
Grass & grasslike (GG)	Themeda triandra	3	58
Grass & grasslike (GG)	Lomandra filiformis	1	54
Grass & grasslike (GG)	Poa labillardierei var. labillardierei	3	49
Grass & grasslike (GG)	Lepidosperma laterale	1	38
Grass & grasslike (GG)	Poa sieberiana	2	34
Grass & grasslike (GG)	Sorghum leiocladum	2	32
Grass & grasslike (GG)	Digitaria parviflora	2	29
Grass & grasslike (GG)	Echinopogon ovatus	2	29
Grass & grasslike (GG)	Carex breviculmis	1	27
Grass & grasslike (GG)	Digitaria ramularis	2	27
Grass & grasslike (GG)	Cyperus laevis	1	25
Grass & grasslike (GG)	Oplismenus imbecillis	2	25
Grass & grasslike (GG)	Panicum effusum	2	25
Grass & grasslike (GG)	Eragrostis leptostachya	2	23
Grass & grasslike (GG)	Scleria mackaviensis	1	20
Grass & grasslike (GG)	Lomandra multiflora subsp. multiflora	1	18
Grass & grasslike (GG)	Aristida ramosa	2	16
Grass & grasslike (GG)	Echinopogon caespitosus	1	16
Grass & grasslike (GG)	Rytidosperma longifolium	2	16
Grass & grasslike (GG)	Austrostipa rudis	2	14
Grass & grasslike (GG)	Panicum simile	1	14
Grass & grasslike (GG)	Carex inversa	2	12
Grass & grasslike (GG)	Cyperus gracilis	2	12
Grass & grasslike (GG)	Dichelachne micrantha	1	12
Grass & grasslike (GG)	Entolasia marginata	1	12
Grass & grasslike (GG)	Lomandra confertifolia	2	12
Grass & grasslike (GG)	Rytidosperma racemosum	2	12

Grass & grasslike (GG)	Sporobolus creber	2	12
Grass & grasslike (GG)	Elymus scaber	1	9
Grass & grasslike (GG)	Entolasia stricta	2	9
Grass & grasslike (GG)	Austrostipa verticillata	2	7
Grass & grasslike (GG)	Cyperus imbecillis	2	7
Grass & grasslike (GG)	Dichelachne rara	2	7
Grass & grasslike (GG)	Juncus usitatus	1	7
Grass & grasslike (GG)	Sporobolus elongatus	1	7
Grass & grasslike (GG)	Austrostipa ramosissima	1	5
Grass & grasslike (GG)	Carex incomitata	1	5
Grass & grasslike (GG)	Carex longebrachiata	2	5
Grass & grasslike (GG)	Cenchrus caliculatus	1	5
Grass & grasslike (GG)	Chloris truncata	2	5
Grass & grasslike (GG)	Dichanthium sericeum	1	5
Grass & grasslike (GG)	Gahnia aspera	2	5
Grass & grasslike (GG)	Anisopogon avenaceus	2	3
Grass & grasslike (GG)	Aristida gracilipes	1	3
Grass & grasslike (GG)	Aristida vagans	1	3
Grass & grasslike (GG)	Bothriochloa macra	2	3
Grass & grasslike (GG)	Capillipedium spicigerum	1	3
Grass & grasslike (GG)	Carex appressa	2	3
Grass & grasslike (GG)	Cyperus tetraphyllus	1	3
Grass & grasslike (GG)	Dichelachne parva	1	3
Grass & grasslike (GG)	Digitaria brownii	1	3
Grass & grasslike (GG)	Digitaria diffusa	2	3
Grass & grasslike (GG)	Gahnia sieberiana	2	3
Grass & grasslike (GG)	Lomandra spicata	1	3
Grass & grasslike (GG)	Poa costiniana	4	3
Grass & grasslike (GG)	Rytidosperma pallidum	1	3
Other (OG)	Desmodium varians	2	78
Other (OG)	Hardenbergia violacea	1	74
Other (OG)	Glycine clandestina	2	63
Other (OG)	Hibbertia scandens	1	63
Other (OG)	Geitonoplesium cymosum	1	52
Other (OG)	Glycine tabacina	2	47
Other (OG)	Clematis aristata	1	36
Other (OG)	Billardiera scandens	1	25
Other (OG)	Pandorea pandorana subsp. pandorana	1	25
Other (OG)	Cayratia clematidea	1	23
Other (OG)	Cissus antarctica	1	23
Other (OG)	Eustrephus latifolius	1	20
Other (OG)	Clematis glycinoides	1	18
Other (OG)	Clematicissus opaca	1	16

Other (OG)	Glycine microphylla	2	14
Other (OG)	Jasminum volubile	1	9
Other (OG)	Cymbidium suave	1	7
Other (OG)	Muellerina celastroides	1	7
Other (OG)	Passiflora herbertiana subsp. herbertiana	1	7
Other (OG)	Tetrastigma nitens	1	7
Other (OG)	Amyema congener subsp. congener	1	5
Other (OG)	Cissus hypoglauca	2	5
Other (OG)	Dendrophthoe vitellina	1	5
Other (OG)	Maclura cochinchinensis	1	5
Other (OG)	Calochlaena dubia	1	3
Other (OG)	Macrozamia communis	1	3
Other (OG)	Marsdenia flavescent	1	3
Other (OG)	Muellerina eucalyptoides	1	3
Other (OG)	Parsonsia purpurascens	1	3
Other (OG)	Parsonsia straminea	1	3
Other (OG)	Parsonsia velutina	1	3
Other (OG)	Passiflora cinnabarina	1	3
Other (OG)	Stephania japonica var. discolor	1	3
Other (OG)	Tylophora paniculata	1	3
Shrub (SG)	Rubus parvifolius	1	72
Shrub (SG)	Breynia oblongifolia	1	69
Shrub (SG)	Denhamia silvestris	1	40
Shrub (SG)	Solanum stelligerum	2	36
Shrub (SG)	Persoonia linearis	1	34
Shrub (SG)	Acacia implexa	1	29
Shrub (SG)	Olearia viscidula	1	25
Shrub (SG)	Indigofera australis	1	23
Shrub (SG)	Solanum brownii	1	23
Shrub (SG)	Exocarpos cupressiformis	1	18
Shrub (SG)	Pittosporum undulatum	1	18
Shrub (SG)	Ozothamnus diosmifolius	1	16
Shrub (SG)	Acacia irrorata	2	14
Shrub (SG)	Pittosporum revolutum	1	12
Shrub (SG)	Hibbertia obtusifolia	1	9
Shrub (SG)	Leucopogon lanceolatus	1	9
Shrub (SG)	Myrsine variabilis	1	9
Shrub (SG)	Persoonia oleoides	1	9
Shrub (SG)	Pittosporum multiflorum	1	9
Shrub (SG)	Cassinia quinquefaria	1	7
Shrub (SG)	Eremophila debilis	1	7
Shrub (SG)	Jacksonia scoparia	1	7
Shrub (SG)	Persoonia media	1	7

Shrub (SG)	<i>Polyscias sambucifolia</i>	1	7
Shrub (SG)	<i>Alectryon subcinereus</i>	1	5
Shrub (SG)	<i>Cassinia aculeata</i>	1	5
Shrub (SG)	<i>Diospyros australis</i>	2	5
Shrub (SG)	<i>Exocarpos strictus</i>	2	5
Shrub (SG)	<i>Myoporum montanum</i>	1	5
Shrub (SG)	<i>Ozothamnus rufescens</i>	1	5
Shrub (SG)	<i>Persoonia conjuncta</i>	1	5
Shrub (SG)	<i>Persoonia levis</i>	2	5
Shrub (SG)	<i>Phyllanthus gunnii</i>	1	5
Shrub (SG)	<i>Pimelea curviflora</i>	3	5
Shrub (SG)	<i>Podolobium ilicifolium</i>	2	5
Shrub (SG)	<i>Psychotria loniceroides</i>	1	5
Shrub (SG)	<i>Solanum amblymerum</i>	1	5
Shrub (SG)	<i>Solanum curvicutpe</i>	2	5
Shrub (SG)	<i>Trema tomentosa</i> var. <i>aspera</i>	1	5
Shrub (SG)	<i>Abutilon oxycarpum</i>	2	3
Shrub (SG)	<i>Acacia floribunda</i>	1	3
Shrub (SG)	<i>Acacia longifolia</i>	2	3
Shrub (SG)	<i>Acacia longissima</i>	1	3
Shrub (SG)	<i>Callistemon salignus</i>	1	3
Shrub (SG)	<i>Calotis dentex</i>	1	3
Shrub (SG)	<i>Capparis arborea</i>	1	3
Shrub (SG)	<i>Cassinia leptoccephala</i>	1	3
Shrub (SG)	<i>Cassinia uncata</i>	1	3
Shrub (SG)	<i>Claoxylon australe</i>	1	3
Shrub (SG)	<i>Clerodendrum floribundum</i> var. <i>floribundum</i>	1	3
Shrub (SG)	<i>Daviesia genistifolia</i>	1	3
Shrub (SG)	<i>Daviesia latifolia</i>	1	3
Shrub (SG)	<i>Dodonaea viscosa</i>	1	3
Shrub (SG)	<i>Goodia lotifolia</i>	1	3
Shrub (SG)	<i>Hakea eriantha</i>	1	3
Shrub (SG)	<i>Hibbertia linearis</i>	3	3
Shrub (SG)	<i>Hibiscus heterophyllus</i> subsp. <i>heterophyllus</i>	1	3
Shrub (SG)	<i>Leucopogon juniperinus</i>	1	3
Shrub (SG)	<i>Melichrus urceolatus</i>	1	3
Shrub (SG)	<i>Myrsine howittiana</i>	1	3
Shrub (SG)	<i>Olearia elliptica</i> subsp. <i>elliptica</i>	1	3
Shrub (SG)	<i>Persoonia lanceolata</i>	1	3
Shrub (SG)	<i>Pimelea ligustrina</i>	1	3
Shrub (SG)	<i>Pimelea linifolia</i>	1	3
Shrub (SG)	<i>Pimelea neo-anglica</i>	1	3
Shrub (SG)	<i>Rhodamnia rubescens</i>	1	3

