

Cumberland Ecology Analysis of requirement to include Koala in Coonara Concept Masterplan referral

1. Introduction

The EPBC Referrals Gateway section, in an email to Emma Ellis (Mirvac) and Elizabeth Ashby (Keystone Ecological), dated 12 May 2023, outlined the following in relation to the Koala (*Phascolarctos cinereus*), listed as Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act):

“The Department notes that no significant impact assessment, with supporting evidence, has been undertaken/provided for the relevant MNES in accordance with the EPBC Act referral guidelines for the vulnerable Koala. While this is not required to meet the minimum requirements for the referral application to be validated, it is highly recommended the application includes an MNES significant impact assessment for transparent consideration of Commonwealth legislation and Departmental policies, and updates made additionally to section 5 of the application form accordingly. Please see EPBC Act referral guidelines for vulnerable Koala and Commonwealth Significant Impact Guidelines 1.1 for further information.

Additionally, it is noted that since the completion of your BDAR, the Koala has been up listed by the Department and the information contained within your document is no longer current. Further, there has been no consideration of potential suitable habitat for the Koala mentioned in the application or supporting documentation.”

The purpose of this assessment is to determine if potential suitable habitat for the Koala is present within the Current Referred Area and wider Property and if there is a requirement to include an assessment against the Significant Impact Guidelines for the Endangered Koala.

2. Methodology

The following documents and databases were reviewed for this assessment:

- Commonwealth Protected Matters Search Tool (DCCEEW, 2023a)– Koala Habitat Map; Accessed 21 Aug 2023;
- Species Profile and Threats Database (DCCEEW, 2023b) for Koala (*Phascolarctos cinereus*) combined populations of Qld, NSW and the ACT). Accessed 22 Aug 2023;
- NSW BioNet Atlas (DPE, 2023) Records for Koala (10km x 10km search grid around the Property and Cumberland State Forest); Accessed 21 Aug 2023;
- Biodiversity Development Assessment Report Demolition Stage Lot 61 DP 737386 55 Coonara Avenue West Pennant Hills (Keystone Ecological, 2021b);
- Biodiversity Development Assessment Report (V2.1), Concept Development Application, 55 Coonara Avenue, West Pennant Hills (Keystone Ecological, 2021a);
- Biodiversity Development Assessment Report (V2.2), Concept Development Application, 55 Coonara Avenue, West Pennant Hills (Keystone Ecological, 2022);

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- National Recovery Plan for the Koala (*Phascolarctos cinereus*) combined populations of Queensland, New South Wales and the Australian Capital Territory (DAWE, 2022);
- A review of koala habitat assessment criteria and methods - Report prepared for the Department of Agriculture, Water and the Environment (Youngentob, Marsh, & Skewes, 2021);
- Approved Recovery Plan: Recovery plan for the koala (*Phascolarctos cinereus*) (DECC (NSW), 2008)
- A review of koala tree use across New South Wales (OEH, 2018); and
- Koala Habitat Information Base Technical Guide (EES, 2019)

