

Record Reference: [REDACTED]
[REDACTED] Luddenham NSW 2745
7th October 2020

Department of Planning, Industry and Environment
12 Darcy St,
Parramatta NSW 2150

Attn: Steve Hartley
Executive Director

RE: Public Exhibition of the Draft Cumberland Plain Conservation Plan - [REDACTED]
[REDACTED] Luddenham NSW 2745

We are the owners of [REDACTED] Luddenham NSW 2745, we strongly argue against classifying our area as 'E2 Environmental Conservation Land' as it is inaccurate without any sound basis to be categorised as 'E2 Environmental Conservation Land'.

As per the attached Narla Environmental Assessment for [REDACTED] Luddenham NSW 2745, Narla Environmental have advised that the proposed E2 Zone Mapping is inaccurate and needs reconsideration as the ecological assessment has identified that the majority of the existing watercourse and associated riparian corridor is located in land proposed to be mapped as 'Certified – urban capable land', which has no environmental significance, this conclusion is supported by the attached Assessment.

The proposed 'E2' Zoning of the property at [REDACTED] Luddenham NSW 2745 will not contribute to suitable environmental restoration or biodiversity conservation gain, but rather, lead to misguided use of land.

Please refer to the attached Assessment for further supporting information.

Thank you for your consideration of our submission.

Yours sincerely

[REDACTED]
[REDACTED]

[REDACTED]
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29th September, 2020

Re: Proposed E2 Assessment at [REDACTED] Luddenham

To whom it may concern,

Narla Environmental Pty Ltd (Narla) were engaged by the proponents [REDACTED] to undertake an ecological assessment of the area proposed to be rezoned as E2: Environmental Conservation, under the Draft Aerotropolis State Environmental Planning Policy (the SEPP), located between [REDACTED] Luddenham NSW 2745 [REDACTED] the 'Subject Site'; **Figure 1**).

Narla understand that the zoning has been conducted in accordance with the Draft Cumberland Plain Conservation Plan (The Plan; DPIE 2020c) that proposes to protect lands containing high-value vegetation. The Plan is also being applied to land that is deemed unsuitable for development due to the presence of riparian corridors along creek lines, and steep land.

It appears that the Subject Site has been mapped as E2 due to the presence of a 2nd order watercourse and associated riparian corridor located within the Subject Site.

Narla were engaged to conduct an assessment to support the proponents submission which is contesting the accuracy of the mapping of the watercourse, and to identify any additional ecological features found within the Subject Site to justify the proposed E2 zoning.

Methodology

A thorough literature review of local information relevant to the Subject Site was undertaken. This included a review of the Plan and the SEPP as well as searches using NSW Wildlife Atlas (BioNet; DPIE 2020a) and the Commonwealth Protected Matters Search Tool (DAWE 2020) were conducted to identify all current threatened flora and fauna, as well as migratory fauna records within a 10km x 10km cell centred on the Subject Site. These data were used to assist in establishing the presence or likelihood of any ecological values as occurring on or adjacent to the Subject Site, and helped inform our ecologist on what to look for during the site assessment. In addition, soil landscape and geological mapping was examined to assist in determining whether any threatened flora or ecological communities may occur within the Subject Site (Bannerman & Hazelton 2011; DPIE 2020b).

A site assessment was undertaken by Narla Ecologist Chris Moore on Tuesday 22nd September 2020. During the site assessment, the following activities were undertaken within the Subject Site:

- Accurate mapping of the watercourse;
- Identification of vegetation communities;
- One (1) Vegetation Integrity Survey (VIS) plot was conducted to show the condition of the vegetation within the E2 zone;
- Opportunistic surveys for threatened flora and fauna
- Any other additional significant habitat features were recorded.



Figure 1. Location of the proposed E2 zone (Subject Site).

Results

Hydroline

Site assessment revealed that the 2nd order hydroline and associated riparian corridor on which the E2 zones has been based, is not accurate. The hydroline is located running from the large dam on [REDACTED] to another large dam on [REDACTED] then proceeding down the fence line of [REDACTED] until exiting the property through a culvert under [REDACTED] (Figure 2; Plate 3).

Vegetation communities

Site assessment indicated the following vegetation communities were present within the Subject Site (Figure 3):

- Low condition Cumberland Plain Woodland (CPW), Listed as Critically Endangered under the Biodiversity Conservation Act 2016;
- Historically cleared pasture vegetation; and
- Planted Pines.

