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Protected Species and Ecological Communities Branch
Department of Climate Change, Energy, the Environment and Water

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[Draft National Recovery Plan for the Pookila \(New Holland Mouse\) *Pseudomys novaehollandiae* - DCCEEW](#)

The Koala Koalition EcoNetwork Port Stephens (KKEPS) was formed in June 2021 in response to the growing need for a strong voice to advocate for better protection for koalas in Port Stephens (Hunter Region) and neighbouring LGAs e.g. Mid Coast and Dungog. KKEPS is a Special Interest Group within EcoNetwork Port Stephens. The members of this alliance, comprising groups and individuals, are committed to working collaboratively with local councils, landholders, environment groups and other stakeholders to ensure that strategies such as the Port Stephens Comprehensive Koala Plan of Management (CKPoM) are actively used to address and rectify the plight of koalas in our region.

As the Koala is seen as an umbrella species, KKEPS also regularly highlights risks to other threatened or sensitive species using or living in known koala habitat. It is for this reason that we appreciate the opportunity to comment on the draft recovery plan for the Pookila, in accordance with the provisions of the Environment Protection and Biodiversity Conservation Act 1999.

The current threats to the Pookila are shared with the Koala; habitat loss, habitat disturbance and modification due to development, fragmented populations, fire regimes/ bushfires, predation by invasive species, disease and climate change being the key threats. ¹ Where both species either are known to be present in suitable habitat, or are likely to be present, recovery measures such as habitat protection and regeneration may prove beneficial to both species. With this in mind, we would like to identify a possibly significant at risk Pookila population as part of our response to the draft Pookila National Recovery Plan.

How will a Pookila National Recovery Plan be effective?

Despite having an approved Koala Recovery Plan in NSW from 2008 ², a Koala Strategy in NSW since 2021 ³ and a National Koala Recovery Plan since 2022 ⁴, we have seen very little change in how Local and State Governments permit development in known or potential koala habitat. There is still a huge appetite for habitat clearance causing additional habitat fragmentation, the loss of biodiversity, genetic allelic richness and a potential reduction in environmental resilience to climate change.

I mention this as a member of the National Koala Recovery Team's Community Advisory Committee. Sadly, the outcomes for koalas seem unchanged since they were declared Endangered and their National Recovery Plan began.

KKEPS repeatedly objects to proposals and challenges applications using minimal survey data or survey techniques which may not adequately represent the habitat to be impacted by the proposed development.

We are also repeatedly asking that applications in a similar location and with a similar purpose are assessed strategically. Too often, linked applications are assessed and approved in a piecemeal fashion which waters down the apparent cumulative and combined impact to the local residents and the local environment.

The situation here is so dire that a comprehensive document of the issues has been developed by local environmental groups and NSW ministers have been asked to take urgent measures to produce a strategic and conservation framework to better assess, mitigate and, crucially, reduce the present and projected cumulative and combined impacts of operating approved and proposed hard rock quarries in the Lower Hunter region.⁵

The Hunter Regional Plan 2041 promotes a transition to development and urban planning with more environmentally positive and sustainable outcomes. While the plan emphasises the need for development in the region and forecasts an extra 11,000 houses needed in Port Stephens by 2041, it has a clear objective to conserve heritage, landscapes, environmentally sensitive areas, waterways and drinking water catchments.⁶

The Plan stipulates that any planning proposal or local strategic planning statement needs to comply with an Objective 6 strategy or demonstrate how certain performance outcomes will be achieved which include:

1. Areas of high environmental value* are protected to contribute to a sustainable region;
2. Biodiversity network is sustainably managed and provide social, environmental, health, cultural and economic benefits; and,
3. Development outcomes maintain or improve the environmental value or viability of the biodiversity network**.⁷

All of the above might suggest a clear commitment to putting biodiversity and habitat connectivity at the centre of local strategic planning, planning proposals and the planning approval process yet, over a year after the plan was released, we are still seeing applications approved where the project footprints include primary and secondary koala habitat.