3. Results

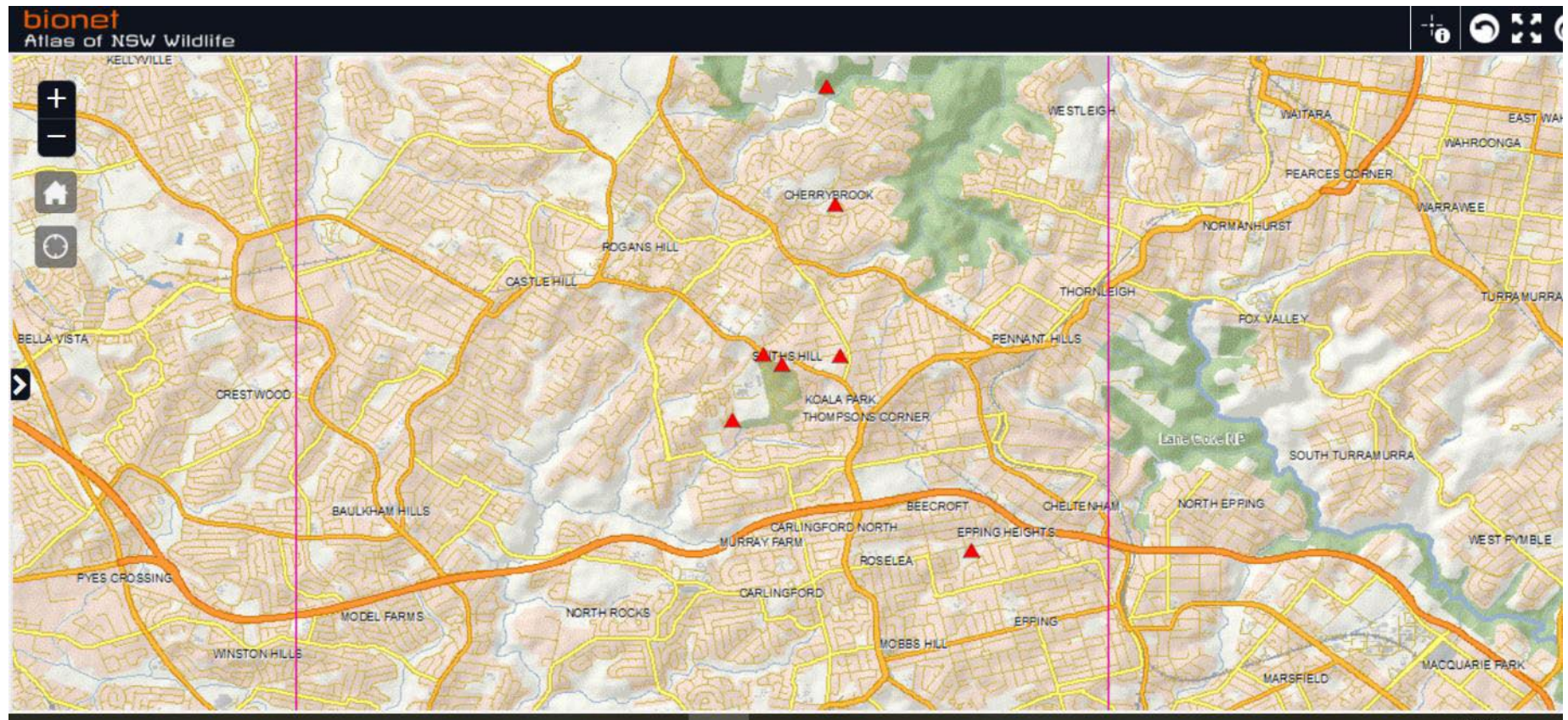
3.1 Database searches

The PMST search for Koala habitat indicated that the Current Referred Area and wider Property are fully located within an area mapped as 'Species or Species Habitat likely to occur'. The BioNet Atlas search returned a total of seven (7) Koala records occurring within a 10km x 10km grid of the Property. Of these, two records are from the Wildlife Rehabilitation Database (dated 2012) while the remaining five records are from a 2019-2021 Community Wildlife Survey. It is noted that the accuracy of the Wildlife Rehabilitation Database records is limited as both records only provide the suburb (West Pennant Hills and Cherrybrook) as the location. It is also noted that the 2019 – 2021 Community Wildlife Survey records also have limited information accompanying them, although all records are listed as visual observations i.e sightings of Koalas.

Two of the Community Wildlife Survey records are noted as occurring within the adjacent Cumberland State Forest. However, correspondence received from Forestry Corporation staff, who manage Cumberland State Forest and conduct regular monitoring within Cumberland State Forest have verified that there are no records of Koalas occurring within Cumberland State Forest (see Appendix 1 – Correspondence). Therefore, the accuracy of the community survey records is questionable.

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Image 1: BioNet Atlas records of the Koala within a 10km x 10km grid of the Property



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3.2 Surveys

Targeted surveys for the Koala were conducted by Keystone within the Previously Referred Area and included:

- Call Playback;
- Spotlighting; and
- Scat searches.

No Koalas were sighted during those surveys and no indications of Koala usage such as scats or scratches were detected during the surveys.

