

22 September 2022

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Submission Inland Rail - Narromine to Narrabri SSI-9487

Please find my submission as an Objection to this State Significant Infrastructure Project

1. Lack of consideration of endangered wetland.

In relation to the Inland Rail issues on wetlands, it appears as if ARTC has not considered the potentially affected endangered wetlands in the Pilliga as, according to the NSW Biodiversity Assessment Methodology, there WAS NO DIRECT IMPACT.

The community in question was not even mentioned as it was only impacted by what the BDAR calls 'indirect impact', ie. change to local flooding regimes. Despite this, this matter should have been flagged as an issue in the EIS, particularly as poor modelling of the flooding impacts was a key failure of the EIS.

The submission in relation to flooding impacts made by the NSW Biodiversity, Conservation and Science Directorate stated, *"There does not appear to be any reference to investigations into the potential impact to flood dependent ecosystems. If these ecosystems are present in the vicinity of the proposed alignment, then any impact on flooding which may affect these ecosystems should be identified and assessed. This is especially important for the small floods or low flows as these flows are crucial to maintaining the ongoing character of the ecosystems. The flooding characteristics at the full range of floods therefore need to be considered."*

The indirect impact of the rail line may significantly alter the surface hydrology in the forest, further endangering the endangered community, '**Pilliga Outwash Ephemeral Wetlands in the Brigalow Belt South Bioregion**'. This community has a very restricted distribution and impacts on this community have not been addressed in the EIS.

The additional work undertaken on addressing flooding impacts within the EIS and the Response to Submissions process has not addressed this issue.

This is a failure of the NSW biodiversity assessment methodology once again and the precautionary principle has not been followed. This wetland has key species which are entirely dependent on their survival on periodic inundation.

The Scientific Determination for this endangered ecological community states:

3.1.2. *"Major threats to Pilliga Outwash Ephemeral Wetlands include altered hydrology, soil disturbance from feral pigs and recreational vehicles, clearing of native vegetation and degradation caused by grazing and weed invasion (M. Brock in litt. August 2012; P. Christie in litt. June 2012; P. Clarke in litt. March 2012; D. Mabberley in litt. April 2012).*

3.1.3. *"Alteration of water regimes in the Pilliga Outwash Ephemeral Wetlands has occurred intentionally by draining or damming and unintentionally through sedimentation*

from catchment erosion (Bell et al. 2012). Temporary wetland habitats are particularly vulnerable to human activities due to their unique physical and ecological characteristics and their value is frequently overlooked because of their small size and seasonal occurrence (Schwartz and Jenkins 2000). In general, wetlands that depend primarily on precipitation for water input are more vulnerable to changes in climate and weather patterns (Brooks 2005). Under climate change predictions of more episodic precipitation and increased evapotranspiration, temporary wetlands may dry earlier in the year and remain dry for longer periods (Zacharias et al. 2007). These changes could adversely affect the successful reproduction of wetland dependent organisms and isolate the remaining productive pools (Brooks 2005). 'Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands' and 'Anthropogenic Climate Change' are listed as Key Threatening Processes under the Act."

<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Scientific-Committee/Determinations/2015/pilliga-outwash-ephemeral-wetlands-nsw-scientific-committee-final-determination.pdf?la=en&hash=129620AFB4E9A4271583361E44F9FECB2B88103D>

A precautionary approach to assessing the potential impact of the rail line on this endangered ecological community should have:

- a) Identified the local distribution of this ecological community in relation to the proposed rail route;
- b) Identified sensitive (Including threatened) species within this community;
- c) Identified impacts of rail infrastructure of flooding within this area

2. Adverse impacts on essential behavioural patterns of threatened species.

The endangered Koala, Black-striped Wallaby and the vulnerable Rufous Bettong are very susceptible to strike by vehicles and having movement patterns in the forest disrupted raising the extinction threat for these species. Mitigating actions, bridges, culverts and canopy bridges have not properly addressed these issues.

The EIS should have considered the specific impacts on each of these species in terms of the populations of this in the project area.

The koala *Phascolarctos cinereus* is recently listed as an 'endangered' species under the EPBC Act. Populations in the Pilliga Forest have undergone significant decline in recent years ¹ and further impacts on their movement and dispersal through the forest is likely to further exacerbate their level of extinction proneness.

There is a significant population of endangered Black-striped Wallabies *Macropus dorsalis* in the northern Pilliga forest, as yet no work has been done to ascertain their distribution and status.

There has also been a recent record of a Rufous Bettong *Aepyprymnus rufescens* in the vicinity of the proposed rail route. NO work has been undertaken to determine this species current status or distribution the forest.

¹Daniel Lunney, Martin Predavec, Indrie Sonawane, Rodney Kavanagh, George Barrott-Brown, Stephen Phillips, John Callaghan, Dave Mitchell, Harry Parnaby, David C. Paull, Ian Shannon, Murray Ellis, Owen Price and David Milledge (2017). The remaining koalas (*Phascolarctos*

cinereus) of the Pilliga forests, north-west New South Wales: refugial persistence or a population on the road to extinction? *Pacific Conservation Biology* 23(3) 277-294
<https://doi.org/10.1071/PC17008>

1. Loss of hollows not offset

The loss of hollows is significant (14,503 to 41,103 hollow-bearing trees) and has not been offset in the EIS. This is also a failure of current offset policy. This is a significant residual impact on hollow bearing species in a forest where hollow numbers are already reduced by historic forestry (Paull and Kerle 2004). This rail line development will occur in an area which has undergone significant historic logging, particularly of ironbark species and from significant hollow loss from the Impact of Australian Wildlife Conservancy's Re-introduction Enclosure. and so the cumulative impact on hollow dependent species as a result of this project is likely to be significant

https://www.researchgate.net/publication/356840642_Recent_decline_of_common_brushtail_and_common_ringtail_possums_in_the_Pilliga_forest_New_South_Wales

Thank you for the opportunity to make a submission on this.

David C Paull

A handwritten signature in black ink, appearing to read 'D. Paull', followed by a period.