

Mr David Kitto  
Director  
Department of Planning and Environment  
GPO Box 39  
Sydney NSW 2001

**Your Ref: MP 241/04**

**Our Ref: 15SYD-2492**

10 May 2016

Dear Mr Kitto,

**RE: Proposed Offset Package - Taralga Wind Farm**

Eco Logical Australia (ELA) has been commissioned by Taralga Wind Farm Pty Ltd (TWF) and CWP Renewables (CWP) to identify an offset for the Taralga Wind Farm and prepare a Biodiversity Offset Package (BOP), as required by Conditions of Approval 86, 86A, 87 and 90 (Major Project 241/04). This letter outlines the BOP and is being submitted to the Department of Planning and Environment (DPE) prior to 13 May 2016 for approval by the Secretary, as required by Condition 90 and the DPE letter dated 17 September 2015 (**Attachment A** DPE letter).

TWF has previously submitted for approval a Habitat Compensation Plan (KMA April 2014) and a BOP (GHD April 2015) that were reviewed by the Office of Environment and Heritage (OEH) against the principles for offsets in NSW.

GHDs BOP (GHD April 2015) used the BioBanking Methodology (BBAM) to quantify the number of credits required for impacts to vegetation types and potential habitat for various threatened grassland reptile species, as requested and accepted by OEH. The results of this assessment are summarised in **Table 1** and show that 276 ecosystem credits are required for impacts to 8.37 ha of vegetation (The full credit report is provided as **Attachment B**). However, OEH were not entirely satisfied that the proposed offset area fully met the 'like for like' requirements of the credit report (i.e. provision of vegetation type HN571 (Tablelands Basalt Forest)).

Using an average of 10 credits generated per hectare of offset area for woodland vegetation types and 8 credits per hectare for grassland vegetation types, ELA has estimated the area of offset needed to meet the offset requirements in **Table 1** to be around 28.3 hectares comprising 7.0 ha of HN571, 17.8 ha of HN584 and 3.5 ha for the grassland vegetation types HN591, HN588 and HN576.

Further, GHD also 'assumed' the presence of Pink-tailed Worm-lizard (PTWL) and Striped Legless Lizard (SLL) in 2.07 ha of potential native grassland habitat requiring 59 and 52 species credits respectively and 6.3 ha of Rosenberg's Goanna habitat requiring 210 species credits.

As requested by OEH, ELA has undertaken a survey for PTWL and SLL within suitable areas of habitat across the TWF (ELA 2016 – **Attachment C**). The SLL was not recorded however a potential PTWL was recorded at

Turbine 15. In consultation with OEH it was agreed that the offset area needs to include confirmed records and habitat for the PTWL capable of generating the 59 credits required.

ELA has estimated the offset area required to generate the 59 PTWL and 52 SLL credits as 8.31 and 7.32 ha respectively (based on generating 7.1 credits per hectare of confirmed habitat) (**Table 1**). Surveys for Rosenberg's Goanna were not undertaken and this species will require 29.58 ha of potential habitat to generate the required 210 species credits. It is noted that Gang-gang Cockatoo and Little Eagle are not species credit species and offsets for impacts to habitat of these species is accounted for in the ecosystem credits

**Table 1: GHD impact calculations and credit requirements**

<b>Vegetation Type</b>	<b>Impact Area (ha)</b>	<b>No of Credits required (GHD)</b>	<b>Approx. Offset Area Required (ha) No. credits required/10 for woodland and 8/ha for grassland)</b>
HN571 Ribbon Gum - Narrow-leaved Peppermint grassy open forest on basalt plateaux, Sydney Basin Bioregion and South Eastern Highlands Bioregion	2.15	70	7.00
HN584 Silvertop Ash - Narrow-leaved Peppermint open forest on ridges of the eastern tableland, South Eastern Highlands Bioregion	4.15	178	17.80
HN591 Speargrass grassland of the South Eastern Highlands Bioregion	1.51	19	2.38
HN588 Snow Grass - Kangaroo Grass - Sheep's Burr grassland on undulating basalt plateaux, South Eastern Highlands Bioregion	0.12	2	0.25
HN576 River Tussock - Tall Sedge - Kangaroo Grass moist grasslands of the South Eastern Highlands Bioregion	0.44	7	0.88
<b>Total</b>	<b>8.37</b>	<b>276</b>	<b>28.30</b>
<b>Species Credits</b>	<b>Impact Area (ha)</b>	<b>No of Credits required (GHD)</b>	<b>Approx. Offset Area Required (ha) No. credits required/7.1)</b>
Pink-tailed Worm-lizard	2.07	59	8.31
Striped Legless Lizard#	2.07	52	7.32
Rosenberg's Goanna	6.3	210	29.58