3.3 Document Review

The National Recovery Plan for the Koala (DAWE, 2022) describes Koala habitat as including the total set of resources required by Koalas to meet the needs of individual survival and reproduction and how those resources are arranged in the landscape to maintain viable metapopulation processes. For an individual Koala, this includes access to sufficient quality food and shelter trees to meet their daily energetic requirements and reproduction, and a safe place to avoid predators. For a population, this means sufficient total amount of habitat of adequate quality to support a viable biological population. As per the National Recovery Plan for the Koala (DAWE, 2022), key factors that influence the quality of habitat for Koalas are the presence and density of preferred food tree species, food trees' nutritional foliar chemistry, shelter trees and vegetation structure.

As per the review of Koala habitat conducted by Australian National University for DAWE (Youngentob et al., 2021), the Property occurs within the Central NSW Coast Koala management bioregion. Locally important Koala trees and ancillary habitat trees for the Central NSW Coast bioregion that have been recorded within the Property include:

- Locally Important Trees:
 - *Angophora costata* (Smooth-barked Apple);
 - *Eucalyptus fibrosa* (Broad-leaved Ironbark);
 - *Eucalyptus microcorys* (Tallowood);
 - *Eucalyptus paniculata* (Grey Ironbark);
 - *Eucalyptus punctata* (Grey Gum);
 - *Eucalyptus resinifera* (Red Mahogany);
 - *Eucalyptus saligna* (Sydney Blue Gum); and
 - *Eucalyptus tereticornis* (Forest Red Gum).
- Ancillary Habitat Trees:
 - *Allocasuarina littoralis* (Black She-oak);
 - *Allocasuarina torulosa* (Forest oak);
 - *Angophora floribunda* (Rough-barked Apple);
 - *Casuarina glauca* (Swamp Oak);
 - *Corymbia gummifera* (Red Bloodwood);
 - *Corymbia maculata* (Spotted Gum);
 - *Eucalyptus pilularis* (Blackbutt); and
 - *Syncarpia glomulifera* (Turpentine).

It is noted that the dominant trees within the Property comprise the primary diagnostic species of Blue Gum High Forest (BGHF) and Sydney Turpentine Ironbark Forest (STIF) such as *Eucalyptus*

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saligna, *Eucalyptus pilularis* and *Syncarpia glomulifera*. Other trees recorded within the site comprise scattered individuals, including planted individuals within former landscaped areas.

As information on locally important and ancillary habitat trees in the ANU review was based on review of NSW documentation for Koalas (EES, 2019; OEH, 2018), the NSW documents were reviewed in further detail to determine potential Koala habitat within the Property.

It is noted that the NSW documentation lists Koala trees based on evidence of use for feeding, shelter or social needs. The NSW documentation classifies Koala use trees into four categories based on usage: Rank 1: High preferred use, Rank 2 High use, Rank 3 Significant use and Rank 4 Irregular or low use.

The dominant trees present within the Property namely *Eucalyptus saligna*, *Eucalyptus pilularis* and *Syncarpia glomulifera* are all classified as Rank 3 Significant use. However, none of these species are considered to comprise Koala food trees (DECC (NSW), 2008; OEH, 2018) and therefore usage of these species is largely limited to shelter or movement purposes. This is supported by the NSW documentation, that acknowledges that forests, woodlands or remnants dominated by non-eucalypts, or eucalypts that are less favoured by Koalas for feeding are highly unlikely to support Koalas for anything other than movement purposes (OEH, 2018).

While some preferred feed tree species in the Sydney region such as *Eucalyptus punctata* (Grey Gum) and *Eucalyptus tereticornis* (Forest Red Gum) are present within the Property, these comprise scattered individuals and are not dominant or abundant within the Property.

As the forest vegetation within the Property is dominated by tree species that are not favoured by Koalas for feeding, the habitat within the Property is not considered to comprise Koala habitat as described in the National Recovery Plan for the Koala (DAWE, 2022) as it does not include access to sufficient quality food to meet their daily energetic requirements.