Shrub (SG)	Rubus rosifolius	1	3
Shrub (SG)	Senna barronfieldii	1	3
Shrub (SG)	Teucrium junceum	1	3
Tree (TG)	Allocasuarina torulosa	3	89
Tree (TG)	Eucalyptus eugenoides	3	65
Tree (TG)	Eucalyptus tereticornis	3	56
Tree (TG)	Angophora floribunda	2	45
Tree (TG)	Acacia maidenii	1	34
Tree (TG)	Angophora subvelutina	2	25
Tree (TG)	Eucalyptus biturbinata	3	25
Tree (TG)	Brachychiton populneus	1	18
Tree (TG)	Clerodendrum tomentosum	1	16
Tree (TG)	Eucalyptus canaliculata	3	16
Tree (TG)	Alphitonia excelsa	1	14
Tree (TG)	Notelaea longifolia	1	14
Tree (TG)	Eucalyptus blakelyi	3	12
Tree (TG)	Acacia blakei	1	9
Tree (TG)	Acacia melanoxylon	2	9
Tree (TG)	Corymbia intermedia	1	7
Tree (TG)	Elaeocarpus obovatus	1	7
Tree (TG)	Eucalyptus acmenoides	3	7
Tree (TG)	Eucalyptus amplifolia	1	7
Tree (TG)	Eucalyptus campanulata	2	7
Tree (TG)	Eucalyptus cameronii	4	5
Tree (TG)	Eucalyptus globoidea	3	5
Tree (TG)	Eucalyptus melliodora	3	5
Tree (TG)	Eucalyptus microcorys	3	5
Tree (TG)	Eucalyptus moluccana	3	5
Tree (TG)	Allocasuarina littoralis	1	3
Tree (TG)	Corymbia maculata	3	3
Tree (TG)	Ehretia acuminata var. acuminata	1	3
Tree (TG)	Eucalyptus andrewsii	6	3
Tree (TG)	Eucalyptus caliginosa	3	3
Tree (TG)	Eucalyptus carnea	1	3
Tree (TG)	Eucalyptus crebra	1	3
Tree (TG)	Eucalyptus dives	3	3
Tree (TG)	Eucalyptus fibrosa	1	3
Tree (TG)	Eucalyptus quadrangulata	3	3
Tree (TG)	Eucalyptus radiata	3	3
Tree (TG)	Eucalyptus saligna	1	3
Tree (TG)	Euroschinus falcatus var. falcatus	1	3
Tree (TG)	Geijera salicifolia	1	3
Tree (TG)	Guioa semiglauca	1	3

Tree (TG)	Lophostemon confertus	1	3
Tree (TG)	Melia azedarach	1	3
Tree (TG)	Olea paniculata	1	3
Tree (TG)	Toona ciliata	1	3

Appendix 2d:

Plant Community Type ID (PCT ID): 3254

BioNet Vegetation Classification - Community Profile Report

Plant Community Type ID (PCT ID): 3254

PCT Name: Northern Hinterland Tallowwood-Forest Oak Grassy Forest

Classification Confidence Level: 1-Very High

Total Number of Replicates: 306

Number of Primary Replicates: 261

Number of Secondary Replicates: 45

Vegetation Description: A very tall to extremely tall, sparse to mid-dense, grassy or occasionally shrub-grass sclerophyll open forest, which is very extensive on the coastal, hinterland and escarpment ranges north from Bulahdelah. Canopy composition is variable, however Eucalyptus microcorys is very frequently present and sometimes dominates with the highest foliage cover. Other canopy species occasionally include Lophostemon confertus, Eucalyptus saligna, Eucalyptus carnea and Eucalyptus acmenoides, rarely with the spotted gums Corymbia maculata (incorporating Corymbia variegata). Allocasuarina torulosa is almost always present, forming a mid-dense to dense sub-canopy, and the mid-stratum very frequently includes scattered individuals of the shrub Breynia oblongifolia. The ground layer is very frequently dominated by a high cover of the grasses Imperata cylindrica and/or Poa sieberiana. Other species with low abundance almost always include Dianella caerulea and very frequently Hibbertia scandens, Lomandra longifolia and one or more species of Desmodium. This PCT occurs mainly in mild, wet locations receiving 1040-1540 mm mean annual rainfall, at mid to high elevations of 250-830 metres asl. It occurs on clay-rich sedimentary or meta-sedimentary substrates, on ridges to lower slopes, and exposed to moderately sheltered sites which are burnt at moderate to high frequency. PCT 3254 occurs in a mosaic with a range of other grassy forest and wet sclerophyll forest PCTs, with patterns determined by soil moisture, insolation and fire history. For example, in drier or more exposed sites in the north of its range it may grade into grassy forest PCT 3251, while throughout its range it may grade into shrubby wet sclerophyll PCT 3205 on more sheltered slopes.

Vegetation Formation: Wet Sclerophyll Forests (Grassy sub-formation);

Vegetation Class: Northern Hinterland Wet Sclerophyll Forests;

IBRA Bioregion(s): New England Tablelands; NSW North Coast; South Eastern Queensland;

IBRA Sub-region(s): Northeast Forest Lands; Stanthorpe Plateau; Carrai Plateau; Cataract; Chaelundi; Coffs Coast and Escarpment; Comboyne Plateau; Dalmorton; Guy Fawkes; Karuah Manning; Macleay Gorges; Macleay Hastings; Mummel Escarpment; Rocky River Gorge; Upper Manning; Washpool; Clarence Sandstones; Scenic Rim; Woodenbong;

LGA: ARMIDALE REGIONAL; BELLINGEN; CLARENCE VALLEY; COFFS HARBOUR; DUNGOG; GLEN INNES SEVERN; KEMPSEY; KYOGLE; MID-COAST; NAMBUCCA VALLEY; PORT MACQUARIE-HASTINGS; SINGLETON; TENTERFIELD; WALCHA;

Elevation (m) (Min, Median, Max): 78.3 563.6 1103.6

Annual Rainfall (mm) (Min, Median, Max): 874 1225 2037

Annual Mean Temperature (deg C) (Min, Median, Max): 11.57 15.06 17.66

Median Native Species Richness per plot: 46

TEC Assessed: No associated TEC

TEC List:

TEC Comments:

PCT Percent Cleared: 4.65

PCT Definition Status: Approved

Species By Growth Form Group

Growth Form Group	Species	Median cover score	Frequency
Fern (EG)	Pteridium esculentum	2	61
Fern (EG)	Doodia aspera	2	59
Fern (EG)	Adiantum aethiopicum	2	27
Fern (EG)	Adiantum hispidulum	1	20
Fern (EG)	Blechnum cartilagineum	2	16
Fern (EG)	Pellaea paradoxa	1	12
Fern (EG)	Platynerium bifurcatum	1	12
Fern (EG)	Pyrrosia rupestris	1	8
Fern (EG)	Adiantum formosum	2	7
Fern (EG)	Pellaea falcata	2	7
Fern (EG)	Pteris tremula	1	7
Fern (EG)	Davallia solida var. pyxidata	1	5
Fern (EG)	Blechnum spinulosum	1	4
Fern (EG)	Pyrrosia confluens var. confluens	2	4
Fern (EG)	Asplenium australasicum	1	3

