LOCK THE GATE ALLIANCE

AUSTRALIANS WORKING TOGETHER TO PROTECT OUR LAND, WATER, AND FUTURE

2 July 2025

Submission Boggabri Modification 10

Thank you for the opportunity to make a submission about this modification application. Lock the Gate Alliance objects to this modification and we believe that the Department has harmed the public interest by accepting two modification applications from this mining operation in lieu of requiring the proponent to lodge a development application for its larger expansion intentions. As the Department is aware, Modification 8 of this consent originally sought a six year extension beginning in 2033 to mine an additional 62 million tonnes of coal. That application was of sufficient scale and impact that it was clearly not "substantially the same development" as the existing operation. Indeed, it was comparable in size to several development applications for mine extension projects.

The modification application was subsequently amended to be half the length in time and a little under half the volume of coal originally sought. That application was approved in January 2024 and 18 months later, the company is seeking a further four year extension and an additional 30 million tonnes of coal, also not scheduled to start until the Modification 8 extension concludes, in 2036. The actions of the Department in this matter are profoundly concerning to us and appear from the public's view to have contributed to the company avoiding the scrutiny of a development application process by splitting its extension proposal into two pieces.

Needless to say this circumstance has profoundly eroded confidence in the Department's administration of this process.

Notwithstanding its apparently small size and duration, this modification, alone and in combination with modification 8, will inflict unacceptable impacts on biodiversity and water resources in the district.

Water resources

Boggabri mine has already been investigated for failing to divert surface water around the mine site and instead unlawfully capturing clear surface water from the catchment to use to run the mine. The mine entered into an Enforceable Undertaking with the Natural Resources Access Regulator in 2023 for the unlawful diversion of over 1,300ML of water from the Bluevale surface water source, which is part of the Namoi River catchment. This water was taken by the mine because it failed to establish diversions to prevent clean catchment water entering the mine, to which it had previously committed. The extension to the mining area for this Modification will require further surface water diversions and will further deplete the catchment of the affected creeks.

The further ongoing loss of this water to the catchment constitutes an unacceptable environmental impact, given that the Namoi is a constrained water environment and these are upper catchment areas, previously forested.

The Namoi River and its tributaries are highly variable, are highly groundwater connected, and vulnerable to drought. For Modification 8, the Independent Expert Scientific Committee (IESC) identified alteration of ecologically important flow components, including low-flow duration and zero flow days for ephemeral creeks in the zone of predicted alluvial drawdown as one of the key impacts of the project. This modification will worsen cumulative loss of surface water in the Namoi River and its tributaries as a result of groundwater drawdown from the three large mines in the district.

The impacts on the Namoi arise from drawdown of alluvial and surface water, loss of baseflow and lost surface water flow as a result of catchment modification. The ecology of the area, and the communities that depend on connected groundwater in the district, will be vulnerable to further change in the hydrology of the district as a result of this project.

This modification extends the surface disturbance of Boggabri mine into the Back Creek catchment, which is already highly impacted by the Maules Creek coal mine. This is a new impact of the Boggbari mine compared to the existing operations and requires assessment cumulatively with the impacts of Maules Creek coal mine. We note that the IESC's advice on Modification 8 reviewed the shared groundwater model for the mines in the district and found that "cumulative impacts are likely to have been underestimated."

The Groundwater Assessment says "within the Upper Namoi Zone 4, an alluvial tongue extends along the length of Nagero Creek, providing a potential connection between mining and the alluvial aquifer." The footprint of Boggabri Coal mine follows almost identically the footprint of the catchment of Nagero Creek, ultimately wiping out this water source (Bluevale Unregulated water source) and halting the recharge to the alluvium of zone 4. There will be a cumulative drawdown in the Nagero Creek alluvium of up to 5.1m which is clearly unacceptable.

Predicted water take from Zone 11 of the Namoi River unregulated alluvial water source (Maules Creek Water Source) is expected to exceed entitlements held by Boggabri Coal. Given recent experience of this mine and the adjacent Maules Creek coal mine being investigated by NRAR for unlawfully taking water, it is imperative that the Department not approve this application. This is particularly the case given it is not anticipated to begin operating for another decade. An approval of this modification now may foreclose opportunities to respond to changing water availability in the region as a result of global warming. The proponent's ability to obtain additional entitlements is highly questionable.