# The Striped Legless Lizard was not recorded by ELA 2016 and thus is not required in the offset package.

GHD proposed meeting these offset requirements on part of Lot 125 and 211, Dp 750046 (Rosvale property owned by TWF) and commenced a formal Biobank Assessment with a view to registering this area as a Biobank site to fulfil the offset requirements of the project. However, OEH expressed concerns regarding the correct mapping and identification of vegetation types on the property following a site inspection (in particular HN571 “*Ribbon Gum – Narrow-leaved Peppermint grassy open forest on basalt plateaux*” and the likelihood of the area meeting grassland reptile habitat requirements in the absence of any nearby records).

Subsequently, ELA was engaged to identify an alternate offset site that meets the credit requirements of GHDs impact calculations and provides habitat or potential habitat for the ‘assumed’ grassland reptile species and Rosenberg’s Goanna (unless the results of targeted survey indicates that the species is not present).

ELA ecologist met OEH officers on site and clarified the impacts to native grassland areas and assessed these areas for the presence of PTWL and SLL. OEH agreed that the native grassland areas identified in the original impact assessment reports was of very poor quality and likely would have been the derived components of HN571 rather than HN591 Speargrass grassland, HN 576 River-tussock-Tall Sedge – Kangaroo Grass moist grassland or HN588 Snowgrass – Kangaroo Grass grassland.

Accordingly, OEH suggested that the offset calculations for HN576, HN588 and HN591 be met by retiring an equivalent number (28) of HN571 credits i.e. 98 credits of HN571 would be required instead of 70. Further OEH requested that ELA assess these grassland areas for the presence of PTWL and/or SLL to inform the need for grassland reptile offsets or assume the presence of these species and either confirm presence of these species in the proposed offset areas or prepare an expert report stating that the habitat is likely to be used by these species. The results of ELA reptile surveys of impact areas and the proposed offset area is included as **Attachment C** (ELA 2016 Taralga Wind Farm Reptile Surveys).

Vegetation across two potential offset properties (Rossville Lot 1 DP 605482 and Lots 5, 54, 58, 121 & 122 DP 750046) and Rosvale Lots 125, 211, 118, 2 & 3 DP 750046 and Lot 1 DP 1011714), which were assessed as likely to have the required vegetation types and be available as offsets, were mapped (**Figure 1**) and discussed with OEH.

An alternative offset area that was capable of meeting the offset requirements for the project was subsequently identified in consultation with OEH and area calculations undertaken to ensure that it was large enough to meet the project’s offset requirements (**Figure 2** and **Table 2**). The proposed offset area totals 60.35 ha.

The western portion of the proposed offset area includes 22.69 ha of intact and degraded HN571 and 7.3 ha of cleared land interspersed with HN571 that could be restored to fully functional HN571 over time. 10.64 ha of this area encompasses three rocky outcrops, including a large outcrop to the south of Turbine 15 where the PTWL was recorded. This area will be managed to enhance habitat qualities for grassland reptiles and will exceed the 28 credit requirement for vegetation types HN591, HN588 and HN576. In consultation with OEH it has been agreed that the number of credits that the grassland reptile habitat area would generate, estimated to be 106, would all be ‘retired’ to meet the offset requirements for these three grassland vegetation types and the potential grassland reptile habitat they provide i.e. there would be no surplus credits.

The remaining 19.35 ha of HN571 would be managed in perpetuity to fully restored HN 571 generating an estimated 194 credits for the 70 HN571 credits required. It has been agreed in consultation with OEH that any surplus HN571 credits would not be retired and would be retained by the owner of the Biobank site.

The eastern portion of the offset area comprises 30.36 ha of HN584 and HN583 which will generate an estimated 301 ecosystem credits that exceeds the 178 credit requirements and is consistent with the credit profile for impacts to HN584 and provides potential habitat for Rosenberg’s Goanna. In consultation with OEH it has been agreed that the number of credits that the 30.36 ha of HN584 and HN583 would generate, would all be ‘retired’ to meet the offset requirements for HN584 and Rosenberg’s Goanna i.e. there would be no surplus credits.