There appears to be a discord between the Hunter Regional Plan and NSW planning processes, the latter being a machine that in most cases leads to approval, with the bilateral agreement for environmental assessments streamlining decisions under the EPBC Act since 2020.

Refusal by the Independent Planning Commission (IPC) often results in costly appeals by developers in the Land and Environment Court (LEC) where even those decisions can be appealed, and the community lacks financial recourse. A case in point is the LEC decision by Commissioner Bish being appealed by the proponent on grounds related to 'process' as part of Kingshill Development No 1 Pty Ltd and Kingshill No 2 Pty Ltd v Port Stephens Council and Hunter and Central Coast Regional Planning Panel - NSW Caselaw.⁸

* The term high environmental value (HEV) is based on NSW State Government criteria that includes, but is not limited to:

- *important habitat mapping for serious and irreversible impact species;*
- *koala habitat;*
- *native vegetation of high conservation value, including vegetation types that have been over-cleared or occur within over-cleared landscapes, old growth forests and rainforests; and,*
- *key habitat for threatened species and populations and threatened ecological communities.*⁹

** The plan proposes that large areas of remnant vegetation, such as national parks, state forests, council reserves, floodplains, foreshores and riparian vegetation, can be connected to secure biodiversity corridors, possibly as part of a biodiversity stewardship agreement.¹⁰

While KKEPS strongly supports the need for Pookila populations to be better understood and better protected, we ask how a Pookila National Recovery Plan can be successful given that there has been little or no discernible change in how development applications on koala habitat are approved, and despite the existence of a National Koala Recovery Plan. We fear that there is currently an insufficient onus on the NSW Planning processes to save Pookila or their habitat from development, particularly while it is not listed as a threatened species in New South Wales. We support the Mid Coast Council's call to have, as a key action of any National Pookila Recovery Plan key, representation to the NSW Scientific Committee and NSW Government to list the Pookila as vulnerable or endangered in the NSW Biodiversity Conservation Act 2016. We also support the suggestion that any sightings are consistently reported in a timely manner to ensure Pookila data is accurate and as complete as possible. ¹¹

In addition to the Mid Coast Council's suggestions, we suggest that for a National Recovery Plan to succeed, whether for the Pookila, Koala or any other threatened species, planning processes need to be tightened to ensure that the biodiversity mitigation hierarchy is followed with offsets or compensation payments being the absolute last resort. ¹²

We further suggest that proposed translocations/relocations of threatened species should not be agreed upon in order to permit approval of a development proposal through a plan of management yet to be written, but rather may only gain permission to be trialled and funded by the applicant with truly independent qualified supervision, as a recommended condition prior to an approval. If the trial is largely unsuccessful, approval should be able to be declined as a direct result. This additional expense and delay must be accepted by the proponent in order to work towards an approval being granted. The outcome of such research in action should be published to inform the wider ecological community.

We are aware that "23.2 - 35.3 % of unique genetic diversity has been lost to local extinction in Victoria in the past 50 years, with ongoing population decline and inbreeding exacerbated by natural barriers to dispersal", and that "future extinction of any one of three Victorian populations examined here will result in the loss of 15–46 % of remaining unique alleles" ¹³. We are of the opinion, however, that the draft Recovery Plan for the Pookila should stress the need to better understand Pookila populations in other areas, as we believe that a lack of survey data on Pookila populations in NSW means they are also not clearly understood. Our information on a possibly 'at risk' Pookila population will hopefully add to the data you are hoping to collect.