Fern (EG)	Cheilanthes sieberi subsp. sieberi	1	3
Fern (EG)	Adiantum silvaticum	2	2
Fern (EG)	Botrychium australe	1	2
Fern (EG)	Cheilanthes austrotenuifolia	2	2
Fern (EG)	Cheilanthes distans	1	2
Fern (EG)	Hypolepis glandulifera	3	2
Fern (EG)	Lastreopsis decomposita	1	2
Fern (EG)	Asplenium flabellifolium	1	1
Fern (EG)	Asplenium obtusatum subsp. northlandicum	1	1
Fern (EG)	Asplenium polyodon	2	1
Fern (EG)	Blechnum watsii	2	1
Fern (EG)	Cyclosorus dentatus	1	1
Fern (EG)	Dictymia brownii	1	1
Fern (EG)	Diplazium assimile	1	1
Fern (EG)	Histiopteris incisa	1	1
Fern (EG)	Hypolepis muelleri	1	1
Fern (EG)	Lastreopsis acuminata	3	1
Fern (EG)	Lastreopsis munita	1	1
Fern (EG)	Lindsaea microphylla	1	1
Fern (EG)	Platynerium superbum	1	1
Fern (EG)	Pteris comans	2	1
Forb (FG)	Dianella caerulea	2	92
Forb (FG)	Lobelia purpurascens	2	65
Forb (FG)	Plectranthus parviflorus	2	59
Forb (FG)	Sigesbeckia orientalis subsp. orientalis	1	59
Forb (FG)	Vernonia cinerea	2	56
Forb (FG)	Desmodium rhytidophyllum	2	51
Forb (FG)	Viola betonicifolia	2	50
Forb (FG)	Viola hederacea	2	45
Forb (FG)	Geranium solanderi	2	36
Forb (FG)	Pseuderanthemum variabile	2	36
Forb (FG)	Oxytes brachypoda	2	32
Forb (FG)	Dichondra repens	2	30
Forb (FG)	Gymnostachys anceps	1	24
Forb (FG)	Senecio amygdalifolius	2	23
Forb (FG)	Oxalis chnoodes	2	20
Forb (FG)	Hybanthus stellarioides	2	19
Forb (FG)	Poranthera microphylla	1	19
Forb (FG)	Hydrocotyle sibthorpioides	2	16
Forb (FG)	Plantago debilis	1	15
Forb (FG)	Commelina cyanea	1	14
Forb (FG)	Geranium homeanum	2	14
Forb (FG)	Hydrocotyle acutiloba	2	14

Forb (FG)	Lagenophora stipitata	1	14
Forb (FG)	Brunoniella australis	2	12
Forb (FG)	Hypericum gramineum	1	12
Forb (FG)	Swainsona galegifolia	2	12
Forb (FG)	Veronica plebeia	1	12
Forb (FG)	Desmodium gunnii	2	9
Forb (FG)	Geranium potentilloides	2	9
Forb (FG)	Hydrocotyle geraniifolia	2	9
Forb (FG)	Ranunculus lappaceus	1	9
Forb (FG)	Tripladenia cunninghamii	2	8
Forb (FG)	Ajuga australis	1	7
Forb (FG)	Arthropodium milleflorum	1	7
Forb (FG)	Daucus glochidiatus	1	7
Forb (FG)	Gonocarpus tetragynus	1	7
Forb (FG)	Gonocarpus teucrioides	2	7
Forb (FG)	Opercularia hispida	1	7
Forb (FG)	Solanum prinophyllum	1	7
Forb (FG)	Goodenia rotundifolia	1	6
Forb (FG)	Hydrocotyle laxiflora	2	6
Forb (FG)	Opercularia aspera	1	6
Forb (FG)	Senecio prenanthoides	1	6
Forb (FG)	Alpinia caerulea	2	5
Forb (FG)	Dianella revoluta	1	5
Forb (FG)	Galium leiocarpum	2	5
Forb (FG)	Lagenophora gracilis	2	5
Forb (FG)	Picris angustifolia	1	5
Forb (FG)	Plectranthus graveolens	1	5
Forb (FG)	Senecio diaschides	1	5
Forb (FG)	Senecio linearifolius	2	5
Forb (FG)	Aneilema acuminatum	2	4
Forb (FG)	Euchiton japonicus	2	4
Forb (FG)	Galium binifolium	1	4
Forb (FG)	Gonocarpus humilis	2	4
Forb (FG)	Hackelia latifolia	2	4
Forb (FG)	Pterostylis nutans	1	4
Forb (FG)	Senecio pinnatifolius	2	4
Forb (FG)	Senecio vagus	2	4
Forb (FG)	Wahlenbergia gracilis	1	4
Forb (FG)	Xerochrysum bracteatum	1	4
Forb (FG)	Youngia japonica	1	4
Forb (FG)	Desmodium nemorosum	2	3
Forb (FG)	Euchiton sphaericus	1	3
Forb (FG)	Galium leptogonium	1	3

Forb (FG)	Goodenia fordiana	2	3
Forb (FG)	Goodenia hederacea	2	3
Forb (FG)	Goodenia heterophylla	1	3
Forb (FG)	Hypericum japonicum	2	3
Forb (FG)	Lobelia trigonocaulis	2	3
Forb (FG)	Phyllanthus similis	1	3
Forb (FG)	Plectranthus suaveolens	2	3
Forb (FG)	Pterostylis longifolia	1	3
Forb (FG)	Senecio tenuiflorus	1	3
Forb (FG)	Wahlenbergia stricta	2	3
Forb (FG)	Acianthus fornicatus	2	2
Forb (FG)	Arthropodium minus	1	2
Forb (FG)	Arthropodium sp. South-east Highlands	1	2
Forb (FG)	Brachyscome nova-anglica	1	2
Forb (FG)	Caesia parviflora	2	2
Forb (FG)	Caladenia carnea	1	2
Forb (FG)	Caladenia catenata	1	2
Forb (FG)	Centella asiatica	2	2
Forb (FG)	Chrysocephalum apiculatum	2	2
Forb (FG)	Coronidium scorpioides	2	2
Forb (FG)	Corybas fimbriatus	1	2
Forb (FG)	Crassula sieberiana	1	2
Forb (FG)	Dampiera purpurea	1	2
Forb (FG)	Dianella longifolia	2	2
Forb (FG)	Dichondra sp. Inglewood	2	2
Forb (FG)	Euchiton involucratum	1	2
Forb (FG)	Galium ciliare	1	2
Forb (FG)	Geranium neglectum	2	2
Forb (FG)	Hackelia suaveolens	1	2
Forb (FG)	Helichrysum rutidolepis	2	2
Forb (FG)	Libertia paniculata	1	2
Forb (FG)	Mentha satereioides	1	2
Forb (FG)	Opercularia diphylla	2	2
Forb (FG)	Oxalis exilis	1	2
Forb (FG)	Oxalis perennans	1	2
Forb (FG)	Oxalis radicata	1	2
Forb (FG)	Podolepis jaceoides	1	2
Forb (FG)	Polygala japonica	1	2
Forb (FG)	Scutellaria humilis	1	2
Forb (FG)	Senecio bipinnatisectus	1	2
Forb (FG)	Senecio hispidulus	1	2
Forb (FG)	Solanum opacum	1	2
Forb (FG)	Solenogyne bellioides	2	2

Forb (FG)	<i>Stellaria flaccida</i>	1	2
Forb (FG)	<i>Stylidium graminifolium</i>	2	2
Forb (FG)	<i>Trachymene incisa</i> subsp. <i>incisa</i>	2	2
Forb (FG)	<i>Urtica incisa</i>	2	2
Forb (FG)	<i>Viola banksii</i>	2	2
Forb (FG)	<i>Acaena novae-zelandiae</i>	2	1
Forb (FG)	<i>Acianthus exsertus</i>	2	1
Forb (FG)	<i>Alternanthera denticulata</i>	1	1
Forb (FG)	<i>Arthropodium strictum</i>	2	1
Forb (FG)	<i>Asperula conferta</i>	1	1
Forb (FG)	<i>Boerhavia dominii</i>	1	1
Forb (FG)	<i>Brachyscome angustifolia</i>	1	1
Forb (FG)	<i>Brachyscome microcarpa</i>	2	1
Forb (FG)	<i>Brachyscome procumbens</i>	2	1
Forb (FG)	<i>Brunonia australis</i>	2	1
Forb (FG)	<i>Brunoniella pumilio</i>	1	1
Forb (FG)	<i>Centratherum riparium</i>	1	1
Forb (FG)	<i>Chiloglottis reflexa</i>	1	1
Forb (FG)	<i>Chiloglottis sylvestris</i>	1	1
Forb (FG)	<i>Chiloglottis trapeziformis</i>	2	1
Forb (FG)	<i>Chrysocephalum semipapposum</i>	1	1
Forb (FG)	<i>Corybas aconitiflorus</i>	1	1
Forb (FG)	<i>Corybas pruinosis</i>	2	1
Forb (FG)	<i>Craspedia variabilis</i>	2	1
Forb (FG)	<i>Cryptostylis erecta</i>	1	1
Forb (FG)	<i>Dendrobium speciosum</i>	2	1
Forb (FG)	<i>Desmodium gangeticum</i>	1	1
Forb (FG)	<i>Dianella tasmanica</i>	2	1
Forb (FG)	<i>Dipodium punctatum</i>	2	1
Forb (FG)	<i>Dipodium variegatum</i>	1	1
Forb (FG)	<i>Diuris sulphurea</i>	1	1
Forb (FG)	<i>Drymophila moorei</i>	2	1
Forb (FG)	<i>Einadia hastata</i>	1	1
Forb (FG)	<i>Epilobium billardierianum</i>	1	1
Forb (FG)	<i>Galium gaudichaudii</i>	1	1
Forb (FG)	<i>Glossocardia bidens</i>	2	1
Forb (FG)	<i>Gonocarpus micranthus</i>	1	1
Forb (FG)	<i>Goodenia bellidifolia</i>	1	1
Forb (FG)	<i>Haloragis heterophylla</i>	1	1
Forb (FG)	<i>Hybanthus monopetalus</i>	1	1
Forb (FG)	<i>Hydrocotyle pedicellosa</i>	2	1
Forb (FG)	<i>Hydrocotyle tripartita</i>	2	1
Forb (FG)	<i>Lobelia concolor</i>	1	1