TWF has reached an in-principle agreement with the landowner to make the land available as an offset (**Attachment D**) and will fund the assessment and registration of the area as a BioBank site under Part 7A of the Threatened Species Conservation Act (1995), subject to the DPE approving this offset package.

The owner of the land, Mrs Ross, has agreed to make the credits available to TWF, who will purchase and retire the required number of ecosystem and species credits as outlined in **Table 1** to fulfil their obligation under the conditions of approval and the credit calculations in the GHD BOP.

This letter is now formally seeking the approval of the DPE of the proposed offset area, following which, TWF will engage an accredited BioBank Assessor to undertake the formal BioBank Assessment of the proposed offset area, prepare the required management plan and associated in perpetuity conservation management calculations and submit the application to OEH for registration.

This process can commence as soon as the DPE has approved the proposed offset package and is likely to take up to three months to complete (detailed site assessment, biometric plots, preparing credit calculation report, management plan and in perpetuity conservation management costs). Once submitted to OEH for registration it is likely to take a further 3-4 months for OEH to complete their audit and registration processes.

*Robert Humphries*

Robert Humphries

**Eco Logical Australia**

On behalf of CWP Renewables.

Cc. Allison Treweek, Senior Team Leader Planning Section South East – Office of Environment and Heritage

Attachment A: DPE Letter dated 17 September 2015

Attachment B: GHD Biodiversity Offset Package (April 2015) and Impact Credit Assessment Report (June 2015)

Attachment C: ELA Grassland reptile survey report

Attachment D: Letter from landowner consenting to registration of a Biobanking Agreement

## References

ELA (2016) Grassland Reptile Survey – Taralga Wind Farm

GHD (2015) Taralga Wind Farm Biodiversity Offset Package April 2015

Kevin Mills and Associates (2014) Habitat Compensation Plan, Taralga Wind Farm

Table 2: Summary of proposed Offset area vegetation types, area and likely number of credits generated

Note: The coloured rows in the table below match the vegetation mapping in Figure 2.

Vegetation Type	BVT & Condition	Impact Area (ha)	No of Credits required (GHD)	Approx. Offset Area Required (credits required/10)	Proposed Offset Area (ha)	Total Area (ha)	Est. no of credits generated	Credit Balance	
Ribbon Gum - Narrow-leaved Peppermint grassy open forest on basalt plateaux, Sydney Basin Bioregion and South Eastern Highlands Bioregion	HN571 Mod-Good_Canopy with Native Ground Cover	2.15	70	7.00	2.62	19.35	194	124	
	HN571 Mod-Good_Derived Native Grassland				1.92				
	HN571 Mod-Good_Canopy with exotic ground cover				8.73				
	Cleared (Regenerate to HN571)				6.08				
Ribbon Gum - Narrow-leaved Peppermint grassy open forest on basalt plateaux, Sydney Basin Bioregion and South Eastern Highlands Bioregion	Area to be managed as native grassland/woodland for reptiles in place of HN591, HN588 and HN576)				10.64	10.64	106	106	
Speargrass grassland of the South Eastern Highlands Bioregion	HN591 Spear Grass	1.51	19	2.38	0	0.00	0	-19	Met by 10.64 ha of Reptile habitat
Snow Grass - Kangaroo Grass - Sheep's Burr grassland on undulating basalt plateaux, South Eastern Highlands Bioregion	HN588 Snow Grass	0.12	2	0.25	0	0.00	0	-2	
River Tussock - Tall Sedge - Kangaroo Grass moist grasslands of the South Eastern Highlands Bioregion	HN576 River Tussock	0.44	7	0.88	0	0.00	0	-7	
Silvertop Ash - Narrow-leaved Peppermint open forest on ridges of the eastern tableland, South Eastern Highlands Bioregion	HN584 Mod-Good_Canopy & Native Ground Cover	4.15	178	17.80	21.6	22.54	225	47	
	HN584 Mod-Good_Canopy & Exotic ground cover				0.41				
	Cleared (Regenerate to HN584)				0.53				
Silvertop Ash - Blue-leaved Stringybark shrubby open forest on ridges, north east South Eastern Highlands Bioregion	HN583 MG_Canopy with Native Ground Cover				7.57	7.57	76	76	
Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion	HN570 MG_Canopy & Exotic ground cover?				0.16	0.16	2	2	
River Oak open forest of major streams, Sydney Basin Bioregion and South East Corner Bioregion	HN574 MG_Canopy with Native Ground Cover				0.09	0.09	1	1	
	Grand Total	8.37	276	28.30	60.35	60.35	604	327	