We also believe that the importance of Pookila as a vertebrate host to a diverse range of symbiotic arthropods needs to be made clear. Until research was undertaken by Kwak et al 2024 ¹⁴, the symbionts associated with Pookila had only been studied in a haphazard way. In just one study they were able to triple the number of arthropod symbiotes known from Pookila which included two threatened undescribed mite species. This suggests that a further decline in Pookila populations will also see a potential loss in arthropod symbiotes. Kwak et al state that there is "a dire need to identify the arthropod symbiotes of threatened vertebrates so that they can be characterised (morphologically and molecularly) and appropriate conservation actions enacted to prevent extinction of these invertebrates". ¹⁵

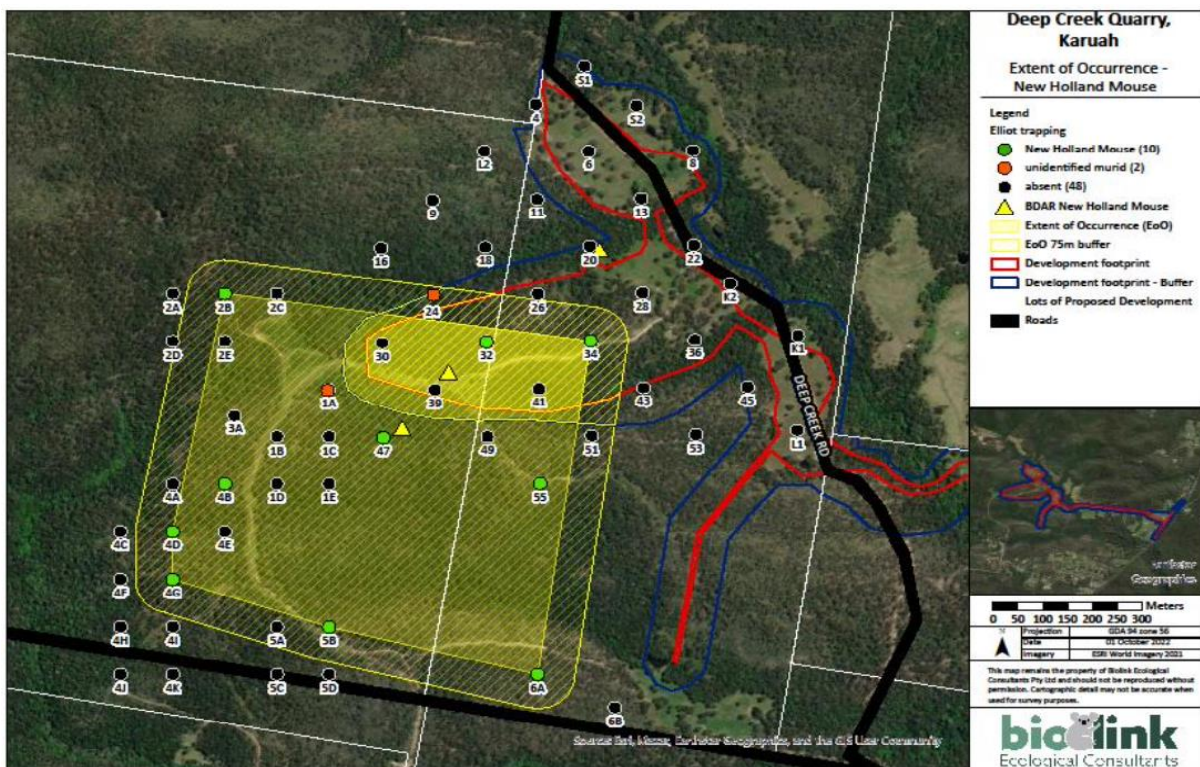
The Draft Recovery Plan for the Pookila acknowledges that "DPE is the primary agency involved in threatened species management on public and private land in NSW" ¹⁶ yet the established set of communication channels doesn't include DPE. Please be aware that the Department has split into the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) and Department of Planning, Housing and Infrastructure (DPHI). The plan needs updating because of this change and reference made to the currently relevant section/team.

