9 October 2020

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Department of Planning, Industry & Environment
Green and Resilient Places Division
Locked Bag 5022
Parramatta NSW 2124

Via Portal upload

Dear Sir/Madam,

Re: Draft Cumberland Plain Conservation Plan; [redacted] Orchard Hills NSW 2748

Thank you for the opportunity to provide a submission to the draft Cumberland Plain Conservation Plan (**the Plan**) currently on exhibition and also for the Community Webinar on 10 September 2020.

We write in relation [redacted] Orchard Hills NSW 2748 being Lot [redacted] and referred to herein as the '**Site**' and outlined in yellow in Figure 1 below.

Figure 1: Location Plan with Site outlined in yellow (*Spatial Viewer for the Plan, DPIE*)

COPRAD represents an entity that has a legal right to acquire the Site and has been undertaking investigations for some months.

The Department of Planning, Industry & Environment (**DPIE**) Spatial Viewer for the Plan identifies a portion of the Site as *Proposed Environmental Conservation Zoning* (**Subject Area**) which has prompted this submission. Based on review of documentation exhibited for the draft Plan and our investigations, COPRAD is of the very strong view that the Subject Area should not be deemed as avoided lands.

On 11 August 2020, two ecologists from Ecoplanning undertook a detailed field survey including the Subject Area and derived a vegetation integrity score of 23.5/100 as detailed in the attached Vegetation Assessment dated 17 September 2020. The Vegetation Assessment noted the low score "reflects the overall poor condition of the patch of native vegetation on site" and raised other issues including the fragmentation of the patch even when considered with lands to the north.

We appreciate that it would be impractical for DPIE to undertake field surveys of the entire 5,475 hectares of native vegetation proposed to offset development within the Western Parkland City and that the draft mapping of the Plan needs to rely largely on desktop analysis with limited 'drive-by' or kerbside inspections. For these reasons, we request that DPIE utilise the attached Vegetation Assessment prepared from detailed field survey works and by qualified ecologists.

A separate assessment completed by Ecoplanning in April 2020 identified the 1st Order Stream that runs generally north-south through the Subject Area and lands to the north. In accordance with WaterNSW's Guidelines for riparian corridors on waterfront land, a 1st order stream can be relocated and requires a vegetated riparian zone of 10 metres beyond the channel. The stream is located at the west of the Subject Area almost adjacent the Calverts Road boundary and approximately 70 metres from the eastern extent of the *Proposed Environmental Conservation Zoning* in most areas.

COPRAD is supportive of strategic conservation planning in Western Sydney and respects the principle of protecting native vegetation within new conservation lands to offset development however in this instance, based on the evidence collected from detailed investigation, it is not appropriate or necessary to apply an environmental conservation zoning for biodiversity or riparian purposes.

The exhibition period of the Plan is intended as an opportunity to engage with the community and the foundation of meaningful consultation relies on accounting for input received, particularly when based on evidence that is significantly superior to that which was relied upon to prepare the draft documentation. We understand that "the department will review and, where necessary, update the mapping of urban-capable land and strategic conservation areas following feedback from the exhibition" and will strongly appeal to DPIE to adjust the mapping in this instance.

If you have any questions or comments, please let me know.

Yours sincerely,

[redacted]

Tim Colless
Director | [redacted]

ecoplanning
ecology | planning | offsets

Tim Colless
Director
Coprad
PO Box 358
Kiama NSW 2533
Supplied by email

17 September 2020

Re: Vegetation Assessment, [redacted] Orchard Hills, NSW

Dear Tim,

Please find below an assessment of the vegetation condition within [redacted] Orchard Hills 2748 (hereafter referred to as the 'study area').

The study area is wholly located within the Penrith City Council Local Government Area (LGA) and is zoned RU4 – Primary Production Small Lots under the Penrith City Council Local Environmental Plan 2010.

Background and purpose of the letter

Ecoplanning was engaged to assess the vegetation within the study area. The native vegetation, which exists at the western end of the study area, has been designated as 'Non-certified – Avoided for Biodiversity' and 'Proposed Environmental Conservation' as part of the draft Cumberland Plain Conservation Plan (the Plan) as identified in **Figure 1**.