		Impact Area	No. Credits Required	Approx. Offset Area Required (No. Credits/7.1)	Proposed Offset Area (ha)	No. credits generated / ha	Est. no of credits generated	Credit Balance
Species Credits								
Pink-tailed Worm Lizard		2.07	59	8.31	10.64	7	76	17
Striped Legless Lizard		2.07	52	7.32	10.64	7	76	24
Rosenberg's Goanna		6.3	210	29.58	30.11	7	214	4

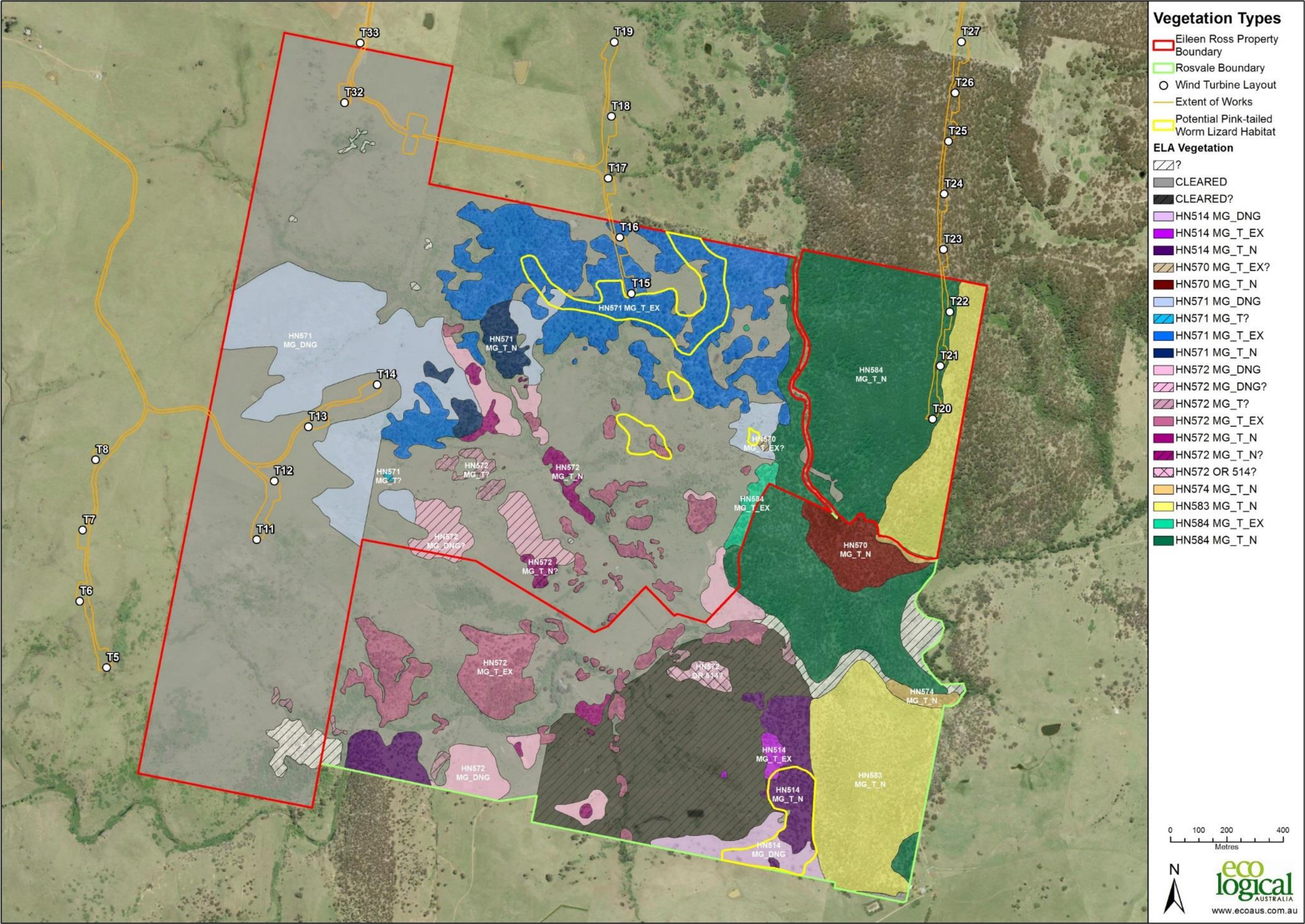


Figure 1: Plant Community Types mapped on Ross and Rosvale Properties by ELA November 2015