Forb (FG)	Lobelia gibbosa	1	1
Forb (FG)	Lobelia pedunculata	1	1
Forb (FG)	Logania pusilla	1	1
Forb (FG)	Mentha diemenica	1	1
Forb (FG)	Microtis unifolia	1	1
Forb (FG)	Patersonia glabrata	2	1
Forb (FG)	Peperomia blanda var. floribunda	2	1
Forb (FG)	Peperomia tetraphylla	1	1
Forb (FG)	Phyllanthus virgatus	1	1
Forb (FG)	Physalis minima	1	1
Forb (FG)	Plantago gaudichaudii	2	1
Forb (FG)	Plantago varia	1	1
Forb (FG)	Plectranthus argentatus	2	1
Forb (FG)	Pomax umbellata	2	1
Forb (FG)	Pterostylis curta	1	1
Forb (FG)	Pterostylis decurva	1	1
Forb (FG)	Pterostylis hispidula	1	1
Forb (FG)	Pterostylis parviflora	1	1
Forb (FG)	Pterostylis pedunculata	1	1
Forb (FG)	Ranunculus plebeius	2	1
Forb (FG)	Rostellularia adscendens	2	1
Forb (FG)	Rumex brownii	1	1
Forb (FG)	Scutellaria mollis	1	1
Forb (FG)	Senecio bathurstianus	1	1
Forb (FG)	Senecio biserratus	1	1
Forb (FG)	Senecio glomeratus	1	1
Forb (FG)	Senecio minimus	1	1
Forb (FG)	Senecio quadridentatus	1	1
Forb (FG)	Senna clavigera	1	1
Forb (FG)	Sigesbeckia australiensis	1	1
Forb (FG)	Solanum pungetium	1	1
Forb (FG)	Stellaria pungens	2	1
Forb (FG)	Stylidium laricifolium	1	1
Forb (FG)	Swainsona fraseri	1	1
Forb (FG)	Thysanotus tuberosus	1	1
Forb (FG)	Trachymene procumbens	1	1
Forb (FG)	Veronica calycina	1	1
Forb (FG)	Veronica grosseserrata	1	1
Forb (FG)	Wahlenbergia communis	1	1
Forb (FG)	Wahlenbergia luteola	1	1
Forb (FG)	Wedelia spilanthoides	2	1
Forb (FG)	Zornia dyctiocarpa var. dyctiocarpa	2	1
Grass & grasslike (GG)	Imperata cylindrica	3	89

Grass & grasslike (GG)	Lomandra longifolia	2	79
Grass & grasslike (GG)	Poa sieberiana	3	79
Grass & grasslike (GG)	Oplismenus imbecillis	2	63
Grass & grasslike (GG)	Themeda triandra	2	44
Grass & grasslike (GG)	Oplismenus aemulus	2	36
Grass & grasslike (GG)	Lepidosperma laterale	1	30
Grass & grasslike (GG)	Entolasia stricta	2	27
Grass & grasslike (GG)	Microlaena stipoides	2	20
Grass & grasslike (GG)	Sorghum leiocladum	2	19
Grass & grasslike (GG)	Cymbopogon refractus	2	17
Grass & grasslike (GG)	Entolasia marginata	2	17
Grass & grasslike (GG)	Lomandra filiformis	1	17
Grass & grasslike (GG)	Echinopogon ovatus	1	15
Grass & grasslike (GG)	Digitaria parviflora	1	14
Grass & grasslike (GG)	Lomandra multiflora subsp. multiflora	1	12
Grass & grasslike (GG)	Poa labillardierei var. labillardierei	2	12
Grass & grasslike (GG)	Echinopogon caespitosus	2	10
Grass & grasslike (GG)	Carex breviculmis	1	7
Grass & grasslike (GG)	Gahnia melanocarpa	2	7
Grass & grasslike (GG)	Dichelachne micrantha	2	6
Grass & grasslike (GG)	Cyperus tetraphyllus	1	5
Grass & grasslike (GG)	Carex appressa	2	4
Grass & grasslike (GG)	Elymus scaber	1	4
Grass & grasslike (GG)	Gahnia aspera	1	4
Grass & grasslike (GG)	Lomandra confertifolia	1	4
Grass & grasslike (GG)	Poa queenslandica	3	4
Grass & grasslike (GG)	Cyperus laevis	1	3
Grass & grasslike (GG)	Rytidosperma longifolium	2	3
Grass & grasslike (GG)	Austrostipa rudis	1	2
Grass & grasslike (GG)	Capillipedium parviflorum	3	2
Grass & grasslike (GG)	Carex inversa	1	2
Grass & grasslike (GG)	Cenchrus caliculatus	2	2
Grass & grasslike (GG)	Cyperus enervis	2	2
Grass & grasslike (GG)	Cyperus gracilis	1	2
Grass & grasslike (GG)	Deyeuxia parviseta	1	2
Grass & grasslike (GG)	Digitaria ramularis	1	2
Grass & grasslike (GG)	Luzula flaccida	1	2
Grass & grasslike (GG)	Oplismenus undulatifolius	2	2
Grass & grasslike (GG)	Panicum simile	1	2
Grass & grasslike (GG)	Rytidosperma tenuius	1	2
Grass & grasslike (GG)	Scleria mackaviensis	1	2
Grass & grasslike (GG)	Aristida vagans	1	1
Grass & grasslike (GG)	Austrostipa pubescens	2	1

Grass & grasslike (GG)	Austrostipa verticillata	1	1
Grass & grasslike (GG)	Bothriochloa macra	1	1
Grass & grasslike (GG)	Capillipedium spicigerum	3	1
Grass & grasslike (GG)	Carex brownii	1	1
Grass & grasslike (GG)	Carex declinata	1	1
Grass & grasslike (GG)	Carex longebrachiata	1	1
Grass & grasslike (GG)	Cyperus cyperoides	1	1
Grass & grasslike (GG)	Cyperus imbecillis	1	1
Grass & grasslike (GG)	Cyperus mirus	1	1
Grass & grasslike (GG)	Deyeuxia reflexa	1	1
Grass & grasslike (GG)	Dichelachne crinita	2	1
Grass & grasslike (GG)	Dichelachne inaequiglumis	1	1
Grass & grasslike (GG)	Digitaria breviglumis	1	1
Grass & grasslike (GG)	Digitaria divaricatissima	2	1
Grass & grasslike (GG)	Echinopogon intermedius	1	1
Grass & grasslike (GG)	Echinopogon mckiei	1	1
Grass & grasslike (GG)	Eragrostis leptostachya	2	1
Grass & grasslike (GG)	Gahnia sieberiana	1	1
Grass & grasslike (GG)	Juncus continuus	1	1
Grass & grasslike (GG)	Juncus remotiflorus	2	1
Grass & grasslike (GG)	Juncus usitatus	1	1
Grass & grasslike (GG)	Lachnagrostis filiformis	3	1
Grass & grasslike (GG)	Lomandra bracteata	2	1
Grass & grasslike (GG)	Lomandra hystrix	3	1
Grass & grasslike (GG)	Lomandra laxa	2	1
Grass & grasslike (GG)	Lomandra obliqua	2	1
Grass & grasslike (GG)	Lomandra spicata	2	1
Grass & grasslike (GG)	Ottochloa gracillima	1	1
Grass & grasslike (GG)	Panicum effusum	1	1
Grass & grasslike (GG)	Panicum obseptum	3	1
Grass & grasslike (GG)	Paspalidium distans	2	1
Grass & grasslike (GG)	Rytidosperma bipartitum	2	1
Grass & grasslike (GG)	Rytidosperma pallidum	3	1
Grass & grasslike (GG)	Rytidosperma racemosum	1	1
Grass & grasslike (GG)	Sporobolus elongatus	1	1
Grass & grasslike (GG)	Tetrarrhena juncea	2	1
Grass & grasslike (GG)	Urochloa foliosa	2	1
Other (OG)	Hibbertia scandens	2	80
Other (OG)	Desmodium varians	2	77
Other (OG)	Glycine clandestina	2	76
Other (OG)	Hardenbergia violacea	2	69
Other (OG)	Eustrephus latifolius	1	63
Other (OG)	Smilax australis	1	49