Case study – Deep Creek Quarry, Limeburners Creek, NSW

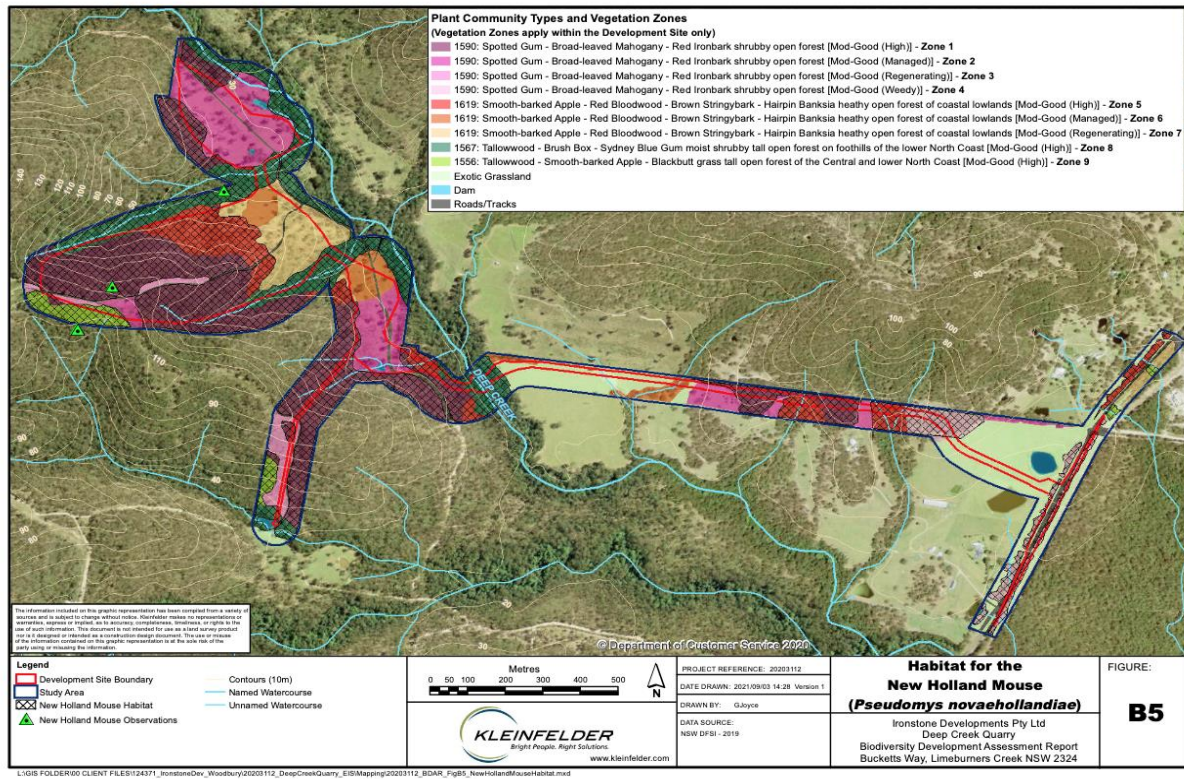
According to a 2008 study of the New Holland Mouse (*Pookila*) by Peter Menkhurst et al for the IUCN Red List of Threatened Species, as reported by the TSSC in 2010, ¹⁷⁻¹⁸ fewer than 10,000 individuals are thought to persist across the species range. (This number was not changed when the IUCN Red List document was updated in 2016 by John Woinarski and Andrew Burbidge) ¹⁹. With this figure in mind, we hope we can highlight a potentially important *Pookila* population in NSW that may be at risk.

KKEPS only recently became aware that the *Pookila* inhabit nearby areas. This information came to our attention while carrying out research for a submission objecting to the Deep Creek Quarry in Limeburners Creek, NSW (Mid Coast LGA). This State Significant Development (SSD-11591659) proposal was referred to the Independent Planning Commission NSW following considerable community opposition. The proposal seeks to extract up to 0.5 million tonnes per annum for an initial 30-year operation period on land located near the Karuah National Park and proximate to Deep Creek that runs into the Karuah River (the headwaters of Port Stephens). The SSD documents are available via <https://www.planningportal.nsw.gov.au/major-projects/projects/deep-creek-quarry> and <https://www.ipcn.nsw.gov.au/cases/2023/11/deep-creek-quarry>.