We urge the Department to refuse this application. Certainly it is unacceptable to approve such activity ten years in advance, without the benefit of understanding the state of the environment to be affected in the future.

Biodiversity

Boggabri Modification 10 would result in the removal of about 85 hectares of native vegetation that provides potential habitat for two state significant plant species and 15 threatened fauna species. One plant species (*Tylophora linearis*) and four fauna species (Koala, Regent Honeyeater, Swift Parrot and Corben's Long-eared Bat) are also EPBC-listed.

The BDAR found Mod 10 would have a significant residual impact on *Tylophora linearis*, *Pomaderris queenslandica*, Koala, Pale-headed Snake and Squirrel Glider. The EPBC referral concluded that the project would have a significant impact on Swift Parrot, Regent Honeyeater and Corben's Long-eared Bat. From the material available it appears likely this application will have a severe and irreversible impact on Swift parrots.

The BDAR prepared for Modification 8 noted that the 2019-20 Black Summer fires did not have a significant impact on threatened species at the Boggabri mine site as the fires did not extend to that area. As up to 30% of habitat for Koala, Regent Honeyeater and Swift Parrot was lost to fires elsewhere in the state, any unburned habitat for these species should be considered even more important as it supports the recovery of these species. There is no mention of the fires in Mod 10 BDAR that will impact these species further by clearing and fragmenting remnant habitat in Leard SF that escaped the fires. Given that the application proposes to undertake clearing a decade into the future, consideration of the future state of all species and ecosystems to be affected, including consideration of changes resulting from global warming, is critical to the Department's assessment of this application.

Significant impact on Swift Parrot

It is concerning and wholly inappropriate that the Swift Parrot was excluded from consideration in the BDAR because the proposed Mod area has not been mapped as Important Habitat for this species. Section 4.1.4.5 of the EPBC referral for the this project concluded:

> *Given the impact to species habitat in the Leard State Forest as a consequence of current mining operations in the Leard Forest Mining Precinct, the incremental loss of potential habitat depleted by cumulative impacts locally is likely to reduce the area of occupancy for the species and have a significant impact on the long-term viability of the Corben's Long-eared Bat, Swift Parrot and Regent Honeyeater.*

This discrepancy between the state and Commonwealth assessment process is particularly concerning for the Swift Parrot whose numbers have already declined by 80-95% (Heinsohn et al. 2015)[1] and which faces possible extinction in the next 10 years (Birdlife Australia 2024).[2] Current population size is estimated at 750 individuals[3] but may be less than 500 birds, including 306 adults.[4] It is therefore at high risk of serious and irreversible impacts due to cumulative impacts of clearing.

The BDAR states that Swift Parrots tend to be associated with higher densities of White Box (*Eucalyptus albens*) in Leard SF. It notes that individuals have been observed on five occasions in the

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[1] Heinsohn R et al. (2015).'A severe predator-induced population decline predicted for endangered, migratory swift parrots (Lathamus discolor)', *Biological Conservation*, 186, pp. 75 - 82.
[2] Birdlife Australia (2014). Tasmanian Government to log more Swift Parrot habitat. Available from: https://birdlife.org.au/news/tasmanian-government-logging-plans-uncovered/.
[3] Webb et al. (2021). Swift Parrot Lathamus discolor. In Garnett, S.T. & Baker, G.B. (Eds), *The Action Plan for Australian Birds 2020*, pp. 427–431. CSIRO Publishing, Melbourne.
[4] Olah G., Waples, R.S. and D Stojanovic (2024). Influence of molecular marker type on estimating effective population size and other genetic parameters in a critically endangered parrot. *Ecology and Evolution*, 14(3), p.e11102.

past 12 years, and are especially associated with periodic strong flowering events. It notes that the disturbance area is dominated by Narrow-leaved Ironbark (*E. crebra*) that has the potential to be used for movement and foraging, but was assessed as being marginal habitat due to the lack of White Box and Yellow Box (*E. melliodora*) trees. The BDAR claims that, within the proposed disturbance area, Swift Parrot have only ever been observed foraging in White Box which are sparsely distributed with "small groupings of individual trees". However it admits that, while Swift Parrots have not been observed to use lerps or foraging in areas dominated by Narrow-leaved Ironbark trees, use of these areas "cannot be discounted."