CPW within the Subject Site was comprised of a single *Eucalyptus tereticornis* in the corner of the Subject Site above a cleared understory and ground layer. Additional areas of CPW were identified in areas adjacent to the Subject Site, however only a small portion intersected with the E2 zone (Plate 1).

The majority of the Subject Site was comprised of historically cleared pasture vegetation typical of a rural landscape, largely dominated by exotic species including *Eragrostis curvula*, *Senecio madagascariensis*, *Medicago trunculata*, *Trifolium repens*, *Conyza* sp., *Taraxacum officinale* and *Plantago lanceolata* (Plate 2). As these species are exotic, they do not conform to a locally occurring native vegetation community, and as such, the vegetation was considered to be historically cleared pasture vegetation.

A row of *Callitris* spp. were present along the fence line of the two properties. These were historically planted for privacy screening.

Vegetation Integrity Survey (VIS) Plot

A 50m x 20m VIS plot was conducted within the historically cleared pasture vegetation which made up the vast majority of the Subject Site (Appendix A). The plot revealed the following scores:

- Composition Condition Score: 0.3;
- Structure Condition Score: 40.9;
- Function Condition Score: 7.2; and
- Current Vegetation Integrity Score: 4.2.

The Current Vegetation Integrity Score indicates how strongly the vegetation within the site differs from the “best-on offer” condition for the same vegetation type in the contemporary landscape (OEH 2017). The vegetation within the Subject Site had a Current Vegetation Integrity Score of 4.2 out of a possible 100, showing that the sampled patch of vegetation is of a considerably degraded.

Threatened flora and fauna

No threatened flora and fauna species were found to occur within the Subject Site during the site assessment.

It was determined that the Subject Site was severely degraded such that the presence of threatened flora was highly unlikely.

In addition, minimal habitat for threatened fauna species existed within the Subject Site. Only one (1) nectar-bearing tree was present within the Subject Site which may provide potential foraging habitat for threatened species.

All flora and fauna located within the Subject Site and the immediate surrounds are recorded within Appendix B and Appendix C.

