

Submission  
No 49

## INQUIRY INTO INTEGRITY OF THE NSW BIODIVERSITY OFFSETS SCHEME

**Organisation:** Lock the Gate Alliance

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## **Submission: Inquiry into the NSW Biodiversity Offsets Scheme**

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

We focus our submission on parts 1 (a) and 1 (c) of the terms of reference. Specifically, we address the effectiveness of biodiversity offsetting to halt or reverse the loss of biodiversity values, including threatened species and threatened habitat in New South Wales, and the use of offsets for state significant development (SSD), including as part of strategic assessments (or biodiversity certifications) and the offsetting conditions that consent authorities apply to these types of projects.

### **Introduction**

The practice of biodiversity offsetting in New South Wales is facilitating biodiversity decline and pushing species and communities towards extinction.

Our remarks in this submission focus on offsetting practices applied in the assessment and determination of major mining projects which are state significant development under the *Environmental Planning and Assessment Act 1979*. Essentially, much of the Biodiversity Offsets Scheme now in force under the *Biodiversity Conservation Act 2016* is an extension of the arrangements that were already in place on an interim basis for the mining industry under the Major Projects Offset Policy and the Framework for Biodiversity Assessment. Features common to these arrangements are: like-for-like offsetting is only strictly applied for critically endangered entities and Commonwealth-listed entities; ability to pay money instead of securing land-based offsets; ability for mines to use the promise of future rehabilitation as a biodiversity offset. Under this scheme, since 2014, particular species and communities have been subjected repeatedly to extensive habitat loss and poorly-enforced, failed and abandoned offsetting proposals.

We would draw the Committee's attention particularly to the following issues:

1. **Lack of data, monitoring and mapping:** Despite a clear commitment in the Strategic Regional Land Use Plans of 2012, there is no register of biodiversity offsets in NSW. There is now a register of credits and transfers but this does not include offset properties owned and controlled by mining companies to offset mining operations. There is too little investment in vegetation mapping, threatened species monitoring and reporting on biodiversity loss and trends at the local and regional level for any confidence in the system as it stands;
2. **Offsetting is no longer a last resort:** Offsetting began as an option of last resort, but is now the assumed approach for biodiversity impact mitigation for almost all impacts, despite lip service to the "avoid, mitigate, offset" hierarchy which has effectively been abandoned;

3. **Use of mine rehabilitation as biodiversity offset is cynical, untested and high risk:** It is now routine for mining companies to meet part or even most of the “credit calculation” for their offset packages through promised rehabilitation of mining pits. Mines are using the very areas they are clearing as offset sites for that clearing, on the promise they will begin to replace the lost ecological communities 20 or more years into the future when mining ceases;
4. **Availability of offsets never tested:** It is routine for mines to be approved without evidence that extant areas of mature vegetation exist and are available to be secured to offset that mine’s impact. Several mining projects have been approved to clear extant areas of mature habitat, notably the eastern Pilliga and Leard State Forest, that are essentially unique and for which no area of equal value and importance is available to act as compensation for this loss;
5. **Offsets being delayed, or revised, or doubled-up:** A significant proportion of mines with offset obligations fail to meet deadlines to properly secure offset properties and this delay has been exacerbated by the shift to the new crediting system. Others are using the same areas as offsets for more than one mining activity or return years later with proposals to clear their offsets and replace them with others.
6. **Absence of “red-lights” and abandonment of “like-for-like”:** Offsets no longer have to be like-for-like, instead, developers have the opportunity to make a payment to the Biodiversity Conservation Fund calculated using the “offsets payments calculator.” There is no analysis that we are aware of that considers the long-term effect of this policy on threatened species and communities that may be in areas particularly targeted for development and may suffer in particular from the combination of the Scheme having no effective red lights, and no effective like-for-like requirement.

We provide more detail about these issues below.

### **Data and monitoring**

There is too little biodiversity data being collected over time in New South Wales. Vegetation mapping in regions targeted by clearing activity is often out of date, which means underestimating the conservation value of bushland being lost. There is little to no public data available about the improvement, or lack of it, of biodiversity values on offset sites and no spatial register of offset sites, despite a nine year old promise to establish this. The assessment process for major projects no longer requires detailed and systematic surveys for rare and threatened species across the development area and in many areas, lack of sustained data collection means that development assessment processes are the only time when such surveys are undertaken.

### **Biodiversity offsetting facilitates cumulative impacts on some values**

Almost all of the bush in the lowlands of the Hunter Valley is one of four nationally critically endangered woodland communities. They’re critically endangered because so much of their original extent has been cleared, and so little of what remains is safe from further clearing. In the last fifteen years, thousands of hectares of native woodland in the Hunter Valley has been approved for clearing by coal mines. Much the remaining vegetation is part of a forest community called Central Hunter Valley Eucalypt Forest and Woodland. The advice prepared by the scientific committee that led to this forest being listed as critically endangered in 2016 warned that it would be extinct in 40-60 years if we don’t stop clearing it. Wildlife that use these forests, such as flying foxes and threatened woodland birds, are also at risk of regional extinction – they may vanish from the Hunter altogether.