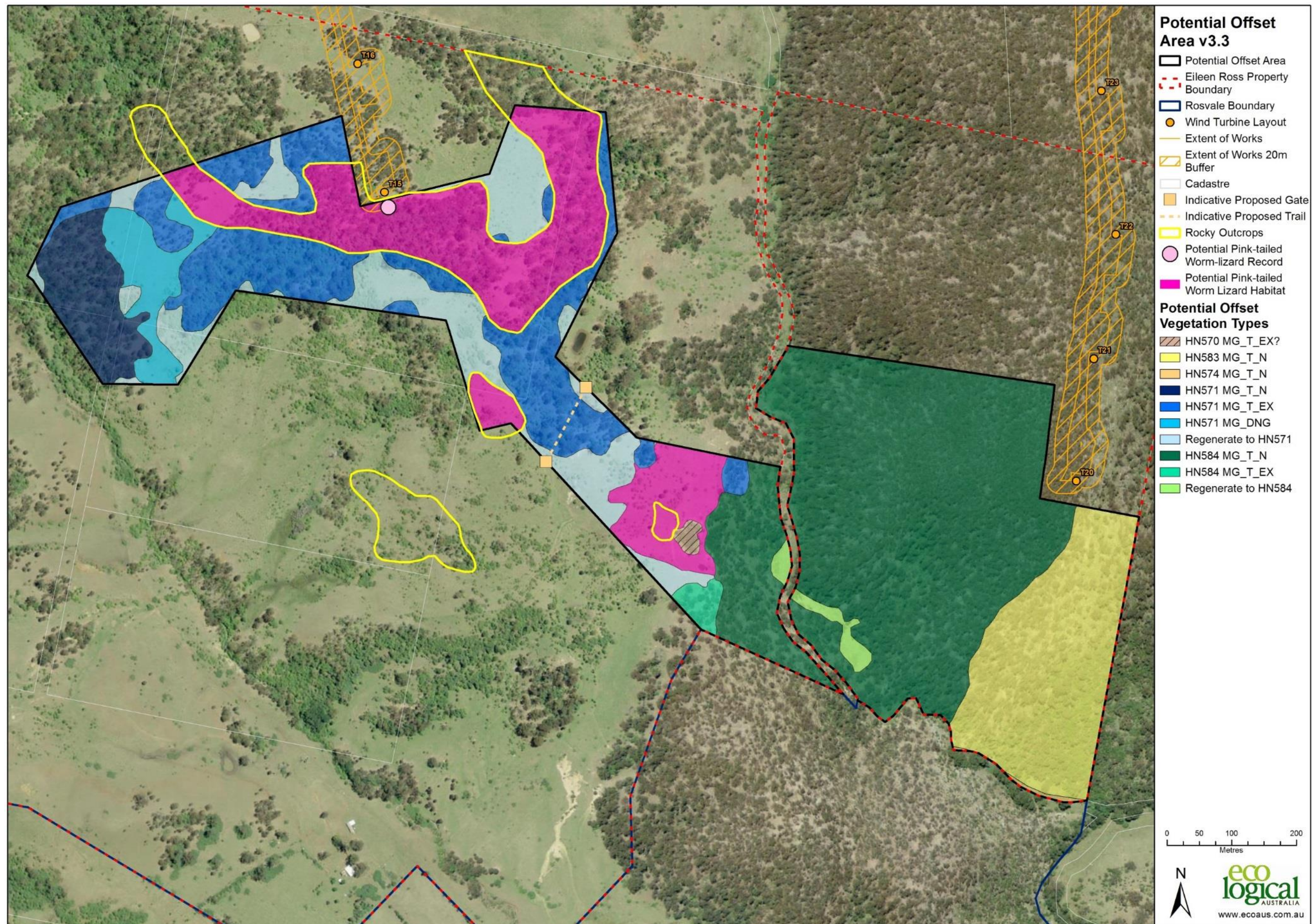


Figure 2: Proposed Offset Area Boundary, Plant Community Types and Condition