4. Conclusion

An assessment of potential Koala habitat has determined that while the Property contains suitable shelter habitat for Koalas, it does not contain the key factor that influences quality habitat for Koalas, namely presence and density of preferred food trees. Accordingly, it is not considered to contain Koala habitat as defined by the National Recovery Plan for the Koala. The lack of habitat suitability for Koalas is supported by the results of field surveys and a lack of verified records in the locality.

As the Property is not considered to comprise suitable habitat for the Koala, a further assessment against Significant Impact Guidelines is not considered to be required for the referral.

5. References

- DAWE. (2022). *National Recovery Plan for the Koala (Phascolarctos cinereus) combined populations of Queensland, New South Wales and the Australian Capital Territory*. Canberra.
- DCCEEW. (2023a). EPBC Protected Matters Search Tool. Retrieved 2023, from Department of Climate Change, Energy, the Environment and Water
<https://pmst.awe.gov.au/#/map?lng=131.52832031250003&lat=-28.671310915880834&zoom=5&baseLayers=Imagery,ImageryLabels>

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- DCCEEW. (2023b). *Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT) in Species Profile and Threats Database. Retrieved from http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=85104
- DECC (NSW). (2008). *Recovery Plan for the Koala (Phascolarctos cinereus)*. Sydney, NSW: Department of Environment and Climate Change.
- DPE. (2023). BioNet Atlas. Retrieved from <http://www.bionet.nsw.gov.au/>
- EES. (2019). *Koala Habitat Information Base Technical Guide*. Sydney, NSW: Department of Planning, Industry and Environment.
- Keystone Ecological. (2021a). *Biodiversity Development Assessment Report (V2.1) Concept Development Application: Detailed Civil Works, Southern Housing Precinct and Apartment Precinct – Lot 61 DP 737386, 55 Coonara Avenue West Pennant Hills*. Empire Bay, NSW: Keystone Ecological Pty Ltd.
- Keystone Ecological. (2021b). *Biodiversity Development Assessment Report: Demolition Stage – Lot 61 DP 737386, 55 Coonara Avenue West Pennant Hills*. Empire Bay, NSW: Keystone Ecological Pty Ltd.
- Keystone Ecological. (2022). *Biodiversity Development Assessment Report (V2.2) Concept Development Application: Detailed Civil Works, Southern Housing Precinct and Apartment Precinct – Lot 61 DP 737386, 55 Coonara Avenue West Pennant Hills*. Empire Bay, NSW: Keystone Ecological Pty Ltd.
- OEH. (2018). A review of koala tree use across New South Wales. In. Sydney, NSW: Office of Environment and Heritage.
- Youngentob, K. N., Marsh, K. F., & Skewes, J. (2021). *A review of koala habitat assessment criteria and methods - Report prepared for the Department of Agriculture, Water and the Environment*. Canberra.

APPENDIX 1

From: [Elizabeth Fowler](#)
To: [Gitanjali Katrak](#)
Cc: [Troy Darcy](#); [Emma Ellis](#); [robert.malcolm@mirvac.com](#)
Subject: RE: Coonara - BioNet Atlas Koala records in Cumberland State Forest
Date: Friday, 25 August 2023 9:41:00 AM
Attachments: [image005.png](#)
[image006.png](#)
[image007.png](#)

Hi Gitanjali,

Sorry I missed your call yesterday. I understand you are after some information about koala records.

Cumberland State Forest like many urban bushland areas, contains habitat for a range of species. Forestry Corporation regularly conducts monitoring within the forest and is not aware of any current or recent koala records in this forest. No koala sightings or evidence of koalas has been recorded by Forestry Corporation or brought to Forestry Corporation's attention over the past 20 years.

Let me know if you need any further information.