In 2006, it was estimated that there was 37,000 hectares of this forest community left in existence.<sup>1</sup> As shown in Table 1, we estimate that clearing approved for mining projects since that time represents 9.1% of that extent, a substantial loss given that much of the remaining extent is scattered in small patches and all remaining patches in moderate to good condition are considered critical to its survival.<sup>2</sup>

Table 1: Clearing of CHVEFW approved with Hunter Valley mining project consents. Projects highlighted in red have been granted consent since the community was listed as critically endangered under the EPBC Act.

<b>Mining project</b>	<b>Hectares</b>	<b>Year</b>
<b>Mount Owen Continued Operations</b>	<b>223</b>	<b>2016</b>
Bulga Optimisation Project	556	2014
Bengalla Continuation Project	10	2015
<b>Warkworth Continuation Project</b>	<b>380</b>	<b>2015</b>
Mount Arthur Extension	30	2014
Ravensworth Operations	526	2011
Integra - Camberwell open cut	68	2008
Anvil Hill/Mangoola	1,231	2007
Mount Arthur 2010 extension	84	2010
<b>United Wambo</b>	<b>250</b>	<b>2019</b>
<b>Total</b>	<b>3,359</b>	

Similar analysis could be prepared of approval for mining projects that clear other critically endangered ecological communities, such as Grassy White Box Woodland, and the habitat of a number of species such as koalas, the critically endangered Regent honeyeater and threatened woodland birds and bats. Offset strategies are approved for these projects, as for the Maules Creek coal mine, without certainty that there is extant vegetation of equal value in condition and habitat function available and in need of protection as an offset. No cumulative impact assessment for these species and communities is undertaken as part of the assessment and determination process and for most, it is assumed without evidence that offsetting is an effective strategy to prevent their ongoing decline and extinction.

In 2014, the then-Office of Environment and Heritage drafted a Cumulative Impact Assessment considering the potential impact of 14 proposed mining projects in the Hunter as part of a Strategic Assessment process under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* – a process which was never completed. Several of the 14 mining projects considered in this process have since gone on to be assessed and determined under the SSD provisions of the *EP&A Act*, the Major Projects Offset Policy and the EPBC bilateral assessment agreement. The analysis undertaken for the Upper Hunter Strategic Assessment was never released publicly and the process was shelved, but Lock the Gate obtained some of the material produced that summarised the expected impact of these projects, which confirms an unacceptable cumulative impact on particularly affected species and communities. For example, the cumulative impact assessment for the Upper Hunter Strategic Assessment found that the proposed 14 mining areas

<sup>1</sup> Peake 2006. *The Vegetation Mapping of the Central Hunter Valley, New South Wales. A report findings of the remnant Vegetation Project*. Hunter Central Rivers Catchment Authority.

<sup>2</sup> See Department of the Environment (2015). *Approved Conservation Advice (including listing advice) for the Central Hunter Valley eucalypt forest and woodland ecological community*.

together harboured 20-25% of the remaining extent of the endangered Central Hunter Grey Box-Ironbark Woodland community and that up to 3,4000 hectares of that community would be cleared for the proposed projects. The assessment found that the mining projects would result in the extent of the community being substantially reduced and the fragmentation of existing remnants into smaller patches. An additional 2,500 ha would be cleared of the related Central Hunter Ironbark-Spotted Gum-Grey Box Forest. Both of these communities are part of the Central Hunter Valley Eucalypt Forest and Woodland described above which was subsequently listed as critically endangered under the *EPBC Act*.<sup>3</sup>

Clearing for each of these projects has also had a cumulative impact on other ecological communities and on nationally threatened species, such as the Regent honeyeater and forest and cave bats. This particularly effects species and communities with limited range or specific habitat requirements. The Warkworth Continuation project, for example, was approved to clear 15% of the remaining extent of the critically endangered Warkworth Sands Woodland. The Upper Hunter Strategic Assessment impact assessment found that nearly all (90%) of the known records of the endangered population Pine Donkey Orchid population in the Muswellbrook local government area were within proposed mining areas, chiefly a Mangoola mine expansion site. The assessment warned that mining could cause this population to go extinct. The Mangoola expansion project that was assessed as part of that process has since been approved by the Independent Planning Commission, with an offset strategy for this species and two other orchids, based on a habitat assessment at the mine's offset sites and including one site that was already pledged to be protected as an offset for another mine.<sup>4</sup>

### **Biodiversity Offset Scheme and the Framework for Biodiversity Assessment**

Prior to the repeal of the *Threatened Species Conservation Act 1995* and the creation of the *Biodiversity Conservation Act 2016 (BC Act)*, biodiversity offsetting for state significant development was being undertaken via the "Major Projects Offset Policy" and its "Framework for Biodiversity Assessment." The approach in these policies has essentially been replicated in the new offsets framework under the *BC Act*. Below, we detail some of the substantial failings of that former scheme's Framework for Biodiversity Assessment, which are now generally applied for development across the state as part of the Biodiversity Offsets Scheme.