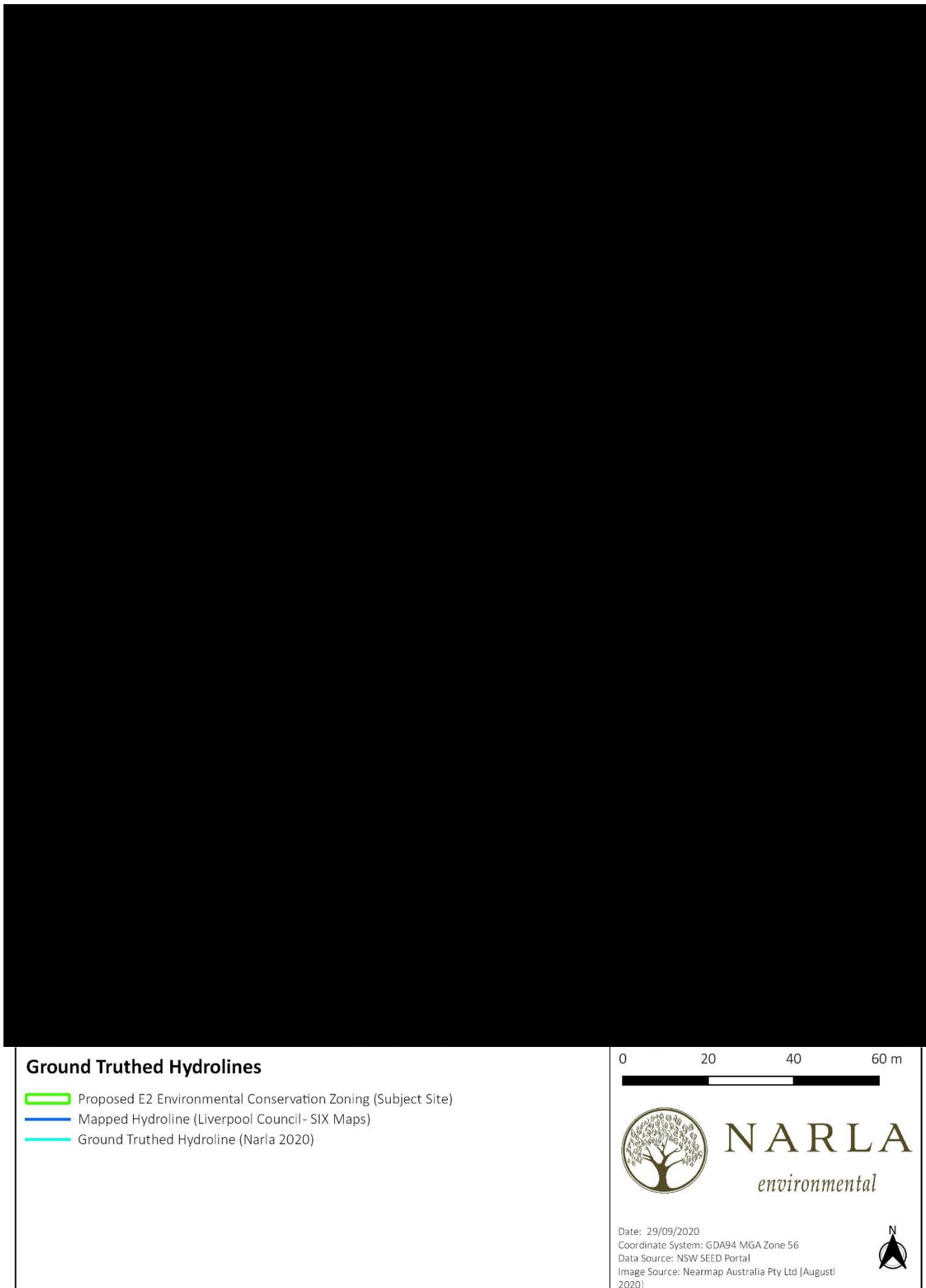


Figure 2. Ground truthed hydroline's compared to mapped hydroline's within the Subject Site