A report commissioned by Lock the Gate and prepared by Botanical Animal Ecology (BAE) in March 2025, confirmed that the large areas of White Box dominated open forest and woodland and the high density of large trees provide important habitat for Swift Parrot in Leard SF. A rapid habitat assessment was conducted in an area of the forest located to the northeast of the area targeted by Modification 10 in *Narrow-leaved Ironbark-cypress pine-White Box shrubby open forest in the Brigalow Belt Bioregion and Nandewar Bioregion* (PCT 592). Results indicated that this community contained a very high density of large White Box trees (45 per ha) that provide excellent potential habitat for parrots. Of the 85ha to be cleared as part of Mod 10, 51ha are described as "high" condition PCT 592 (Table ES.1 in Appendix G). Given this, it is clear that this application is likely to have a serious and irreversible impact on Swift parrots.

The BAE report also provided more detailed information on the Swift Parrot sightings in Leard SF. It refers to 13 sightings being recorded in 2012, 20 sightings in 2022 and 16 in 2023. The number of sightings in 2021 was not specified. Single sightings ranged from 4-9 individuals. The report states that this frequency of observations indicates high site fidelity, with visits expected every 4-5 years. Sight fidelity is an important criterion in determining priority sites for Swift Parrot under the NSW Saving Our Species Strategy. Furthermore the Recovery Plan for this species defines mainland foraging habitat critical to the survival of the species:[5]

> *All preferred foraging species within known and likely foraging habitat on the mainland including Yellow Gum (E. leucoxylon); Red Ironbark (E. tricarpa); Mugga Ironbark (E. sideroxylon); Grey Box (E. macrocarpa); White Box (E. albens); Yellow Box (E. melliodora); Swamp Mahogany (E. robusta); Forest Red Gum (E. tereticornis); Blackbutt (E. pilularis); and Spotted Gum (Corymbia maculata).*

The Plan's highest priority action is to protect habitat that is critical to the survival of the species. It should be noted that revegetation proposed in the Mod 10 application does not offset the loss of mature trees that are the preferred foraging habitat for Swift Parrots, as these areas will not achieve a similar successional stage for decades, if ever. This may not occur within the relatively short time frame required to reverse the extinction trajectory for this critically endangered species.

The BAE report also pointed out that there is a significant lag from the time that records are submitted to the Department to when they finally appear on BioNet. Failure to make records publicly available in real time increases the risk of extinction for this species as developers remain unaware of

[5] DCCEEW (2024). *National Recovery Plan for the Swift Parrot*. https://www.dcceew.gov.au/sites/default/files/documents/national-recovery-plan-swift-parrot-2024.pdf

its presence and understate predicted impacts. For example, records from 2012 and 2014 reported by Idemitsu in 2018 were only recently mapped on BioNet. Two other records from Maules Creek offsets in 2022 and from Whitehaven Coal's Willeroi offset in 2019, were not apparent on BioNet as of March 2025. This administrative lag has the potential to contribute to the demise of the species as projects can be approved without critical information about threatened species locations and certainly appears to serve to downplay the significance of Leard forest for Swift parrots and the severity of impact of further loss of foraging habitat there on the remaining population. The Department must not approve this application.

Vegetation corridor inadequate

The referral states that Mod 10 will not disturb the 3.5km long 500m wide vegetation corridor that has been retained between the Maules Creek mine and Mod 10. The BDAR specifies that Mod 10 has been designed to avoid "direct" impacts to the vegetation corridor. However this long narrow corridor located between two major coal mines will be subject to significant indirect impacts associated with "hard" edges defined by a denuded landscape and possibly fencing. It is highly unlikely to provide structural or functional connectivity for any but the most mobile species. It is far more likely to become a hostile environment for terrestrial fauna species and woodland birds that will effectively sever east-west connectivity in Leard SF and between the forest and established offsets. The loss of connectivity needs to be assessed in the context of the BDAR's admission that Mod 10 will reduce connectivity to the east and southwest for less mobile and sedentary species.