It is understood that this letter is to form the basis of a submission to the NSW Department of Planning, Industry and Environment (DPIE) with regards to the Plan and proposed conservation of the 'Proposed Environmental Conservation' portion of the study area.

Desktop Analysis

Previous vegetation mapping by OEH (2015) indicated that two native vegetation communities occurred within the study area, the majority of which was Plant Community Type (PCT) 849 – Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (**Figure 2**). This community comprises a canopy dominated by Grey Box (*Eucalyptus moluccana*), Forest Red Gum (*E. tereticornis*) and Ironbark (*E. crebra/fibrosa).* PCT 849 is a component of Cumberland Plain Woodland, a Critically Endangered Ecological Community (CEEC) under the Biodiversity Conservation (BC Act) 2016. It is also listed as a Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest, a CEEC under the

Environmental Protection and Biodiversity Conservation Act (EPBC Act) 1999. This community is equivalent to Shale Plains Woodlands (MU10) under the NPSW (2002) vegetation mapping.

The second patch of native vegetation mapped within the study area comprises PCT 835 – Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion. PCT 835 is also listed as an Endangered Ecological Community (EEC) under the BC Act. This community is equivalent to Alluvial Woodland (MU11) under the NPSW (2002) vegetation mapping. The relationship between the vegetation communities identified on site and their threatened species status is summarised in **Table 1**.

Table 1: Relationship between vegetation communities, PCTs and TECs.

NPWS (2002)	Plant Community Type (PCT) (OEH 2015)	BC Act	EPBC Act
Alluvial Woodland (MU11)	Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)	River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions, **EEC**	NA
Shale Plains Woodland (MU10)	Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 849)	Cumberland Plain Woodland in the Sydney Basin Bioregion **CEEC**	Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest **CEEC**

EEC = Endangered Ecological Community, CEEC = Critically Endangered Ecological Community

Field Survey to validate mapping

Field survey was undertaken on the 11th of August 2020 by Lucas McKinnon (Principal Ecologist, Ecoplanning) and Brooke Trigg (Ecologist). Field survey collected data following the Biodiversity Assessment Methodology (BAM) (OEH 2017). One BAM Plot was undertaken in the vegetation community in the west of the study area and entirely within the patch of mapped PCT 849. This was to validate the vegetation mapping (OEH 2015) and provide an indication of the vegetation condition as indicated by the 'Vegetation Index' (VI) score. The VI score represents the degree to which the composition, structure and function of the vegetation at a site differs from the best-on-offer condition for the same vegetation type in the contemporary landscape. The VI ranges from 0-100, with 100 indicating 'the best-on-offer'.

Results

Field survey determined that the vegetation community on site was not consistent with OEH (2015) mapping. The dominance of *Casuarina glauca* indicates that this vegetation community aligns more closely with Alluvial Woodland MU11 (NPWS 2002). The remainder of the study area consisted of cleared land, dominated by weeds and exotic pasture grasses. A validated vegetation map based on the field survey is provided in **Figure 3**.

PCT 835 was assigned to a 'disturbed' condition class. The canopy contains *Casuarina glauca* with no other canopy species present. The midstory contains some *Bursaria spinosa* with the ground-layer dominated by weed species including *Ehrharta erecta** (Panic Veldtgrass), *Sida rhombifolia** (Paddy's Lucerne), and *Lantana camara** (Lantana). The total cover of high threat exotic species was 86.4 %. The species list collected within the plot **(Appendix B**) indicates the dominance of *Casuarina glauca* with a low overall native diversity and dominance of exotic species.

The native vegetation within the west of the study area was calculated to have a vegetation integrity score of 23.5/100 (**Table 2**). This score reflects the overall poor condition of the patch of native vegetation on site.

Table 2: Vegetation Integrity Score.

Veg Zone	Plant Community type	Condition class	Total area (ha)	Vegetation Integrity Score
1	PCT 835 – Forest Red Gum - Rough-barked Apple grassy woodland	Disturbed	0.37	23.5

Conclusion

Field validation revealed a native plant community that is more similar to PCT835 than what has been mapped by OEH (2015). However, even then, the plant community is in poor condition and is dominated by a single canopy species. Only one native shrub species was present, with the ground layer being dominated by high-threat exotic species. Relative to other patches of native vegetation in the locality (i.e. within a 5km radius), the patch should be considered a low priority for protection. The low VI score (23.5/100) indicates the differing condition relative to the best-on-offer for the same vegetation type.