Other (OG)	Geitonoplesium cymosum	2	46
Other (OG)	Kennedia rubicunda	2	45
Other (OG)	Cissus antarctica	1	42
Other (OG)	Cissus hypoglauca	1	34
Other (OG)	Clematis aristata	1	30
Other (OG)	Pandorea pandorana subsp. pandorana	1	28
Other (OG)	Billardiera scandens	1	27
Other (OG)	Calochlaena dubia	2	27
Other (OG)	Cayratia clematidea	1	25
Other (OG)	Tylophora paniculata	1	19
Other (OG)	Dioscorea transversa	1	18
Other (OG)	Clematis glycinoides	1	17
Other (OG)	Hibbertia dentata	2	17
Other (OG)	Stephania japonica var. discolor	1	15
Other (OG)	Cymbidium suave	1	14
Other (OG)	Tetrastigma nitens	1	13
Other (OG)	Xanthorrhoea malacophylla	2	12
Other (OG)	Cordyline stricta	1	9
Other (OG)	Glycine microphylla	2	9
Other (OG)	Marsdenia lloydii	1	8
Other (OG)	Sarcopetalum harveyanum	1	8
Other (OG)	Cyathea australis	1	7
Other (OG)	Glycine tabacina	2	7
Other (OG)	Parsonsia straminea	1	7
Other (OG)	Xanthorrhoea johnsonii	1	7
Other (OG)	Celastrus subspicata	1	5
Other (OG)	Clematicissus opaca	2	5
Other (OG)	Muellerina celastroides	2	5
Other (OG)	Amyema pendula	1	4
Other (OG)	Aphanopetalum resinosum	1	4
Other (OG)	Cordyline petiolaris	1	4
Other (OG)	Smilax glyciphylla	1	4
Other (OG)	Cephalalaria cephalobotrys	1	3
Other (OG)	Dendrobium aemulum	1	3
Other (OG)	Derris involuta	1	3
Other (OG)	Lepidozamia peroffskyana	2	3
Other (OG)	Neoachmandra cunninghamii	1	3
Other (OG)	Passiflora herbertiana subsp. herbertiana	1	3
Other (OG)	Rubus moorei	2	3
Other (OG)	Amyema congener subsp. congener	1	2
Other (OG)	Glycine tomentella	2	2
Other (OG)	Gynochthodes jasminoides	1	2
Other (OG)	Jasminum volubile	1	2

Other (OG)	Maclura cochinchinensis	2	2
Other (OG)	Macrozamia communis	3	2
Other (OG)	Marsdenia rostrata	2	2
Other (OG)	Muellerina eucalyptoides	1	2
Other (OG)	Parsonsia purpurascens	1	2
Other (OG)	Tylophora barbata	1	2
Other (OG)	Xanthorrhoea glauca	2	2
Other (OG)	Amyema miquelii	1	1
Other (OG)	Amylothea dictyophleba	1	1
Other (OG)	Archontophoenix cunninghamiana	1	1
Other (OG)	Austrosteenisia blackii var. blackii	2	1
Other (OG)	Calystegia marginata	1	1
Other (OG)	Cayratia eurynema	1	1
Other (OG)	Celastrus australis	1	1
Other (OG)	Cestichis reflexa	2	1
Other (OG)	Clematis microphylla	1	1
Other (OG)	Cyathea cooperi	1	1
Other (OG)	Dendrobium fairfaxii	1	1
Other (OG)	Dendrobium gracilicaule	1	1
Other (OG)	Dendrobium kingianum	1	1
Other (OG)	Dendrobium pugioniforme	1	1
Other (OG)	Dendrobium teretifolium	1	1
Other (OG)	Dendrophthoe vitellina	1	1
Other (OG)	Embelia australiana	1	1
Other (OG)	Erythrorchis cassythoides	1	1
Other (OG)	Fieldia australis	1	1
Other (OG)	Galactia tenuiflora	2	1
Other (OG)	Glycine cyrtoloba	2	1
Other (OG)	Jasminum suavissimum	1	1
Other (OG)	Kennedia prostrata	2	1
Other (OG)	Macrozamia montana	2	1
Other (OG)	Marsdenia flavescens	1	1
Other (OG)	Marsdenia liisae	2	1
Other (OG)	Marsdenia suaveolens	1	1
Other (OG)	Muehlenbeckia gracillima	1	1
Other (OG)	Pandorea jasminoides	1	1
Other (OG)	Parsonsia brownii	1	1
Other (OG)	Parsonsia lanceolata	1	1
Other (OG)	Passiflora cinnabarina	1	1
Other (OG)	Polymeria calycina	1	1
Other (OG)	Ripogonum album	1	1
Other (OG)	Sarcochilus falcatus	1	1
Other (OG)	Trophis scandens subsp. scandens	1	1

Other (OG)	Vigna lanceolata	1	1
Other (OG)	Vigna vexillata	1	1
Other (OG)	Xanthorrhoea latifolia	3	1
Shrub (SG)	Rubus parvifolius	2	77
Shrub (SG)	Breynia oblongifolia	2	76
Shrub (SG)	Solanum hapalum	2	48
Shrub (SG)	Polyscias sambucifolia	1	41
Shrub (SG)	Psychotria loniceroides	1	39
Shrub (SG)	Indigofera australis	2	33
Shrub (SG)	Myrsine variabilis	1	32
Shrub (SG)	Leucopogon lanceolatus	1	27
Shrub (SG)	Denhamia silvestris	1	24
Shrub (SG)	Phyllanthus gunnii	1	22
Shrub (SG)	Rubus moluccanus	1	20
Shrub (SG)	Acacia irrorata	2	19
Shrub (SG)	Rubus rosifolius	2	19
Shrub (SG)	Persoonia linearis	1	17
Shrub (SG)	Persoonia media	2	17
Shrub (SG)	Synoum glandulosum subsp. glandulosum	1	16
Shrub (SG)	Pittosporum revolutum	1	15
Shrub (SG)	Solanum stelligerum	2	14
Shrub (SG)	Cryptocarya rigida	1	13
Shrub (SG)	Ozothamnus diosmifolius	1	13
Shrub (SG)	Eupomatia laurina	1	12
Shrub (SG)	Rhodamnia rubescens	1	12
Shrub (SG)	Trema tomentosa var. aspera	1	12
Shrub (SG)	Elaeocarpus reticulatus	1	11
Shrub (SG)	Pittosporum undulatum	1	10
Shrub (SG)	Diospyros australis	1	9
Shrub (SG)	Hibbertia aspera	2	9
Shrub (SG)	Tabernaemontana pandacaqui	1	8
Shrub (SG)	Acacia fimbriata	3	7
Shrub (SG)	Lomatia silaifolia	1	7
Shrub (SG)	Ozothamnus obovatus	1	7
Shrub (SG)	Archirhodomyrtus beckleri	1	6
Shrub (SG)	Goodia lotifolia	3	6
Shrub (SG)	Jacksonia scoparia	1	6
Shrub (SG)	Acacia implexa	1	5
Shrub (SG)	Alectryon subcinereus	1	5
Shrub (SG)	Exocarpos cupressiformis	2	5
Shrub (SG)	Gonocarpus oreophilus	1	5
Shrub (SG)	Persoonia conjuncta	1	5
Shrub (SG)	Pittosporum multiflorum	1	5

Shrub (SG)	Acacia floribunda	1	4
Shrub (SG)	Coronidium elatum	1	4
Shrub (SG)	Daviesia arborea	2	4
Shrub (SG)	Exocarpos strictus	2	4
Shrub (SG)	Hakea eriantha	1	4
Shrub (SG)	Leucopogon juniperinus	1	4
Shrub (SG)	Myrsine howittiana	1	4
Shrub (SG)	Pimelea neo-anglica	1	4
Shrub (SG)	Podolobium ilicifolium	2	4
Shrub (SG)	Psychotria daphnoides	1	4
Shrub (SG)	Zieria smithii	1	4
Shrub (SG)	Acacia longifolia	2	3
Shrub (SG)	Acacia longissima	1	3
Shrub (SG)	Alyxia ruscifolia	1	3
Shrub (SG)	Astrotricha latifolia	1	3
Shrub (SG)	Homalanthus populifolius	1	3
Shrub (SG)	Olearia nernstii	2	3
Shrub (SG)	Ozothamnus rufescens	1	3
Shrub (SG)	Solanum brownii	2	3
Shrub (SG)	Abutilon oxycarpum	1	2
Shrub (SG)	Acacia falciformis	2	2
Shrub (SG)	Acacia ulicifolia	2	2
Shrub (SG)	Acalypha eremorum	1	2
Shrub (SG)	Acalypha nemorum	2	2
Shrub (SG)	Acrotriche aggregata	1	2
Shrub (SG)	Backhousia myrtifolia	1	2
Shrub (SG)	Cassinia leptcephala	2	2
Shrub (SG)	Duboisia myoporoides	1	2
Shrub (SG)	Elaeodendron australe	2	2
Shrub (SG)	Eremophila debilis	1	2
Shrub (SG)	Ficus coronata	1	2
Shrub (SG)	Hibbertia obtusifolia	2	2
Shrub (SG)	Hymenosporum flavum	2	2
Shrub (SG)	Leptospermum polygalifolium	1	2
Shrub (SG)	Logania albiflora	1	2
Shrub (SG)	Monotoca scoparia	2	2
Shrub (SG)	Notelaea sp. A	1	2
Shrub (SG)	Notelaea venosa	1	2
Shrub (SG)	Persoonia cornifolia	1	2
Shrub (SG)	Persoonia stradbokensis	2	2
Shrub (SG)	Pimelea latifolia	2	2
Shrub (SG)	Pimelea linifolia	1	2
Shrub (SG)	Pimelea pauciflora	1	2