The current corridor, which varies in width from 500 to 1,000m and adjoins forested land to the south, is likely to retain some functionality. However, its restriction to a 3.5km "funnel" subject to weed invasion, predator pressure, hydrological changes and dust deposition and surrounded by noise, vibration, light and human activity, will result in its degradation and loss of functionality. The ecological consequences of these changes that may not be immediately noticeable include changes to microclimate, seed dispersal patterns, fauna behaviour, predation and competition pressure and vegetation structure and composition. The end result is a loss of species' richness and the loss of interior forest species (threatened woodland birds) and consequent increase of edge-adapted species such as Noisy Miners. Corridor habitat is therefore not likely to attract or support populations of threatened woodland birds that have been recorded in Leard SF including Turquoise Parrot, Painted Honeyeater, Black-chinned Honeyeater, Brown Treecreeper, Dusky Woodswallow, Hooded Robin, Speckled Warbler, Varied Sittella, Diamond Firetail and Grey-crowned Babbler.

While a 500m wide corridor may be effective in instances where it adjoins compatible land uses (e.g. rural, forestry) or where edge transition is gradual, it cannot be considered even remotely adequate when isolated from any vegetation and surrounded by major industrial development. In this case, the entire corridor would be subject to ongoing degradation by edge effects. The extent of edge effects can be highly variable ranging from 50-60m for abiotic or direct impacts, upwards to 500m[6] or even 1000m.[7] A review of 44 studies by Harper et al. (2015) found that edge effects will persist longer and

[6] Harper KA et al. (2005). Edge influence of forest structure and composition in fragmented landscapes. *Conservation Biology* 19(3): 768-782.
[7] de Paula MD et al. (2016). The extent of edge effects in fragmented landscapes: insight from satellite measurement of tree cover. *Ecological indicators* 69: 196-204.

extend further at edges that are maintained. Another review found that threatened species worldwide reached peak abundance 200-400m from "sharp high-contrast" forest edges.[8] It appears that the impact of edge effects is exacerbated in highly fragmented landscapes[9], like that found in the vicinity of Mod 10.

Cumulative impacts not considered

Although the BDAR generally acknowledges that there would be a cumulative loss of habitat or habitat connectivity as a result of Mod 10, it does not specifically refer to the quality or quantity of vegetation/habitat that has already been removed or is approved to be cleared in surrounding mines. Progressive clearing from 2006 associated with the Boggabri, Tarrawonga and Maules Creek mines has resulted in the loss of approximately 3800ha of native vegetation, much of which would have comprised potential habitat for Swift Parrots.

The recently published Maules Creek Continuation project is proposing to remove about 530ha of native vegetation including 460ha of potential habitat for *Tylophora linearis* and over 500ha of habitat for Swift Parrot, Regent Honeyeater, Corben's Long-eared Bat, Koala, Brown Treecreeper, Hooded Robin and Diamond Firetail. The loss of up to 376ha of Painted Honeyeater habitat would reduce this species' area of occupancy according to the BDAR.[10]

The BAE report also estimated Swift Parrot feed tree loss that would be expected if the Maules Creek Coal Mine Continuation project is approved. Although unable to access the mining lease, BAE conducted a rapid assessment within PCT 592 on neighbouring land, and found that it was similar in structure and composition to the community within the Maules Creek mine exclusive use area. Based on a large tree density of 45 large White Box trees per hectare and proposed clearing of 435ha[11] BAE estimated that the Continuation Project could remove approximately 19,000 large White Box trees.

Climate change

Finally, this application is not compliant with the EPA's *Guide for Large Emitters* which requires new, high-emitting development proposals to align with the overall NSW net zero emissions trajectory. Given it is not expected to begin for a decade, it is critical that the Department assess the proposal against NSW's trajectory to zero emissions in 2050.

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[8] Pfeifer M et al. (2017). Creation of forest edges has a global impact on forest vertebrates. *Nature* 551: 187-191.
[9] Porensky LM & Young TP (2013). Edge-effect interactions in fragmented and patchy landscapes. *Conservation Biology* 27(3): 509-519.
[10] Whitehaven (2025). Maules Creek Continuation Project EIS. Appendix C Biodiversity Development Assessment Report. https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-63428218%20250529T231346.871%20GMT
[11] Premise (2024). Maules Creek Continuation Project, EPBC Act Review of Threatened Species, Ecological Communities and Migratory Species. Report for Whitehaven Coal Limited.