The draft Cumberland Plain Conservation Plan has relied on large-scale desktop assessment and mapping for identification of land and proposed zoning. In contrast, this assessment is at the site scale and uses field-collected data to provide a more definitive assessment of the ecological values of the identified patch.

As outlined above, the patch is of limited biodiversity value as reflected by the low VI score and dominance of high-threat exotic species. Moreover, and in the context of the surrounding land use, the small size of the patch, even when including the adjoining vegetation to the north, means that it is likely to further suffer from fragmentation and edge effects, further exposing it to the disruption of ecological processes (**Figure 4**). While these trees may provide a short-term food resource and temporary refuge for some fauna, they would not be a limiting resource for native species, threatened or otherwise.

Please feel free to contact me if you have any questions regarding this assessment.

Yours sincerely

[redacted]

John Gollan

Senior Ecologist
BSc (Hons), PhD

[redacted]

References

NSW Dept. of Planning, Industry and Environment (DPIE) (2020b). NSW Planning Viewer Beta. NSW Government. Accessed at: https://maps.planningportal.nsw.gov.au/Terms

NSW Office of Environment and Heritage (OEH) (2015a) Remnant Vegetation of the western Cumberland subregion, 2013 Update. VIS_ID 4207.

NSW Office of Environment and Heritage. OEH (2017). Biodiversity Assessment Methodology. Accessed at : http://www.environment.nsw.gov.au/biodiversity/assessmentmethod.htm

NSW National Parks and Wildlife Service (NPWS). Interpretation Guidelines for the Native Vegetation Maps of the Cumberland Plain, Western Sydney. NSW NPWS. Hurstville.