Thanks,

Elizabeth Fowler | Media and Communications Officer (Wednesday – Friday)
Forestry Corporation of NSW

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PO Box 100 | Beecroft NSW 2119
T: 02 9407 4265 | F: 02 9871 6941 | M: 0408 779 903 | E: elizabeth.fowler@fcnsw.com.au | W: www.forestrycorporation.com.au

I acknowledge and respect the traditional custodians and ancestors of the lands I work across

From: Troy Darcy <Troy.Darcy@fcnsw.com.au>
Sent: Monday, 21 August 2023 3:41 PM
To: Elizabeth Fowler <Elizabeth.Fowler@fcnsw.com.au>
Cc: Tim Liston <Tim.Liston@fcnsw.com.au>
Subject: FW: Coonara - BioNet Atlas Koala records in Cumberland State Forest

Hi Liz

Are you able to assist me with a response to Mirvac. Clearly we are not aware of any reported Koala sightings within Cumberland State Forest within the past 5 years.

Regards
Troy

From: Emma Ellis <emma.ellis@mirvac.com>
Sent: Monday, 21 August 2023 3:24 PM
To: Troy Darcy <Troy.Darcy@fcnsw.com.au>
Cc: Robert Malcolm <robert.malcolm@mirvac.com>
Subject: FW: Coonara - BioNet Atlas Koala records in Cumberland State Forest

Troy

Thank you for your time on the phone earlier.

As mentioned as part of our application under the EPBC Act we need to prepare an assessment on the koala, due to the change of classification since our first referral under the Act.

Our ecologist has prepared the below and we were wondering if you could comment on the records in the Cumberland State Forest? It would also be appreciated if you could comment on Forestry Corporation's position on the presence of koala's within the State Forest.

Please reach out to Rob or myself if you would like to clarify anything.

Thank you for your assistance.

Kind regards

Emma

Emma Ellis
Project Director
Development

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PLACES TO WORK**
AFR Boss

Mirvac acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Owners of the lands and waters of Australia, and we offer our respect to their Elders.

From: Gitanjali Katrak <gitanjali.katrak@cumberlandecology.com.au>
Sent: Monday, 21 August 2023 1:59 PM
To: Emma Ellis <emma.ellis@mirvac.com>; Robert Malcolm <robert.malcolm@mirvac.com>
Subject: Coonara - BioNet Atlas Koala records in Cumberland State Forest