Shrub (SG)	<i>Santalum obtusifolium</i>	1	2
Shrub (SG)	<i>Solanum aviculare</i>	1	2
Shrub (SG)	<i>Solanum campanulatum</i>	1	2
Shrub (SG)	<i>Solanum cinereum</i>	1	2
Shrub (SG)	<i>Solanum nemophilum</i>	1	2
Shrub (SG)	<i>Acacia cangaensis</i>	1	1
Shrub (SG)	<i>Acacia dawsonii</i>	1	1
Shrub (SG)	<i>Acacia deanei</i>	1	1
Shrub (SG)	<i>Acacia falcata</i>	1	1
Shrub (SG)	<i>Acacia obtusifolia</i>	3	1
Shrub (SG)	<i>Acacia tessellata</i>	1	1
Shrub (SG)	<i>Acacia venulosa</i>	1	1
Shrub (SG)	<i>Acrotriche divaricata</i>	1	1
Shrub (SG)	<i>Adriana tomentosa</i> var. <i>tomentosa</i>	1	1
Shrub (SG)	<i>Alchornea ilicifolia</i>	1	1
Shrub (SG)	<i>Amperea xiphoclada</i>	1	1
Shrub (SG)	<i>Anopterus macleayanus</i>	1	1
Shrub (SG)	<i>Aristotelia australasica</i>	1	1
Shrub (SG)	<i>Astrotricha floccosa</i>	1	1
Shrub (SG)	<i>Bursaria spinosa</i>	2	1
Shrub (SG)	<i>Callicarpa pedunculata</i>	1	1
Shrub (SG)	<i>Callistemon acuminatus</i>	1	1
Shrub (SG)	<i>Callistemon salignus</i>	1	1
Shrub (SG)	<i>Calotis dentex</i>	1	1
Shrub (SG)	<i>Capparis arborea</i>	1	1
Shrub (SG)	<i>Cassinia telfordii</i>	1	1
Shrub (SG)	<i>Claoxylon australe</i>	2	1
Shrub (SG)	<i>Clerodendrum floribundum</i> var. <i>floribundum</i>	1	1
Shrub (SG)	<i>Comesperma ericinum</i>	2	1
Shrub (SG)	<i>Commersonia dasycphylla</i>	2	1
Shrub (SG)	<i>Commersonia fraseri</i>	1	1
Shrub (SG)	<i>Coprosma quadrifida</i>	1	1
Shrub (SG)	<i>Crotalaria mitchellii</i>	1	1
Shrub (SG)	<i>Croton verreauxii</i>	1	1
Shrub (SG)	<i>Denhamia celastroides</i>	1	1
Shrub (SG)	<i>Dodonaea triquetra</i>	5	1
Shrub (SG)	<i>Endiandra virens</i>	2	1
Shrub (SG)	<i>Gompholobium pinnatum</i>	1	1
Shrub (SG)	<i>Hakea salicifolia</i>	1	1
Shrub (SG)	<i>Hibbertia linearis</i>	2	1
Shrub (SG)	<i>Hibiscus heterophyllus</i> subsp. <i>heterophyllus</i>	2	1
Shrub (SG)	<i>Hibiscus splendens</i>	2	1
Shrub (SG)	<i>Hovea acutifolia</i>	3	1

Shrub (SG)	Leucopogon attenuatus	1	1
Shrub (SG)	Melicope micrococca	1	1
Shrub (SG)	Myoporum acuminatum	1	1
Shrub (SG)	Myoporum insulare	2	1
Shrub (SG)	Myoporum montanum	2	1
Shrub (SG)	Olearia argophylla	2	1
Shrub (SG)	Olearia cydoniifolia	2	1
Shrub (SG)	Olearia oppositifolia	2	1
Shrub (SG)	Ozothamnus ferrugineus	1	1
Shrub (SG)	Persoonia oleoides	1	1
Shrub (SG)	Persoonia rufa	1	1
Shrub (SG)	Phyllanthus hirtellus	1	1
Shrub (SG)	Pimelea altior	1	1
Shrub (SG)	Pimelea curviflora	1	1
Shrub (SG)	Pimelea latifolia subsp. latifolia	1	1
Shrub (SG)	Pimelea ligustrina	1	1
Shrub (SG)	Platysace lanceolata	1	1
Shrub (SG)	Pomaderris ligustrina	1	1
Shrub (SG)	Pultenaea retusa	1	1
Shrub (SG)	Pultenaea villosa	2	1
Shrub (SG)	Ricinocarpos speciosus	1	1
Shrub (SG)	Solanum curviciuspe	1	1
Shrub (SG)	Solanum inaequilaterum	2	1
Shrub (SG)	Solanum vicinum	1	1
Shrub (SG)	Styphelia laeta	2	1
Shrub (SG)	Syzygium oleosum	1	1
Shrub (SG)	Tasmannia insipida	1	1
Shrub (SG)	Wikstroemia indica	1	1
Shrub (SG)	Wilkiea huegeliana	1	1
Tree (TG)	Allocasuarina torulosa	3	91
Tree (TG)	Eucalyptus microcorys	3	74
Tree (TG)	Lophostemon confertus	2	49
Tree (TG)	Trochocarpa laurina	1	40
Tree (TG)	Eucalyptus saligna	2	38
Tree (TG)	Eucalyptus carnea	3	32
Tree (TG)	Eucalyptus acmenoides	3	31
Tree (TG)	Corymbia intermedia	2	29
Tree (TG)	Syncarpia glomulifera	2	28
Tree (TG)	Acacia melanoxylon	1	27
Tree (TG)	Eucalyptus campanulata	3	27
Tree (TG)	Corymbia maculata	3	26
Tree (TG)	Acacia maidenii	1	25
Tree (TG)	Eucalyptus propinqua	3	23

Tree (TG)	Denhamia bilocularis	1	19
Tree (TG)	Eucalyptus pilularis	3	17
Tree (TG)	Eucalyptus biturbinata	2	15
Tree (TG)	Eucalyptus siderophloia	2	15
Tree (TG)	Acacia binervata	2	12
Tree (TG)	Notelaea longifolia	1	12
Tree (TG)	Clerodendrum tomentosum	1	11
Tree (TG)	Glochidion ferdinandi	1	11
Tree (TG)	Angophora floribunda	2	9
Tree (TG)	Alphitonia excelsa	1	8
Tree (TG)	Eucalyptus tereticornis	2	8
Tree (TG)	Eucalyptus laevopinea	3	7
Tree (TG)	Eucalyptus resinifera	2	7
Tree (TG)	Angophora subvelutina	1	6
Tree (TG)	Eucalyptus cameronii	3	6
Tree (TG)	Euroschinus falcatus var. falcatus	1	5
Tree (TG)	Guioa semiglauca	1	5
Tree (TG)	Polyscias elegans	1	5
Tree (TG)	Brachychiton populneus	1	4
Tree (TG)	Elaeocarpus obovatus	1	4
Tree (TG)	Eucalyptus canaliculata	3	4
Tree (TG)	Eucalyptus eugenioides	2	4
Tree (TG)	Melia azedarach	1	4
Tree (TG)	Acmena smithii	1	3
Tree (TG)	Allocasuarina littoralis	2	3
Tree (TG)	Corymbia gummifera	2	3
Tree (TG)	Diploglottis australis	1	3
Tree (TG)	Endiandra sieberi	1	3
Tree (TG)	Eucalyptus globoidea	3	3
Tree (TG)	Ficus rubiginosa	1	3
Tree (TG)	Mallotus philippensis	1	3
Tree (TG)	Schizomeria ovata	1	3
Tree (TG)	Acacia blakei	2	2
Tree (TG)	Angophora woodsiana	1	2
Tree (TG)	Banksia integrifolia	1	2
Tree (TG)	Caldcluvia paniculosa	1	2
Tree (TG)	Cryptocarya microneura	1	2
Tree (TG)	Dysoxylum fraserianum	1	2
Tree (TG)	Eucalyptus crebra	2	2
Tree (TG)	Eucalyptus largeana	2	2
Tree (TG)	Eucalyptus melliodora	2	2
Tree (TG)	Eucalyptus quadrangulata	3	2
Tree (TG)	Eucalyptus tindaliae	3	2

Tree (TG)	<i>Ficus watkinsiana</i>	1	2
Tree (TG)	<i>Jagera pseudorhus</i> var. <i>pseudorhus</i>	1	2
Tree (TG)	<i>Neolitsea australiensis</i>	1	2
Tree (TG)	<i>Scolopia braunii</i>	1	2
Tree (TG)	<i>Tristaniopsis laurina</i>	1	2
Tree (TG)	<i>Acacia binervia</i>	1	1
Tree (TG)	<i>Acacia elata</i>	2	1
Tree (TG)	<i>Acacia orites</i>	1	1
Tree (TG)	<i>Angophora costata</i>	2	1
Tree (TG)	<i>Austrobuxus swainii</i>	1	1
Tree (TG)	<i>Backhousia sciadophora</i>	1	1
Tree (TG)	<i>Brachychiton acerifolius</i>	1	1
Tree (TG)	<i>Brachychiton discolor</i>	1	1
Tree (TG)	<i>Citronella moorei</i>	1	1
Tree (TG)	<i>Corymbia henryi</i>	2	1
Tree (TG)	<i>Croton insularis</i>	1	1
Tree (TG)	<i>Cryptocarya glaucescens</i>	2	1
Tree (TG)	<i>Cupaniopsis parvifolia</i>	1	1
Tree (TG)	<i>Daphnandra apatela</i>	1	1
Tree (TG)	<i>Daphnandra melasmena</i>	1	1
Tree (TG)	<i>Diospyros pentamera</i>	1	1
Tree (TG)	<i>Doryphora sassafras</i>	1	1
Tree (TG)	<i>Drypetes deplanchei</i>	1	1
Tree (TG)	<i>Dysoxylum rufum</i>	1	1
Tree (TG)	<i>Ehretia acuminata</i> var. <i>acuminata</i>	1	1
Tree (TG)	<i>Eucalyptus amplifolia</i>	1	1
Tree (TG)	<i>Eucalyptus andrewsii</i>	3	1
Tree (TG)	<i>Eucalyptus beyeriana</i>	1	1
Tree (TG)	<i>Eucalyptus brunnea</i>	3	1
Tree (TG)	<i>Eucalyptus caliginosa</i>	1	1
Tree (TG)	<i>Eucalyptus dalrympleana</i>	1	1
Tree (TG)	<i>Eucalyptus dorrigoensis</i>	2	1
Tree (TG)	<i>Eucalyptus fibrosa</i>	3	1
Tree (TG)	<i>Eucalyptus fusiformis</i>	1	1
Tree (TG)	<i>Eucalyptus interstans</i>	2	1
Tree (TG)	<i>Eucalyptus moluccana</i>	1	1
Tree (TG)	<i>Eucalyptus obliqua</i>	1	1
Tree (TG)	<i>Eucalyptus placita</i>	2	1
Tree (TG)	<i>Eucalyptus punctata</i>	3	1
Tree (TG)	<i>Eucalyptus pyrocarpa</i>	2	1
Tree (TG)	<i>Eucalyptus radiata</i>	3	1
Tree (TG)	<i>Eucalyptus rummeryi</i>	4	1
Tree (TG)	<i>Eucalyptus signata</i>	4	1