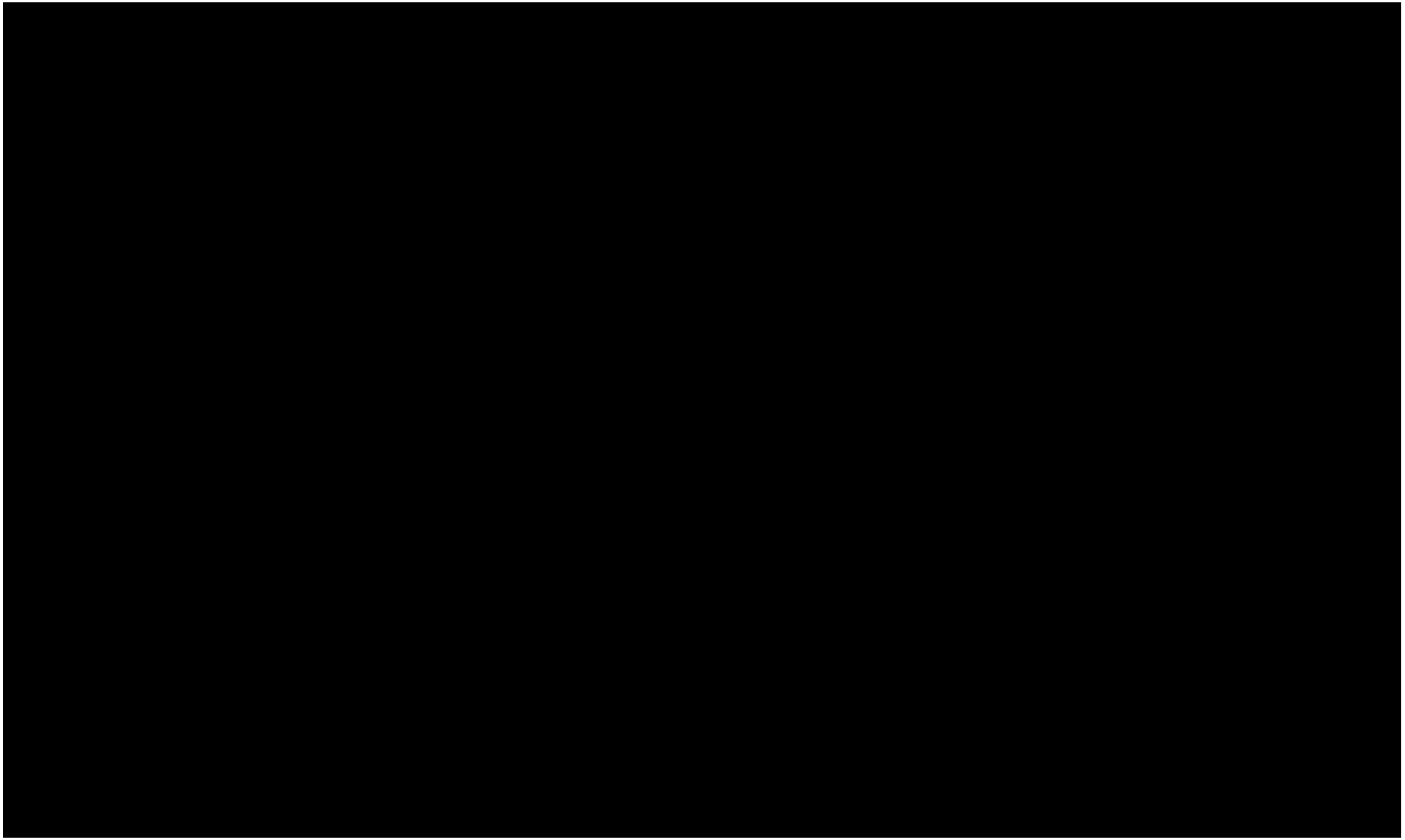

Figure 1: **The subject lot is identified by a yellow circle. Native vegetation in the western portion has been designated 'Non-certified -Avoided for Biodiversity' as part of the draft Cumberland Plain Conservation Plan.**

Figure 2: Native vegetation (OEH 2015) within the study area.