The *Pookila* was recorded by Biolink at 13 locations ²⁰ within the study area, three of which occur within the development site, two of which were identified by Kleinfelder in the Biodiversity Assessment Report (BDAR) ²¹. Based on the number of local records of the species, the local population appears to be a ‘key source population either for breeding or dispersal’ and may also be a ‘population that is necessary for maintaining genetic diversity’ so seen as an ‘important population.’ The Extent of Occurrence of the local population is estimated to be about 77 hectares (Figure 4 Biolink), and contain about 1,156 individuals, of which the proposed development would clear 10.6 hectares, where about 160 individuals are present. This means that the now approved development could directly impact on about 14% of an important population, and potentially negatively impact *Pookila* in surrounding habitat.



Pookila Extent of Occurrence from the Biolink 2022 Deep Creek Quarry Response to Submissions Report. ²²



Habitat for the New holland Mouse (Figure B5) in the Biodiversity Assessment Report by Kleinfelder (2021)
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Biolink also looked at Pookila populations elsewhere in the Mid Coast LGA in 2016 and reported statistically identical NHM densities of 19 ± 9.8 (95% CI) NHM ha⁻¹ on a 70-ha site near Forster.²⁴ Because of this, and given the widespread distribution of NHM records across the Mid Coast LGA, Biolink speculated that “a population estimate for just this LGA alone will likely approximate or even exceed that of the Menkhorst et al. (2008) estimate, while also challenging some other long-standing paradigms about NHM ecology.”²⁵ This clearly needs to be investigated further.

Dr Steve Phillips’ report for the developers (IronStone) went on to suggest four options for the Pookila: euthanasia, translocation, relocation or not proceeding with the development. KKEPS argued that relocation/translocation would probably not be successful, and recommended that the proposal should not be approved.

Our submission to the NSW IPC dated 20/12/23 recommended that “the IPC thoroughly investigates and considers the cumulative and combined Impacts of the many existing and proposed quarries in Port Stephens and Mid Coast LGAs, prior to accepting DPE recommendations to approve Deep Creek Quarry.

Rural communities are deeply concerned that developments gain approval despite potentially significant impacts on biodiversity and their local environment, and also on their livelihoods, mental health and enjoyment of their own properties, on social amenity, road safety, collection of clean drinking water from rainfall, and critically on their health and wellbeing through stress caused by noise, dust and air pollution, all while making very little economic contribution locally and without meaningful justification for the quarry product.

We do not agree that the Department correctly weighted the “significance” of the resource and the wider socio-economic benefits against the cumulative and combined impacts of hard rock quarries in the Port Stephens/Mid Coast LGAs. We are of the opinion that Deep Creek Quarry will have significant impacts on Biodiversity, particularly the Koala and Pookila.

Only two months after being referred to the IPC, the Deep Creek Quarry proposal was approved on the 24th January 2024. From their documentation, the IPC seems to have accepted almost verbatim the DPE BCD draft

conditions of consent totalling 31 pages. The IPC quoted the following from the BDAR "Assessments determined that the Project has potential to have a significant impact on this population, but it is unlikely that the loss of habitat would disrupt the breeding cycle, impact mobility, or decrease the availability or quality of habitat to the extent that the species is likely to decline. To mitigate the impacts of the Project on this species, Ironstone has committed to develop and implement a New Holland Mouse Relocation Plan in consultation with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEW) prior to disturbance of the identified habitat".²⁶ As far as I'm aware, no further information was sought by the IPC on the Pookila.

Yours faithfully,

Carmel Northwood

Convenor, Koala Koalition EcoNetwork Port Stephens (KKEPS)

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