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Hi Emma, Rob,

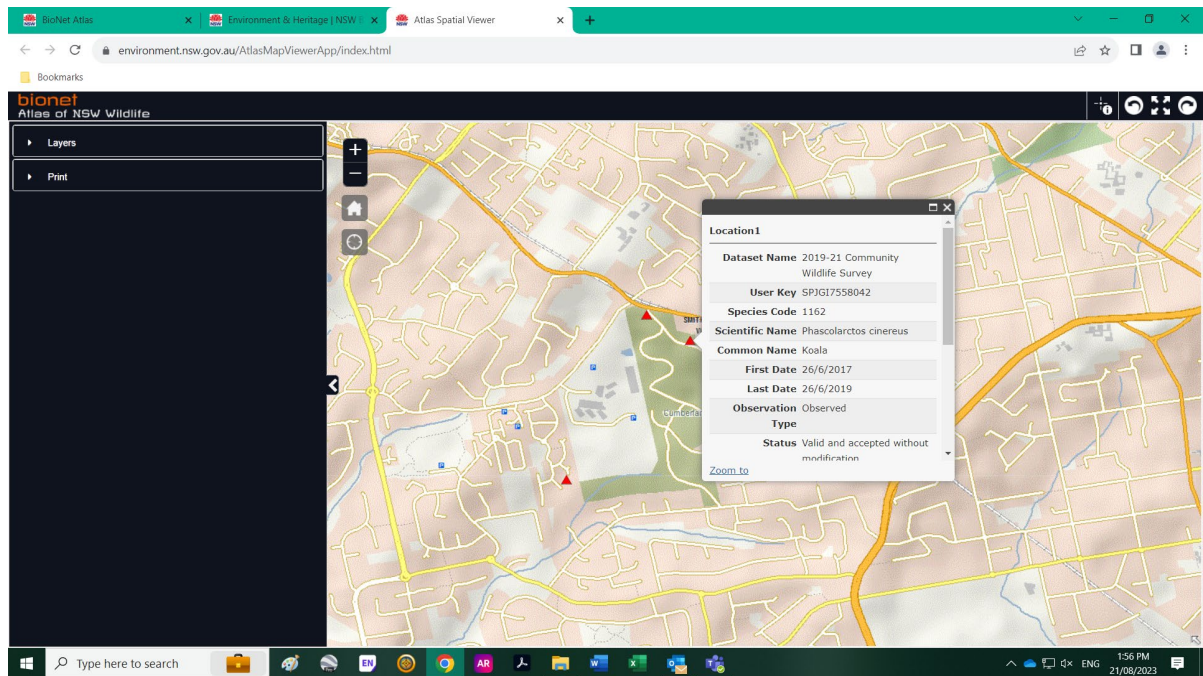
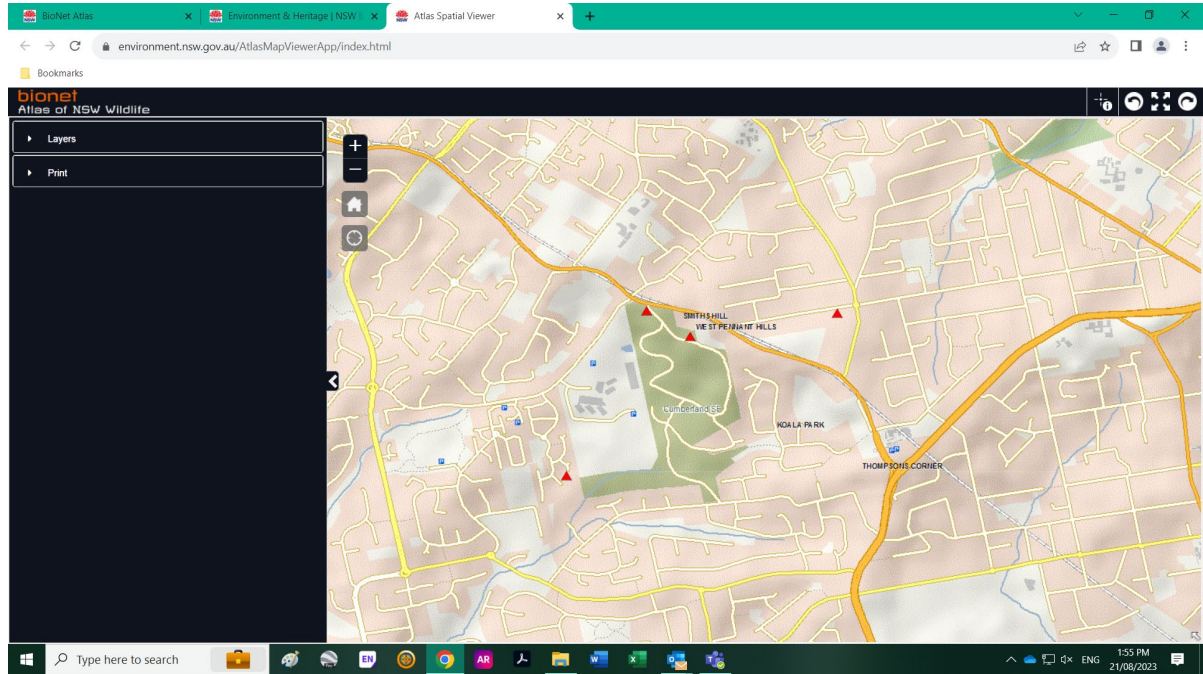
Please find below a screenshot from the BioNet Atlas showing two Koala records within Cumberland State Forest

Both records within Cumberland SF plus one record further east were from a 2019-21 Community Wildlife Survey. The information for each of these data points lists the recording

as 'Observed' (which means the record was based on the koala actually being seen) but there is no further information on any of the data points.


The record to the west is from 2012 and is from the Wildlife Rehab Database. The additional information for this datapoint states 'Suburb only (West Pennant Hills) provided' so this location may not be entirely accurate.

Could we please get a written response from Forestry staff on the accuracy of these recordings.



Regards,

Gitanjali Katrak
Senior Project Manager/Ecologist

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