Tree (TG)	Ficus superba var. henneana	1	1
Tree (TG)	Glochidion sumatranum	1	1
Tree (TG)	Gmelina leichhardtii	1	1
Tree (TG)	Grevillea robusta	1	1
Tree (TG)	Hedycarya angustifolia	2	1
Tree (TG)	Litsea reticulata	1	1
Tree (TG)	Lophostemon suaveolens	1	1
Tree (TG)	Neolitsea dealbata	1	1
Tree (TG)	Olea paniculata	1	1
Tree (TG)	Pennantia cunninghamii	1	1
Tree (TG)	Polyscias murrayi	1	1
Tree (TG)	Rhodosphaera rhodanthema	2	1
Tree (TG)	Rhysotoechia bifoliolata subsp. bifoliolata	1	1
Tree (TG)	Streblus brunonianus	2	1
Tree (TG)	Toona ciliata	2	1

Appendix 3: EPBC Act Protected Matters Report



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 09-Jan-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	50
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	2
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area
New England Peppermint (<i>Eucalyptus nova-anglica</i>) Grassy Woodlands	Critically Endangered	Community may occur within area
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species

[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat likely to occur within area
Atrichornis rufescens Rufous Scrub-bird [655]	Endangered	Species or species habitat may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area
Erythroriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area
CRUSTACEAN		
Euastacus spinichelatus Small Crayfish [83157]	Endangered	Species or species habitat may occur within area
FROG		
Litoria daviesae Davies' Tree Frog [78964]	Vulnerable	Species or species habitat may occur within area
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area
Phyloria sphagnicola Sphagnum Frog [59709]	Vulnerable	Species or species habitat may occur within area
MAMMAL		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Notamacropus parma Parma Wallaby [89289]	Vulnerable	Species or species habitat known to occur within area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Petaurus australis australis		
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area
Potorous tridactylus tridactylus		
Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat known to occur within area
Pseudomys novaehollandiae		
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys oralis		
Hastings River Mouse, Koontoo [98]	Endangered	Species or species habitat may occur within area
Pteropus poliocephalus		
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
PLANT		
Arthraxon hispidus		
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area
Callistemon pungens		
[55581]	Vulnerable	Species or species habitat may occur within area
Coleus nitidus listed as Plectranthus nitidus		
Nightcap Plectranthus, Silver Plectranthus [91380]	Endangered	Species or species habitat may occur within area
Cryptostylis hunteriana		
Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
Cynanchum elegans		
White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus glaucina Slaty Red Gum [5670]	Vulnerable	Species or species habitat may occur within area
Eucalyptus nicholii Narrow-leaved Peppermint, Narrow-leaved Black Peppermint [20992]	Vulnerable	Species or species habitat likely to occur within area
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat likely to occur within area
Haloragis exalata subsp. velutina Tall Velvet Sea-berry [16839]	Vulnerable	Species or species habitat likely to occur within area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat may occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Vincetoxicum woollsii listed as Tylophora woollsii [40080]	Endangered	Species or species habitat may occur within area

REPTILE

Scientific Name	Threatened Category	Presence Text
Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat may occur within area
Myuchelys purvisi Purvis' Turtle [89459]	Endangered	Species or species habitat likely to occur within area
Saltuarius moritzi New England Leaf-tailed Gecko, Moritz's Leaf-tailed Gecko [89490]	Endangered	Species or species habitat may occur within area

Listed Migratory Species	[Resource Information]	
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species	[Resource Information]	
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat likely to occur within area overfly marine area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	
Bugan	Nature Reserve	NSW	

Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.	

RFA Name	State
North East NSW RFA	New South Wales

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Not controlled action (particular manner)			
Aerial baiting for wild dog control	2006/2713	Not Controlled Action (Particular Manner)	Post-Approval

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

[© Commonwealth of Australia](#)

Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111

Appendix 4: **Photo Points**

N1



N1_End Forward



N1_End Left



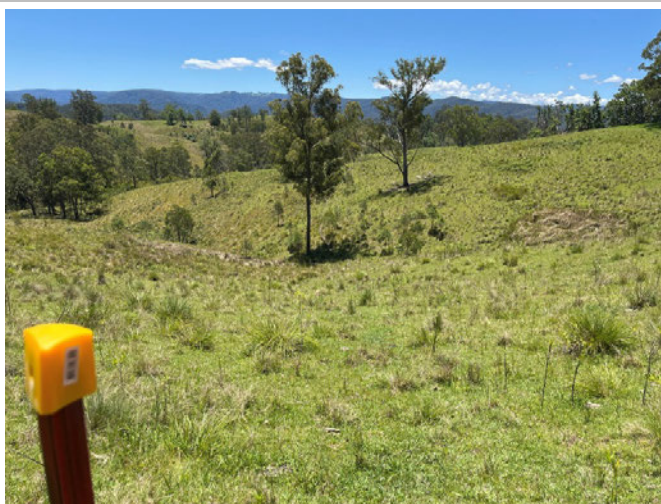
N1_End Right



N1_Start Forward



N1_Start Left



N1_Start Right

N2



N2_End Forward



N2_End Left



N2_End Right



N2_Start Forward

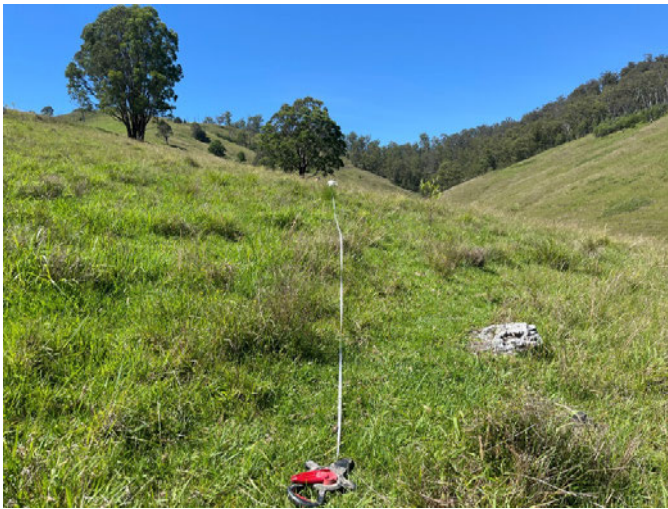


N2_Start Left



N2_Start Right

N3



N3_End Forward



N3_End Left



N3_End Right



N3_Start Forward



N3_Start Left



N3_Start Right

N4



N4_End Forward



N4_End Left



N4_End Right



N4_Start Forward



N4_Start Left



N4_Start Right

N6



N6_End Forward



N6_End Left



N6_End Right



N6_Start Forward



N6_Start Left



N6_Start Right

N7



N7_End Forward



N7_End Left



N7_End Right



N7_Start Forward



N7_Start Left



N7_Start Right

N9



N9_End Forward



N9_End Left



N9_End Right



N9_Start Forward



N9_Start Left



N9_Start Right

Project Photos (S)