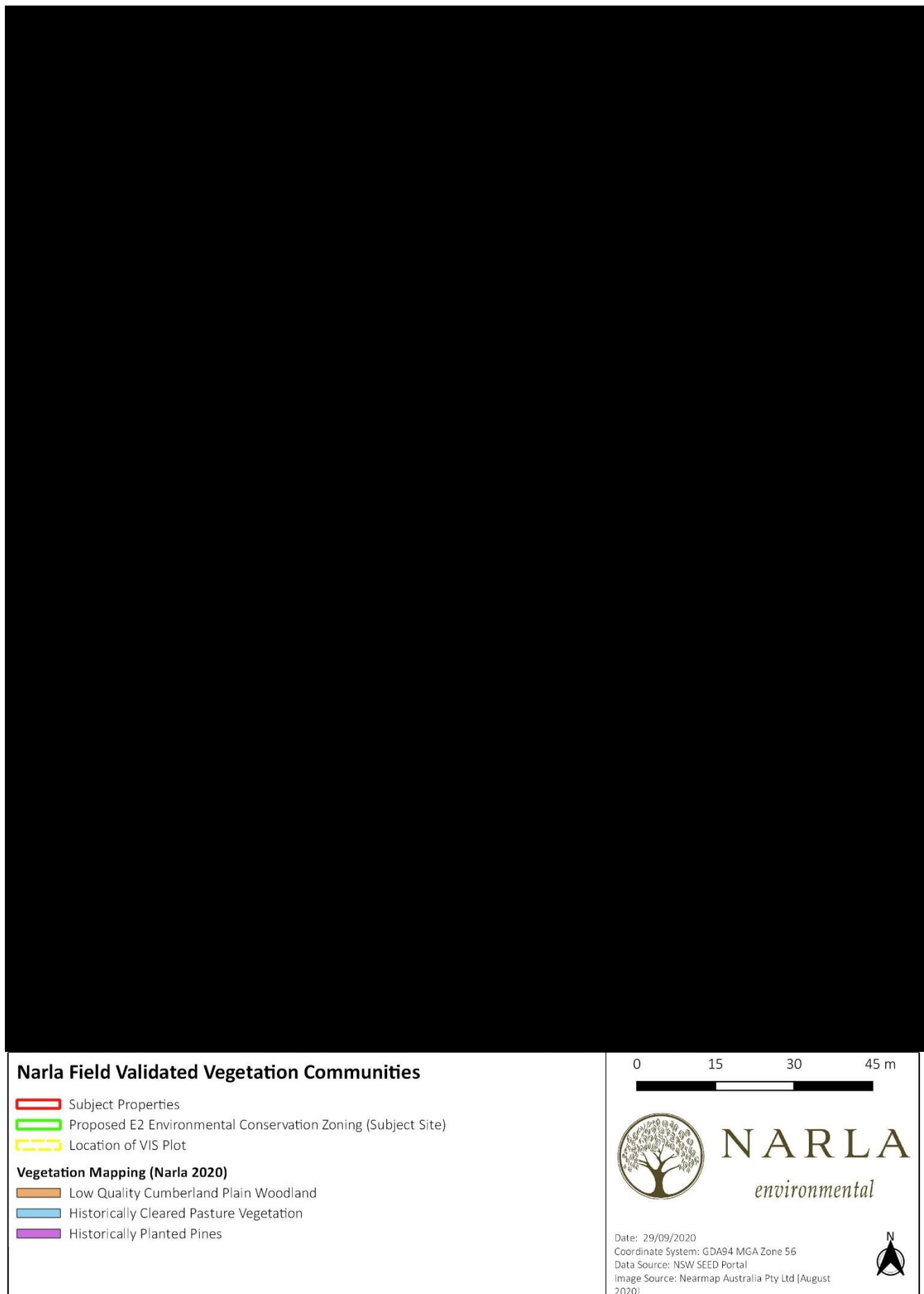


Figure 3. Narla Field Validated Vegetation Mapping.