NSW Biodiversity Offsets Policy for Major Projects was introduced transitionally in 2014 and required proponents to apply the Framework for Biodiversity Assessment (FBA) to assess impacts on biodiversity. The FBA was constructed on the premise that development would proceed and the proposed impact would take place, and the purpose of the policy was to accurately quantify that impact for specific biological entities, *and only those specific entities*, in numerical terms.

As a result, the Framework for Biodiversity Assessment essentially required consent authorities to ignore impacts on biodiversity values beyond vegetation community proxies and a highly restricted list of fauna and flora and constrained the application of offset requirements. This policy was applied in the determination of mining projects between 2014 and 2020.

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<sup>3</sup> The critically endangered EPBC community Central Hunter Valley Eucalypt Forest and Woodland includes the NSW threatened communities Central Hunter Grey Box-Ironbark Woodland in the NSW North Coast and Sydney Basin Bioregions; Central Hunter Ironbark-Spotted Gum-Grey Box Forest in the North Coast and Sydney Basin Bioregions and Hunter Valley Footslopes Slaty Box Woodland in the Sydney Basin Bioregion

<sup>4</sup> Two offsets for the United Wambo mine, the Highfields and Mangrove offset sites, are also now deemed as offset sites for the Mangoola Continuation project. This cross-over is detailed later in this submission.

Only the most severe impacts on specific listed entities and landscape features were deemed under the policy to be “impacts that require further consideration by consent authority.” All other impacts are “impacts for which the assessor is **required to determine an offset**,” or impacts that did not even require offsetting. The effect of this was that consent authorities were no longer required or even allowed to consider the range of biodiversity impacts in their determination of a development application: only impacts deemed complicated or severe were to be considered – everything was assumed able to be offset.

Application of vegetation communities as proxies for threatened plants and animals was central to the method of the FBA and this has continued in the NSW Biodiversity Offsets Scheme. Most threatened species were designated as “ecosystem credit species,” meaning that the species was deemed to be “associated with” certain plant community types (PCTs) and therefore, calculation of impacts and offsets of those plant communities was a proxy for impacts on that species. Only a limited number of threatened species that were designated as “species credit species” and actually had their specific impact analysed, considered and offset.

#### *Case study: Narrabri gas project*

The assessment and approval of the Narrabri gas project in the Pilliga forest provides an illustration of the application of the biodiversity and offset policy for major projects that came to be applied to development generally through the Biodiversity Offsets Scheme. The Pilliga is a unique biodiversity refuge and the largest temperate woodland in eastern Australia. As a result, it is recognised as a priority habitat state-wide for a number of threatened species including the endemic Pilliga Mouse, Barking Owl, Eastern Pygmy Possum, Black-striped Wallaby and Corben’s Long-eared Bat, for which it is recognised as the stronghold by the NSW Government. The Black-striped Wallaby population in the Pilliga and adjoining areas is one of only two known populations of the species in NSW. The Eastern Pygmy Possum population in the Pilliga is also recognised as having significance state-wide, particularly as an example of the species at the edge of its range. As well as providing a core refuge for threatened species, it also provides habitat for a large number of regionally significant species. These include species that are declining, or at the edge of their range, and which were not considered by the gasfield assessment at all as a result of the limited nature of the biodiversity assessment and offset policy.

The ability to offset such refuge habitats for these species in adjoining areas is extremely limited, because of the ecological integrity of the Pilliga, the structure of the woodlands it contains, and its size and configuration compared to other remnants. However, the application of the Major Projects Offsets Policy prevented consideration of this and assumed that offsets *were* available for these species, largely through preserving similar ecosystems where they may or may not be present. The ecological impact assessment for the Narrabri gas project the assessment from the outset excluded 83% of the native fauna species and 98.5% of the native flora species present in the area from consideration because they have not been listed as threatened. The impact assessment then calculated the “credits” required to offset the clearing of 988.8 hectares of vegetation (Santos’ estimate of maximum clearing it would undertake across the whole 95,000 hectare area of the gasfield). Of the 57 threatened flora and fauna species considered, only four threatened fauna and nine threatened flora were “species credit” species: Black-striped wallaby, *Coolabah Bertya*, Eastern Pygmy possum, Greenhood orchid, Native milkwort, Pale-headed snake, Pine Donkey orchid, *Rulingia procumbens*, Scant pomaderris, Spiny peppercross, Winged peppercross, Squirrel glider and *Tylophora linearis*.

The subsequent development consent granted by the Independent Planning Commission includes a series of tables listing the many plant communities and threatened species to be impacted by the development and the numbers of credits Santos must retire to compensate for this loss.

### **Offsetting no longer a last resort**

The hierarchy of “avoid, mitigate, offset” is no longer effectively applied in New South Wales. The Biodiversity Assessment Methodology describes the process of identifying threatened species present at a development site from the outset, in Section 5, using “credits” as the unit of measurement of presence. