My name is Rachel Webster and my submission is on behalf of Upper Peel Landcare Group of which I've been a member for 5 years. Also as an individual who has dedicated her lifestyle, education and career to environmental stewardship. My Landcare group and I are deeply concerned about the potential long-term impacts on biodiversity. We believe that the ecological costs outweigh the benefits of this project and it should not go ahead.

My personal attachment to the natural world is a long one. I grew up on a small farm where we lived a very self-sufficient lifestyle, growing much of our own food minimising our resource use, improving our soils and biodiversity through re-vegetation and weed management. This deep-seeded need to care for our natural world continued into university where I completed a Bachelor degree with first class honours in Wildlife Management and Recreational Ecology. I then spent several years in ecological research In Kosciuszko and Yuraygir National Parks, 3 years as a BeachCare Coordinator in SE QLD and then the Regional Landcare facilitator for NW NSW. My next 15 years were spent in education in the field of science, indigenous culture and sustainability. I am now a small business owner and farmer in Nundle. On our farm in Nundle we continue the lifestyle of my childhood, living with a very small ecological footprint, capturing our own off-grid energy with solar panels, growing our own food and building with recycled materials.

The Griffith University Research and Field Study Team at Kosciuszko National Park, 2008.

Rachel Webster, bottom row, far right.

Rachel Webster leading a group of Japanese students in a beach clean-up in her role as BeachCare Coordinator (Centre for Coastal Management, Griffith University), 2008.

My 20 year Environmental Science career working across many levels; from individuals, to community, business and as an advisory to Government, has highlighted the importance of collaborative decision-making. This project has the opportunity to be an example of this; where extensive, democratic collaboration lead to a decision which addresses the needs of the majority of affected people. But above all, remaining a humble student of the natural world and keeping in mind that we as humans are but a small part of a much larger ecosystem.

Protecting, managing and restoring our natural world through biodiversity has always been my key focus and is shared by our Landcare Group and the greater Landcare movement. I have long protested against reliance on fossil fuel energy and my early leaning was in support of this apparent green energy project. This was until I started to look deeper into the impacts on biodiversity and I was reminded that renewable energy projects are just one solution amongst many to address the climate crisis. Moving forward from this project, I hope that biodiversity moves to the fore of climate management strategies.

Our Landcare group shares the view that there is an important place for renewable energy projects, however these must not be at the expense of natural climate solutions. For example: can we justify the clearance of 190 hectares of land, 8 hectares of which are the endangered Box Gum Woodland, for 64 turbines with a realistic lifespan of only 20-25 years? The trees to be cleared may have taken two centuries to grow and the estimated lifespan of the wind farm pales in comparison. In the pursuit of reduced carbon emissions must we degrade 447ha of existing vegetation and soils which already act as a healthy, functioning carbon sink?

Box Gum Woodlands have been the focus of many Landcare Groups in this area with over 6000 trees planted by the Tamworth Urban Landcare Group and over 1000 trees planted by the Upper Peel Landcare group (Tamworth Regional Landcare Association, 2023). Given that there is less than 400 hectares of White Box Woodland remaining in NSW and that Box Gum Woodland supports over 60 threatened species, every effort should be made to protect these communities (Tamworth Regional Landcare Association, 2023).

Our Landcare group have successfully collaborated with other community groups, Indigenous elders and local council. As a group we are dependent on a shared vision for sustainability projects. Sadly our once cohesive community has been fractured and we have noted reduced community participation vital for the success of Landcare projects. It is frustrating to our group that there is a proposed clearance of 46.28 ha of existing mature Koala habitat, meanwhile our fellow Landcare community in nearby Gunnedah are working to create 45 ha of new koala habitat.

Rachel Webster working with the Tamworth Urban Landcare Group in 2010, during her role as Regional Landcare facilitator

The proposed removal of street trees for the transport route, some of which were planted by local residents, is not supported by our group. These street trees provide habitat, but are also essential in reducing reflective heat, cooling our urban area by up to 10 degrees, an important climate management strategy. The argument that the community fund offered by this project will benefit the community is null and void if there are no volunteers willing to participate in Engie-funded activities. No amount of money can replace long-standing relationships and partnerships based not on money, but on a shared vision.

Members of the Upper Peel Landcare Group (L-R: Karlee Burgess, Hamish Adams, Kay Deaves, Rachel Webster and Maisy Gibson), partnering with local business and a community event at the Nundle Country Picnic in 2020.

Our group supports the Department's removal of 17 turbines to reduce Visual, Noise and Biodiversity impacts. However, we believe there are many indirect impacts which have not been addressed and must be considered. We have grave concern for the direct fragmentation of habitat due to transport and transmission lines and indirect fragmentation due to increased weed dispersal.

It does not take a University degree in Ecology to observe how opportunist species can invade a disturbed area and threaten biodiversity. Who will manage further potential spread of these weeds?