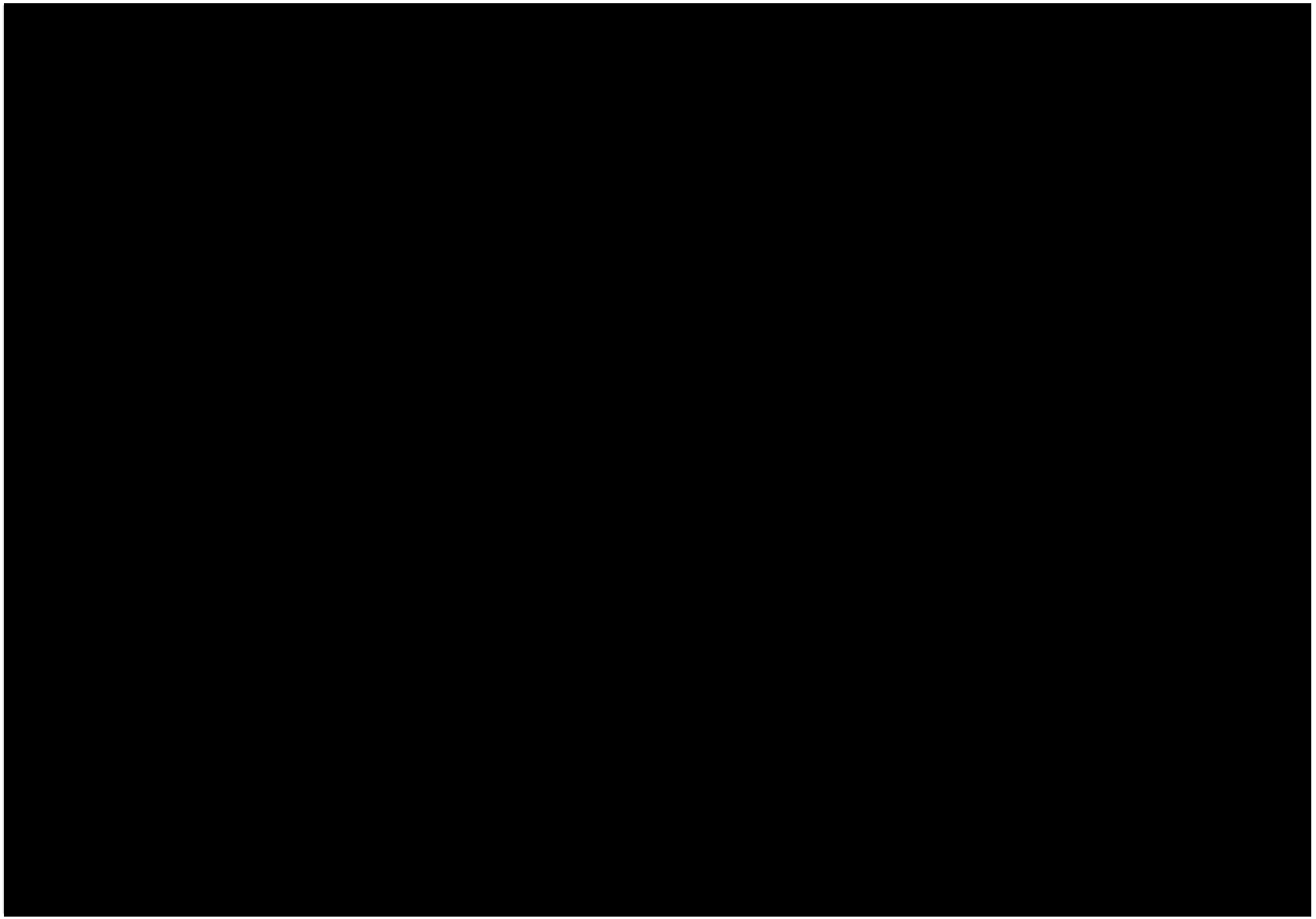

Figure 3: Validated vegetation within the study area (Ecoplanning 2020).