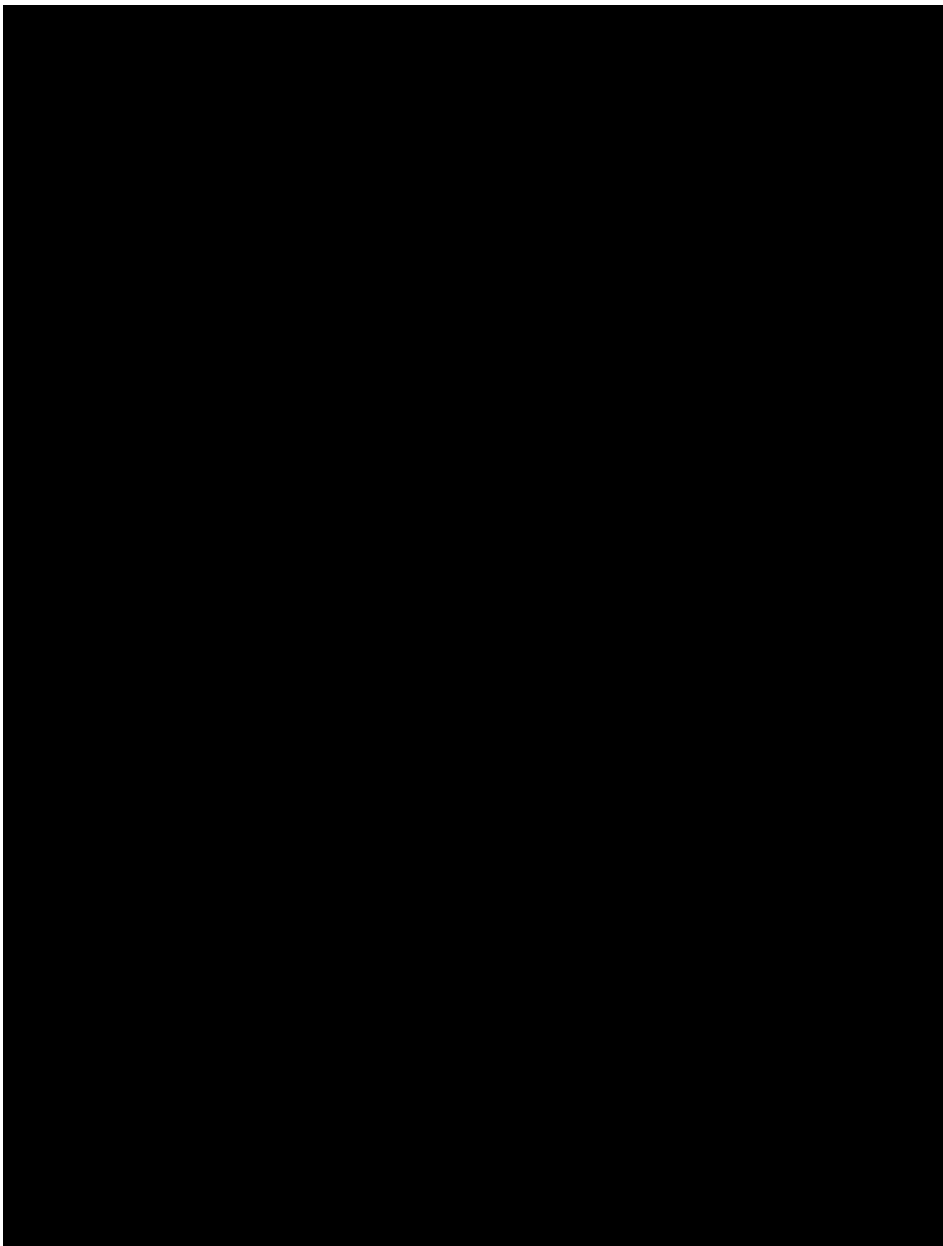


Plate 1. Cumberland Plain Woodland Vegetation within the Subject Site

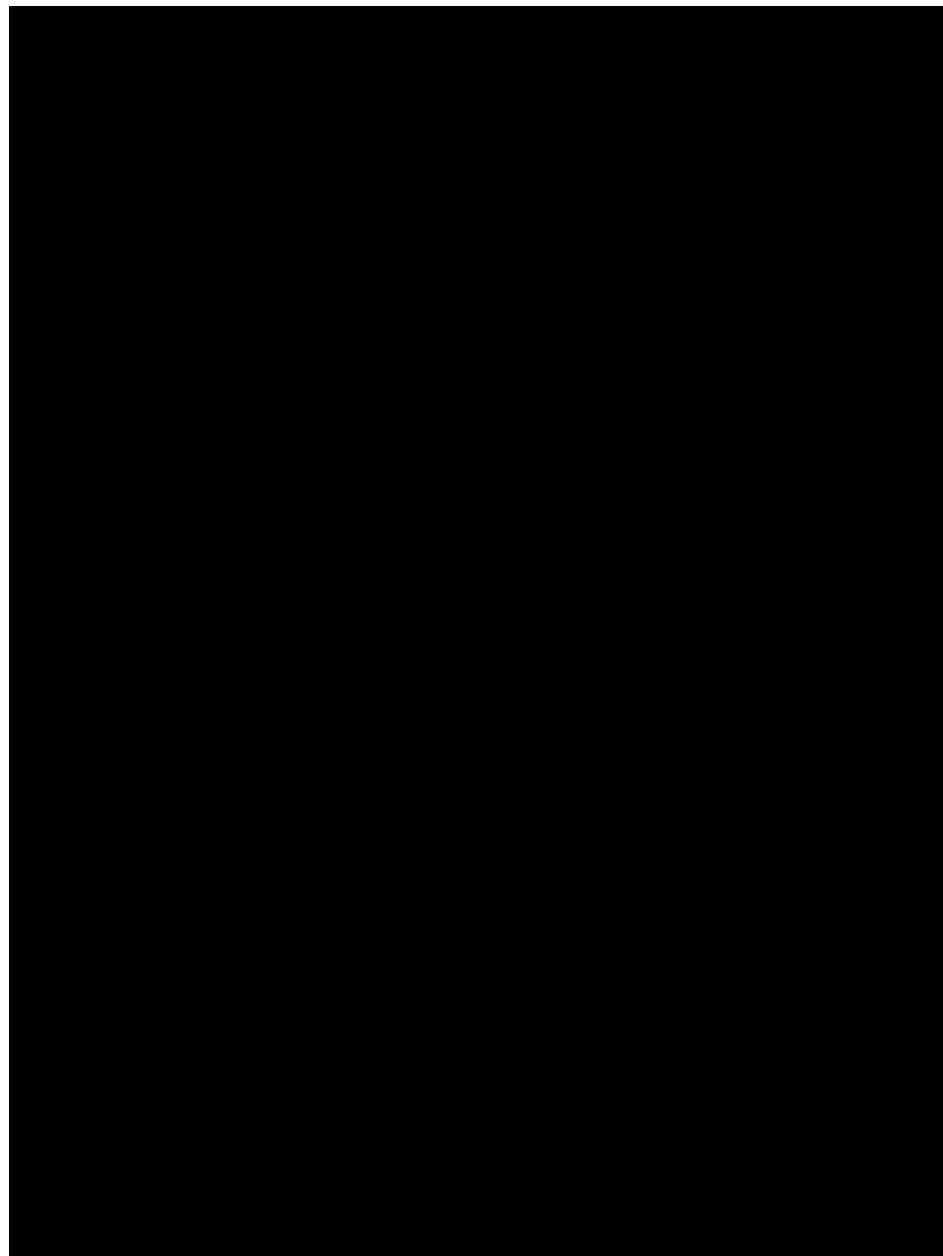


Plate 2. Historically cleared pasture vegetation encompassing the majority of the Subject Site.