Ben Halls Gap Nature Reserve and Crawney Pass National Park are an integral part of the wildlife corridors our group is trying to preserve. The EPBC Act has been put in place to protect ecologically significant ecosystems. The Ben Halls Gap Sphagnum Moss Cool Temperate Rainforest is listed under the EPBC Act as a critically endangered community. This community is similar to the bog communities in the subalpine areas of Kosciuzko National Park where *Sphagnum cristamum* is the dominant ground cover species. This particular species was one of the most severely impacted by fire, following the severe fires of 2003 (Walsh & McDougall, 2004). Previous studies found that this species and associated communities such as the sphagnum-dominated bogs, are highly sensitive to other impacts such as grazing and trampling and may require between 15- 45 years to recover from disturbance.

The location of the Ben Halls Gap Sphagnum Moss Cool Temperate Rainforest community on the boundary of Ben Halls Gap Nature Reserve already makes it vulnerable to edge effects. Its close proximity to the boundary of the wind farm makes it even more so, particularly to drying effects from increased exposure. Erosion from land clearance and earth works also pose a serious threat to this sensitive community. Walsh & McDougall (2003) found that the sphagnum-dominated bogs of the alpine areas in

Victoria and New South Wales which had been impacted by erosion and habitat fragmentation may never recover naturally and become locally extinct. The Scientific Committee established by the Threatened Species Conservation Act suggest that the survival of this community is attributed to its inaccessibility and therefore reduced exposure to human impacts. The presence of this wind farm negates this previous protection (NSW Department of Planning and Infrastructure, 2021).

The existing placement of turbines 32, 33, 39, 40, 43 and 45 near the internationally significant biodiversity area should be removed to protect these highly sensitive communities. We believe the recommended 130 m blade tip buffer from the boundary of the Reserve should be increased. We also agree with the recommended 50 m blade tip buffer from existing native vegetation canopy. We ask that the 6 turbines, unable to meet these buffers, be removed.

Our group believes the NSW Biodiversity Offset Scheme, is impressive on paper but holds little true ecological weight. My many years of field study have reinforced that specific environmental parameters of a subalpine microclimate cannot be replicated elsewhere. The pre-European remnant vegetation and subalpine microclimate on the top of the range is unique. Species which rely on cooler temperatures and altitude who already have a limited geographical range, cannot simply be moved. In the world of biodiversity, it is never like for like. We believe as the project stands, there will still be a net loss of biodiversity and some of the critically endangered communities and species may be threatened with local extinction. This project is potentially undoing the important conservation works of not only Landcare, but the NSW National Parks and Wildlife Service (NPWS), which has a zero extinctions target in all parks and reserves.

Research in the subalpine communities in Kosciuszko National park provide an opportunity for some projections for impact in the subalpine communities at this site. Williams et al. (2014) found a minimal impact of climate change on plant diversity and species composition over a 8 year study. However, the pattern of snow reduction at Kosciuzsko National Park has been noted in an expansion of the range of native macropods and wombats (Hartley et al., 2022). This impact may also be relevant and should be considered at this site. The main concern found based on the many studies in this area, rests with exotic species, particularly hard-hooved animals. Williams et al. (2014) conclude that ungulates such as cattle, horses, deer and pigs should be completely absent from alpine ecosystems. All of these were noted at this site.

Occasional fires such as those in 2003 and 2007 which initially caused widespread devastation in the alpine and subalpine areas of the Snowy Mountains, are not considered a ‘catastrophic’ threat in Koscisuszko National Park according to Williams et al. (2014). These alpine ecosystems have indicated resilience to fires, however they are protected as National Parks and are not faced with some of additional threats at the Hills of Gold site. The cumulative impact of land clearance, grazing, habitat fragmentation, disturbance to soils and the natural hydrology, increased spread and invasion of exotic species, all contribute to a reduced resilience. The impact of fire in this site, is still a serious potential threat to

biodiversity. The mitigation measures to manage fire, such as the suggested 20,000L water storage on site, are simply not adequate.

Unlike the alpine areas in Kosciuszko National Park managed by NSW Parks and Wildlife Service, the hills of gold area is dependent on landholders and developers to do the right thing. Our site has 64.88ha high condition native vegetation. Blackberry (*Rubus fruticosus*) is listed in the EIS as being a major threat to biodiversity, including in existing areas of high condition vegetation. The proposed clearing of 60m strips of mainly native vegetation for transmission lines outlined in the EIS is an example of habitat fragmentation. The mitigation strategy of planting native grass seed will not reduce the potential for erosion given the steepness of the slope. The potential threat of fires at this site has been identified. The cumulative impacts of fire and land clearance on the steep slopes of alpine bioregions, increases the risk of major erosion and threatened ecological integrity according to the State of NSW and Department of Planning, Industry and Environment (2020). There is also a pattern of declining ecological carrying capacity of areas impacted by fire in NSW over the past 10 years.

I appeal to the Commissioners to ask yourself, as fellow humans, a single species amongst many, all economic, business, social outcomes and credits aside; is this project truly protecting the future of our planet? We believe that the answer to this is no. We request that at this final stage, this project is not approved and we look toward other effective, ethical environmental stewardship strategies.

Planting a lemon tree with the help of sustainability expert, Michael Mobbs at the Nundle Community Garden Launch, 2021.

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