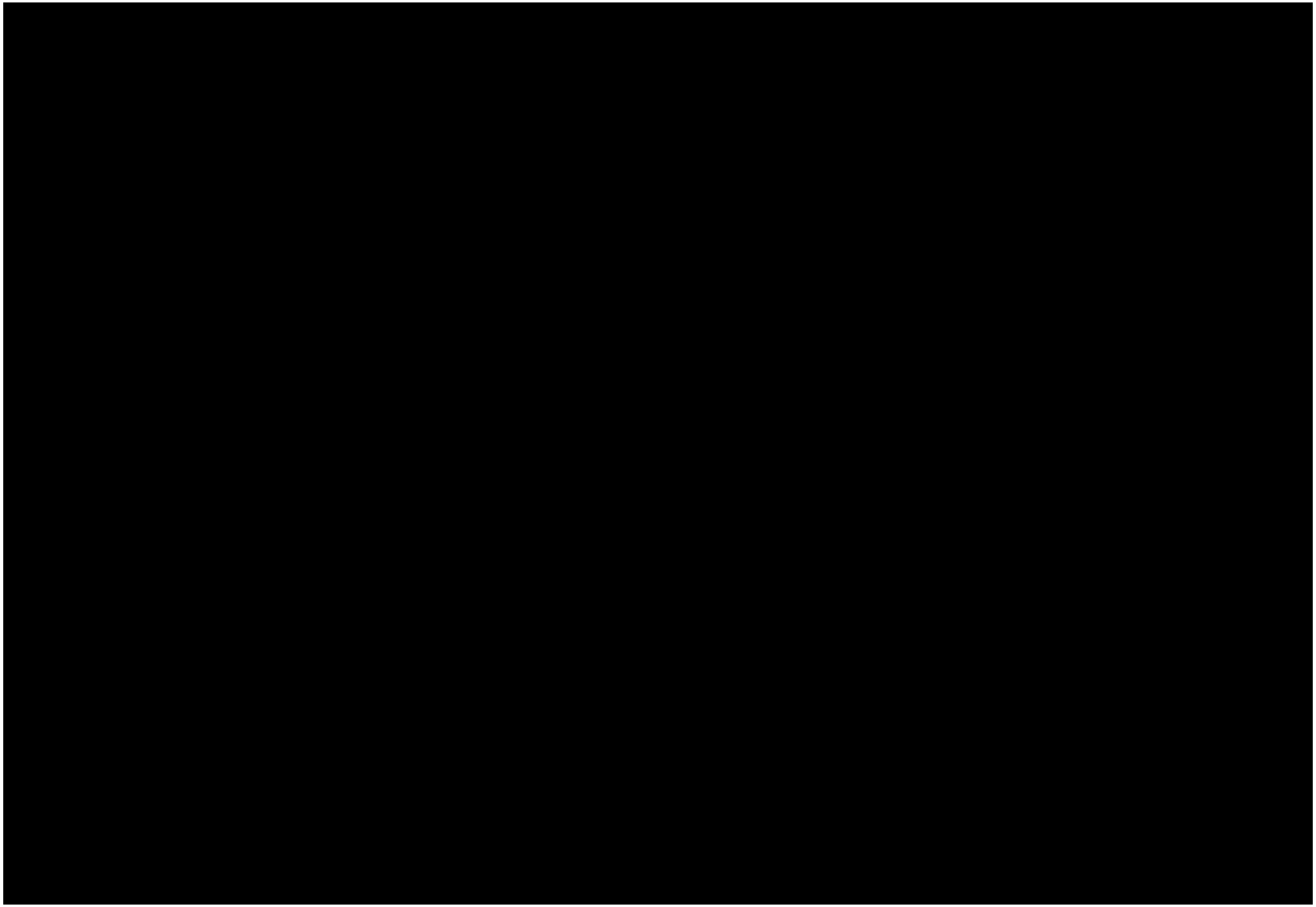

Figure 4: **Native vegetation in the wider area shows the isolation of the native vegetation in the study area from other patches. Future development in the surrounding area (see Figure 1) will further increase its isolation.**

APPENDIX A: BAM PLOT DATA

Plot No.	PCT	Area (ha)	Patch size	Condition class	Zone	Easting	Northing	Bearing	Composition					
									Tree	Shrub	Grass	Forb	Fern	Other
1	835	0.36	101	Disturbed	56				2	1	1	2	0	0

Plot No.	Structure						Function										
	Tree	Shrub	Grass	Forb	Fern	Other	Large trees	Hollow trees	Litter cover	Fallen logs	Tree stem 5-10	Tree stem 10-20	Tree stem 20-30	Tree stem 30-50	Tree stem 50-80	Tree regen	High threat exotic
1	50.1	0.1	10	0.2	0	0	0	0	50	6	1	1	0	0	0	1	86.4

APPENDIX B: FLORA SPECIES LIST

Family	Scientific Name	Common name	Native/Exotic	Cover	Abundance
Apocynaceae	*Araujia sericifera**	Moth Vine	Exotic	0.1	5
Asparagaceae	*Asparagus asparagoides**	Bridal Creeper	Exotic	0.1	5
Asteraceae	*Bidens pilosa**	Cobbler's Pegs	Exotic	5	100
Pittosporaceae	*Bursaria spinosa*	Native Blackthorn	Native	0.1	5
Casuarinaceae	*Casuarina glauca*	Swamp Oak	Native	50	100
Poaceae	*Cenchrus clandestinus*	Kikuyu Grass	Exotic	0.1	5
Asteraceae	*Cirsium vulgare**	Spear Thistle	Exotic	0.1	20
Lamiaceae	*Clerodendrum tomentosum*	Hairy Clerodendrum	Native	0.1	1
Asteraceae	*Conyza** spp.	A Fleabane	Exotic	0.1	20
Malaceae	*Cotoneaster** spp.		Exotic	1	1
Convolvulaceae	*Dichondra repens*	Kidney Weed	Native	0.1	100
Poaceae	*Ehrharta erecta**	Panic Veldtgrass	Exotic	50	1000
Fumariaceae	*Fumaria* spp.*	Fumitory	Exotic	0.1	50
Geraniaceae	*Geranium solanderi*	Native Geranium	Native	0.1	3
Verbenaceae	*Lantana camara**	Lantana	Exotic	20	50
Fabaceae (Faboideae)	*Medicago* spp.*	A Medic	Exotic	1	100
Poaceae	*Microlaena stipoides*	Weeping Grass	Native	10	100
Oleaceae	*Olea europaea**	Common Olive	Exotic	10	10
Plantaginaceae	*Plantago lanceolata**	Lamb's Tongues	Exotic	0.1	20
Asteraceae	*Senecio madagascariensis**	Fireweed	Exotic	0.1	10
Malvaceae	*Sida rhombifolia**	Paddy's Lucerne	Exotic	20	100
Solanaceae	*Solanum nigrum**	Black-berry Nightshade	Exotic	0.1	10
Asteraceae	*Sonchus oleraceus**	Common Sowthistle	Exotic	0.1	5
Lamiaceae	*Stachys arvensis**	Stagger Weed	Exotic	0.1	10