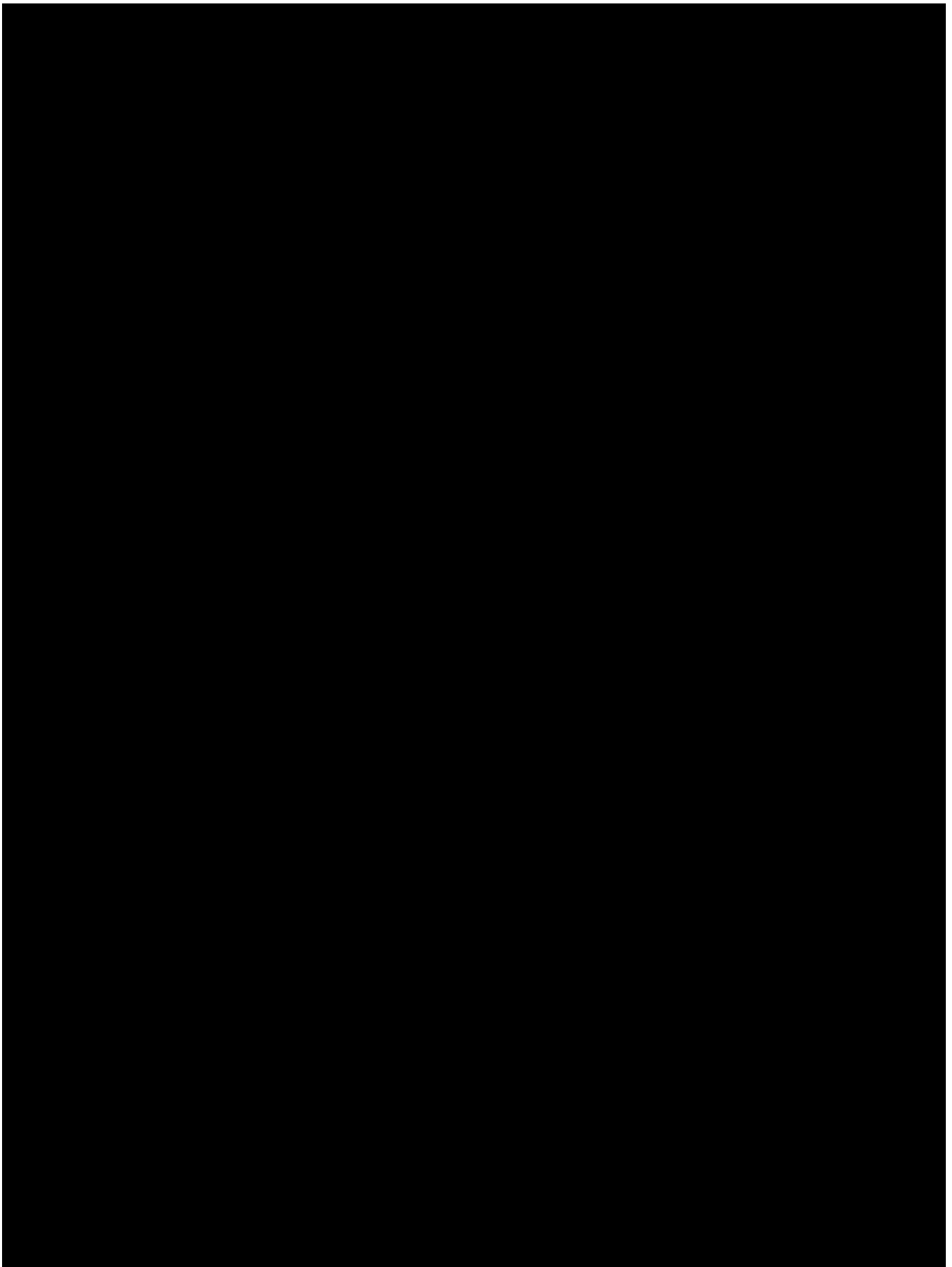


Plate 3. Ground truthed hydroline within [REDACTED] Luddenham.

Conclusion

The site assessment identified that there is a need for the accuracy of proposed E2 zone mapping to be reviewed within the Subject Site.

The Plan lists areas being zoned as E2 as either containing areas of high value vegetation or areas with low development potential such as riparian corridors or steep lands.

Whilst it is evident that the Subject Site has been mapped based on the existing watercourse and associated riparian corridor within the area, this ecological assessment has identified that the mapping is inaccurate. The majority of the existing watercourse and associated riparian corridor is located in land proposed to be mapped as 'Certified – urban capable land'.