S1



S1_End Forward



S1_End Left



S1_End Right



S1_Start Forward



S1_Start Left



S1_Start Right

S3



S3_End Forward



S3_End Left



S3_End Right



S3_Start Forward



S3_Start Left



S3_Start Right

S4



S4_End Forward



S4_End Left



S4_End Right



S4_Start Forward



S4_Start Left



S4_Start Right

S5



S5_End Forward



S5_End Left



S5_End Right



S5_Start Forward



S5_Start Left



S5_Start Right

S7



S7_End Forward



S7_End Left



S7_End Right



S7_Start Forward



S7_Start Left



S7_Start Right

S8



S8_End Forward



S8_End Left



S8_End Right



S8_Start Forward



S8_Start Left



S8_Start Right

S9



S9_End Forward



S9_End Left



S9_End Right



S9_Start Forward



S9_Start Left



S9_Start Right

S10



S10_End Forward



S10_End Left



S10_End Right



S10_Start Forward



S10_Start Left



S10_Start Right

S11



S11_End Forward



S11_End Left



S11_End Right



S11_Start Forward



S11_Start Left



S11_Start Right

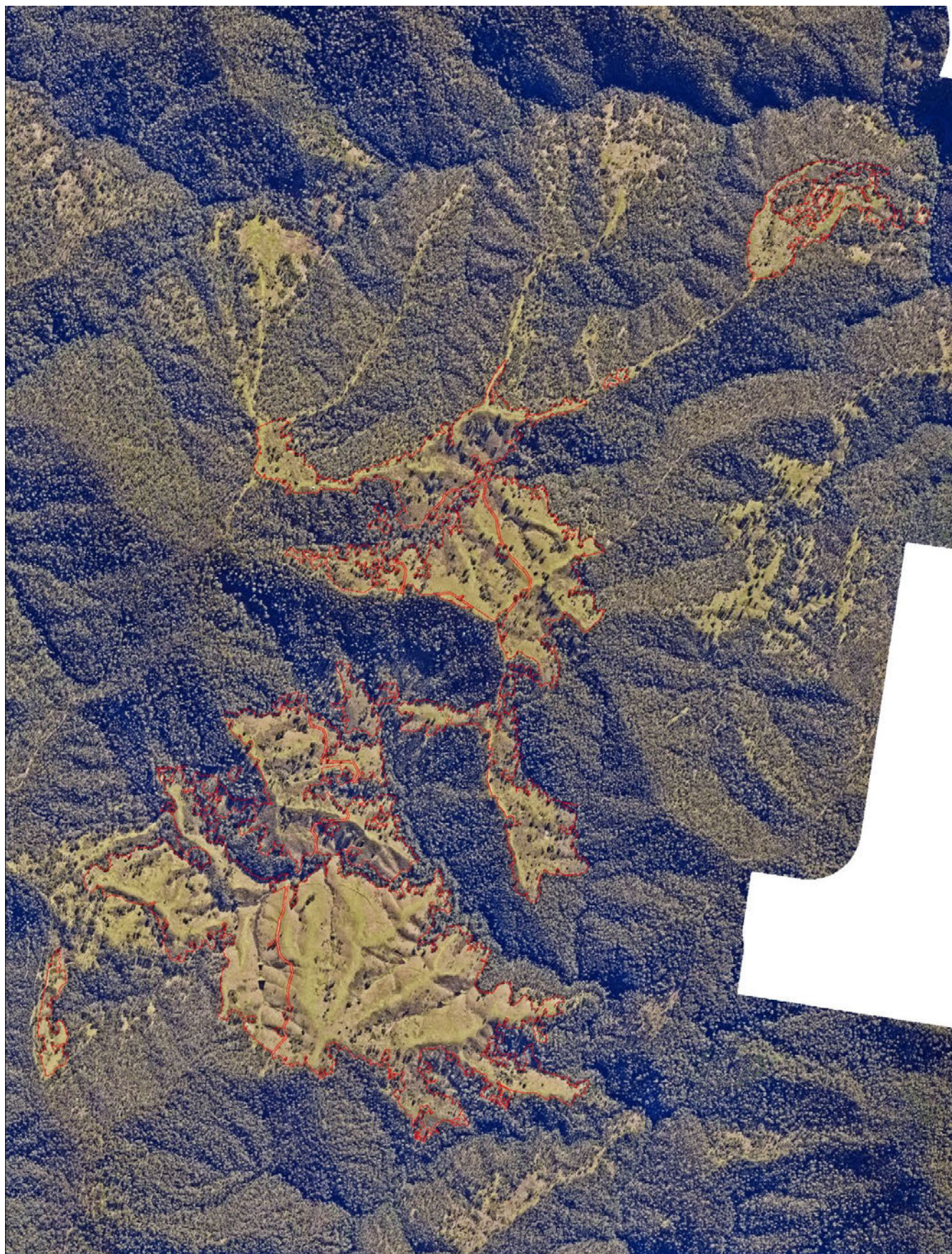
Appendix 5: Historic Satellite Imagery



NRM Project Area (North)

Imagery Date Stamp: 21st August 2021

Imagery Source: Maxar (GE01) image captured on Aug 21, 2021 as shown in the 2022-06-29 version of the ESRI World Imagery map.
Spatial Reference: GDA2020 MGA56
Scale: 1:21,000 [A4]
Map Exported 4th August 2025



NRM Project Area (North)

Imagery Date Stamp: 5th July 2025

Imagery Source: RGB Photogrammetry from
Manned Aircraft - Captured 5th July 2025
Spatial Reference: GDA2020 MGA56
Scale: 1:21,000 [A4]

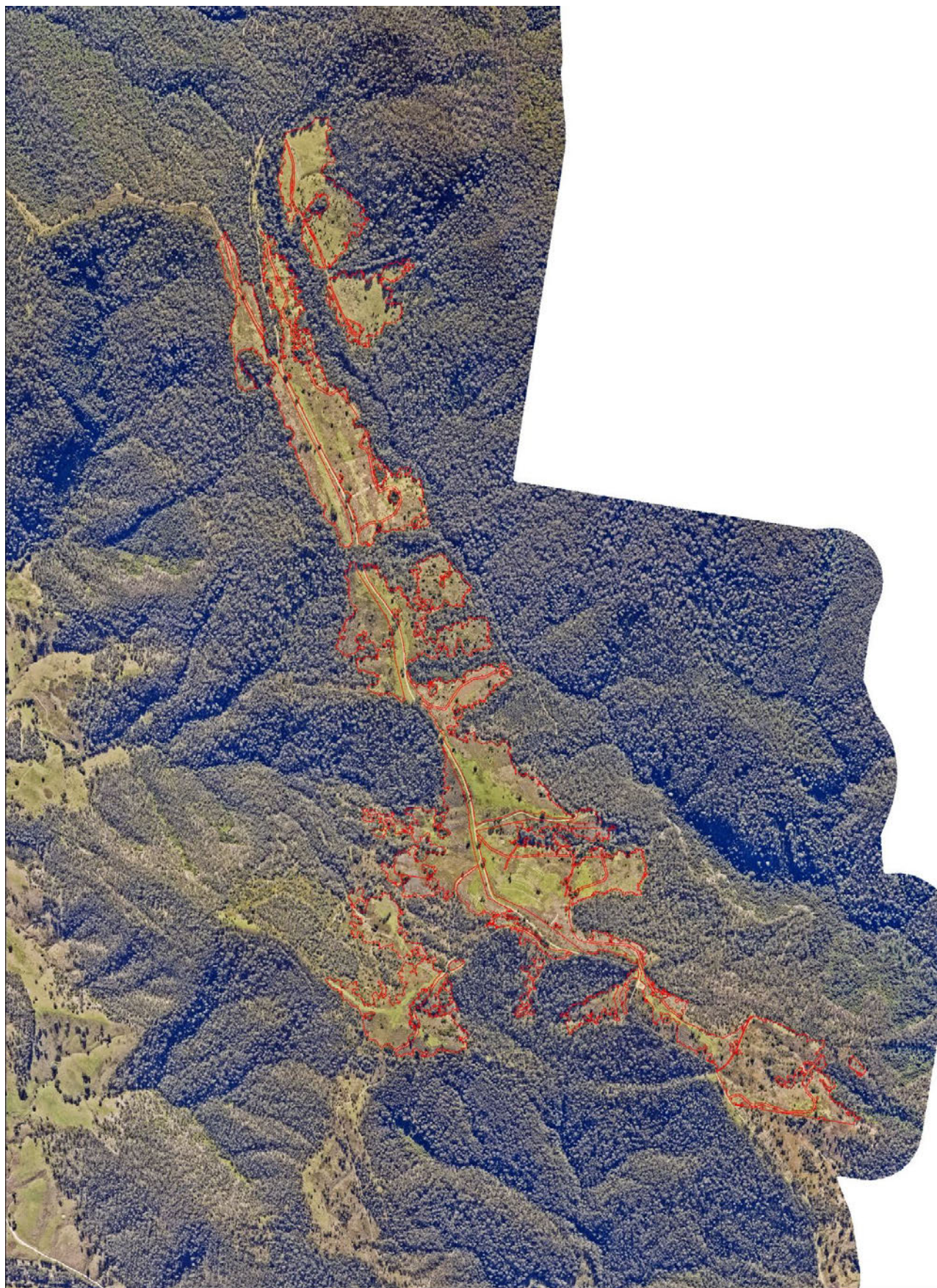
Map Exported 4th August 2025



NRM Project Area (South)

Imagery Date Stamp: 21st August 2021

Imagery Source: Maxar (GE01) image captured on Aug 21, 2021 as shown in the 2022-06-29 version of the ESRI World Imagery map.
Spatial Reference: GDA2020 MGA56
Scale: 1:21,000 [A4]
Map Exported 4th August 2025



NRM Project Area (South)

Imagery Date Stamp: 5th July 2025

Imagery Source: RGB Photogrammetry from
Manned Aircraft - Captured 5th July 2025
Spatial Reference: GDA2020 MGA56
Scale: 1:21,000 [A4]

Map Exported 4th August 2025