



NORTH WEST ECOLOGICAL SERVICES

**FLORA AND FAUNA SURVEYS
ENVIRONMENTAL
MONITORING
IMPACT ASSESSMENT
RESEARCH AND PLANNING**

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Submission RE: TARRAWONGA COAL MINE MODIFICATION PROJECT PROPOSAL IN REGARDS TO FLORA AND FAUNA IMPACTS

Dear reader

I am opposed to the proposed Tarrawonga Coal Mine modification project. I think the mine should not be approved for the reasons which I make in my submission.

I am appalled at the thought of any expansion of coal mining in the region, as I dread the thought of our region becoming like the Hunter Valley. Planning to encourage boom bust extraction industries for short term gain is not sustainable development. Agriculture and eco tourism can provide the same return over a longer period, and in a sustainable way that preserves the landscape and the community way of life.

The era of digging up locked up carbon, and releasing it to the atmosphere, should be finished. All new energy developments should now be based on renewable and sustainable energy sources.

Points of my objection are listed below;

- I found the Environmental Assessment lacking in detail to properly review all aspects of its potential impacts. The proposal should not be considered for approval until the various plans that are to provide the detail are completed and put out for public review.
- In total (approved and proposed) Tarrawonga mine will involve the clearance of 1113ha of habitat (Tarrawonga Fauna Assessment).
- The clearing of native vegetation should not be allowed. The justification for the clearing fails to consider the areas true environmental value, and makes simplistic assumptions that the rehabilitation proposed is somehow going to offset the loss of a functional ecosystem that took 1,000s of years to create.

- No landholder would be given permission to clear the land proposed, and worse still, much of that land in question is public forest owned by the Australian public. It should not be destroyed for the private benefit of a few.
- Leard State Forests is the single biggest remnant of native vegetation left on the heavily cleared Liverpool Plains. A large section of it is nationally endangered Grassy Box woodland. It provides habitat for 26 threatened plants and animals, in time it will prove to be a major climate change refuge crucial to the survival of populations of wildlife that can survive accelerated global warming. The area of habitat to be cleared in and adjoining Leard State Forest is part of a large remnant that has integrity, it has mixed age mature structure, it supports species with large home ranges, it is less threatened by feral animals and weeds, and it has a low edge to area ratio.
- The Liverpool plain already has insufficient native vegetation remnants to conserve the regions flora and fauna. This proposal combined with the accumulated impacts of the other proposed mines will take conservation of the regions flora and fauna to an unprecedented low.
- There will be little to no benefit from the offsets proposed. The proposed offset land is not like for like, as it is a higher elevation community in the Nandewar bioregion, containing a distinctly different flora and fauna assemblage. That vegetation will continue to mature and conserve biodiversity regardless of what the mine does. The native vegetation act would not allow it to be cleared, so they can't claim it as compensation for what they propose to destroy.
- Nothing can compensate for the loss of the remnant proposed; it takes hundreds of years to create a whole ecosystem with the full suite of naturally occurring flora, fauna and micro-organisms. Revegetation areas on mine tailings may grow trees and shrubs, but even if revegetation is successful the area will remain a biodiversity desert for the life of the mine.
- The regeneration areas are going to require ongoing management, I can't see the mine controlling the weeds and managing the land for the next hundred years until it becomes useful fauna habitat. From a flora and micro-organism point of view I doubt whether revegetation areas will ever have the diversity of species present in the forest. For that reason I don't believe that the endangered ecological community can be regenerated in such a highly disturbed area.
- From a threatened hollow dependent fauna point of view the EA does not take into account how long it will take for the trees in the regeneration areas to mature and provide hollow and log habitats. Such habitat regeneration could take up to 200 years to provide large hollow habitats suitable for the bigger birds, reptiles, and arboreal mammals. The bottom line is that the habitat lost by clearing will not be replaced for a very long time, meanwhile the populations of threatened and common flora and fauna will have reduced areas of occupancy and reduced populations. Hence the proposal will lead to species decline.

- The environmental assessment states that there will be progressive rehabilitation post mining. By year 12 there will be 437ha of rehabilitation area that will be six years old which is 'expected to support multiple structural layers; litter, grass, herb, shrub with tree regrowth (2 to 4m tall)'. Such regrowth at year 12 is still structurally a shrubland and will not provide habitat for species dependent on the presence of mature trees, mixed age stands and/or tree overstorey.
- The proposal plans to relocate 3 km of Goonbri Creek, I don't think it should be relocated at all. The proposal is an engineer's fantasy, which fails to consider the aquatic ecosystem function and landscape function of the existing creek. This proposal will change habitat values, vegetation type and structure, flora and fauna populations, soil moisture status, in-stream sediments, and significantly modifying the hydrological regime of Goonbri Creek. Also Goonbri Creek is an Endangered Ecological Community, as it is part of the *Aquatic Ecological Community of the Natural Drainage System of the Lower Darling* listed under the *Fisheries Management Act 1994*. The significance of that potential impact has not been considered.
- Collectively the four mines are expected to destroy up to 5,067 hectares of native vegetation in Leard SF and the surrounding farmland. The four mines will open-cut almost half of the invaluable Leard State Forest and will effectively cut the forest into two. This public forest that provides immeasurable benefits to the community will never be the same, destroyed for the private gain of a few.
- If the coal must be mined, it must be done underground. The extraction cost might be greater, however the environmental values of Leard State Forest and the adjoining remnants would be protected. To conclude that the open cut option would be cheaper can only be arrived at by placing a low or no value on the existing natural environment that will be destroyed. Such forests and woodlands should be considered sacred for the conservation of our unique flora and fauna, and the ecosystem services and spiritual connection they provide.
- I am also very concerned about the impact that weed invasion is likely to have on the proposed conservation outcome in both regeneration areas and the offset properties. I have observed that weeds now dominate much of the regeneration areas viewable from the road throughout the Hunter valley. There are environmental weeds present in the region that will invade disturbed areas and quickly become beyond control. That has happened to many endangered ecological communities in travelling stock reserves and roadside reserves which are now permanently lost to exotic grasses.
- I also have grave concerns about the impact of industrial development on the small rural communities and the nearby towns. Progress is not measured by dollars to the state revenue, it should be measured by community well-being, and sustainable use of the land.

- The other issue I have is the way that economic assessments focus on economic growth and jobs for the state, and fail to place real values on; the environment - the ecosystems services provided by natural areas – the existing sustainable land use, and the rural communities in the locality. Coal might produce economic benefit but that must be weighed up against all the negative effects.
- I also share the farmers concerns about the impact of digging a hole through underground aquifers; such a hole must have an impact on water tables and water quality. The plan to leave a large pit where there was once native vegetation is not best practice. The void does not return the land to its pre-mining land capability and creates an evaporative pump that will negatively impact on the ground water. The water contained in the final void will increase in toxicity and be a threat to native animals in the area, and could be a major threat to the floodplain in a flood event.
- The existing mine overburden embankments recently directed large volumes of mine water from within the project area onto the flood plain during the Nov 2011 and Feb 2012 floods. The mine expansion in the Goonbri Creek Catchment will exacerbate this issue.