In addition, undertaking a VIS plot provided further evidence that only a small portion of the Subject Site contained high value vegetation (areas mapped as CPW), with the majority of the site containing exotic pasture vegetation typical of a rural landscape.

Sincerely,

Chris Moore – Project Manager/ Ecologist
Narla Environmental Pty Ltd

References

- Australian Government Department of Agriculture, Water and the Environment (DAWE) (2020). Protected Matters Search tool. <http://environment.gov.au/epbc/protected-matters-search-tool>
- Bannerman S.M. and Hazelton P.A. (2011) Soil Landscapes of the Penrith 1:100,000 Sheet report, Office of Environment and Heritage, Sydney
- Department of Planning, Industry and Environment (DPIE) (2020a) NSW BioNet. The website of the Atlas of NSW Wildlife <http://www.bionet.nsw.gov.au/>
- Department of Planning, Industry and Environment (DPIE) (2020b) eSPADE v2.0 <https://www.environment.nsw.gov.au/eSpade2Webapp#>
- Department of Planning, Industry and Environmental (DPIE) (2020c) Draft Cumberland Plain Conservation Plan.
- Government Spatial Services (SIX Maps) (2020) NSW Government Land & Property Information Spatial Information Exchange map viewer, <https://six.nsw.gov.au/>
- Liverpool Council (2008) Local Environmental Plan
- NearMaps Australia Pty Ltd (2020) [REDACTED] Luddenham. Accessed September 2020
- Office of Environment and Heritage (2017) Native Vegetation Integrity Benchmarks: An information Sheet
- PlantNET (2020) The NSW Plant Information Network System, Royal Botanic Gardens and Domain Trust, Sydney. <http://plantnet.rbgsyd.nsw.gov.au>
- Robinson, L. (2003) 'Field Guide to the Native Plants of Sydney', Third Edition, Kangaroo Press
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- Tozer, M.G., Turner, K., Simpson, C., Keith, D.A., Beukers, P., MacKenzie, B., Tindall, D. & Pennay, C., (2010) Native vegetation of southeast NSW: a revised classification and map for the coast and eastern tablelands. Version 1.0

Appendices

Appendix A. VIS Plot Conducted Within the Subject Site.

Appendix B. Flora species identified within the Subject Site.

Appendix C. Fauna species identified within and surrounding the Subject Site.

Appendix A. VIS Plot Conducted Within the Subject Site.

| BAM Site – Field Survey Form | | | | | |
|------------------------------|--|-------------------------|--------|-----------|---|
| Date: | 22/09/2020 | Plot ID: | 1 | Photo #: | 0 |
| Zone: | 56 | Plot Dimensions: | 50x20m | Easting: | |
| Datum: | 94 | Middle bearing from 0m: | 219° | Northing: | |
| PCT: | Historically cleared and disturbed grassland | | | | |

| Growth Form | Scientific Name | Cover | Abundance |
|------------------------|---------------------------------|-------|-----------|
| HTE | <i>Eragrostis curvula</i> | 45 | 100 |
| Exotic | <i>Anagallis arvensis</i> | 2 | 100 |
| Exotic | <i>Soliva spp.</i> | 1 | 100 |
| Exotic | <i>Medicago truncatula</i> | 1 | 100 |
| Exotic | <i>Plantago lanceolata</i> | 0.5 | 25 |
| Exotic | <i>Bromus catharticus</i> | 2 | 30 |
| Grass & grasslike (GG) | <i>Cynodon dactylon</i> | 55 | 1000 |
| Exotic | <i>Sisymbrium officinale</i> | 0.2 | 15 |
| HTE | <i>Senecio madagascariensis</i> | 2 | 15 |
| Exotic | <i>Vicia sativa</i> | 0.2 | 10 |
| Exotic | <i>Cyclosporum leptophyllum</i> | 0.2 | 15 |
| Exotic | <i>Trifolium repens</i> | 0.4 | 30 |
| Exotic | <i>Lotus angustissimus</i> | 1 | 100 |
| HTE | <i>Stenotaphrum secundatum</i> | 3 | 100 |
| HTE | <i>Chloris gayana</i> | 1 | 20 |
| Exotic | <i>Verbena bonariensis</i> | 0.5 | 10 |
| Exotic | <i>Sida rhombifolia</i> | 0.1 | 2 |
| Exotic | <i>Taraxacum officinale</i> | 0.3 | 10 |
| Exotic | <i>Conyza bonariensis</i> | 0.1 | 1 |
| Exotic | <i>Gamochaeta spp.</i> | 0.1 | 3 |
| Exotic | <i>Modiola caroliniana</i> | 0.5 | 20 |
| HTE | <i>Cyperus eragrostis</i> | 0.5 | 20 |

| DBH | # Tree Stems Count | # Hollow Bearing Trees |
|---------|--------------------|------------------------|
| 80+cm | 0 | 0 |
| 50-79cm | 0 | 0 |
| 30-49cm | 0 | 0 |
| 20-29cm | 0 | 0 |
| 10-19cm | 0 | 0 |
| 5-9cm | 0 | 0 |
| <5cm | 0 | 0 |

| | |
|--------------------|---|
| Length of Logs (m) | 0 |
|--------------------|---|

| BAM Attribute (1x1m) | Litter Cover (%) |
|----------------------|------------------|
| 1 (5m) | 15 |
| 2 (15m) | 20 |
| 3 (25m) | 20 |
| 4 (35m) | 10 |
| 5 (45m) | 12 |
| Average | 15.4 |

| Growth Form | Composition Data (Count of Native Cover) | Structure Data (Sum of Cover) |
|---------------------|---|----------------------------------|
| Tree | 0 | 0 |
| Shrub | 0 | 0 |
| Grass | 1 | 55 |
| Forb | 0 | 0 |
| Fern | 0 | 0 |
| Other | 0 | 0 |
| High Threat Exotics | 5 | 51.5 |

Appendix B. Flora species identified within the Subject Site.

| Species | Exotic | Canopy | Midstory | Ground layer |
|---------------------------------|----------|--------|----------|--------------|
| <i>Anagallis arvensis</i> | x | | | x |
| <i>Briza minor</i> | | | | x |
| <i>Bromus catharticus</i> | x | | | x |
| <i>Bursaria spinosa</i> | | | x | |
| <i>Callitris spp.</i> | | | | x |
| <i>Carex spp.</i> | | | | x |
| <i>Cirsium vulgare</i> | x | | | x |
| <i>Conyza bonariensis</i> | x | | | x |
| <i>Cynodon dactylon</i> | | | | x |
| <i>Cyperus eragrostis</i> | x | | | x |
| <i>Dichondra repens</i> | | | | x |
| <i>Eragrostis curvula</i> | x | | | x |
| <i>Eruca sativa</i> | x | | | x |
| <i>Eucalyptus moluccana</i> | | x | | |
| <i>Eucalyptus tereticornis</i> | | x | | |
| <i>Glycine clandestina</i> | | | | x |
| <i>Medicago truncatula</i> | x | | | x |
| <i>Microlaena stipoides</i> | | | | x |
| <i>Olea europaea</i> | Priority | | x | |
| <i>Plantago lanceolata</i> | x | | | x |
| <i>Rubus fruticosus agg.</i> | Priority | | | x |
| <i>Rumex spp.</i> | x | | | x |
| <i>Rytidosperma spp.</i> | x | | | x |
| <i>Senecio madagascariensis</i> | Priority | | | x |
| <i>Sherardia arvensis</i> | x | | | x |
| <i>Sida bonariensis</i> | | | | x |
| <i>Solanum sisymbriifolium</i> | x | | | x |
| <i>Taraxacum officinale</i> | x | | | x |
| <i>Trifolium repens</i> | x | | | x |
| <i>Verbena bonariensis</i> | x | | | x |
| <i>Vicia sativa</i> | x | | | x |

Appendix C. Fauna species identified within and surrounding the Subject Site.

| Class | Scientific Name | Common name | Status |
|-------|--------------------------------|--------------------------|-----------|
| Aves | <i>Cacatua galerita</i> | Sulphur-crested Cockatoo | Protected |
| | <i>Chenonetta jubata</i> | Australian Wood Duck | Protected |
| | <i>Corvus coronoides</i> | Australian Raven | Protected |
| | <i>Cracticus tibicen</i> | Australian Magpie | Protected |
| | <i>Egretta novaehollandiae</i> | White-faced Heron | Protected |
| | <i>Hirundo neoxena</i> | Welcome Swallow | Protected |
| | <i>Malurus cyaneus</i> | Superb Fairy Wren | Protected |
| | <i>Manorina melanocephala</i> | Noisy Miner | Protected |
| | <i>Manorina melanophrys</i> | Bell Miner | Protected |
| | <i>Rhipidura albiscapa</i> | Grey Fantail | Protected |
| | <i>Taeniopygia bichenovii</i> | Double-barred Finch | Protected |



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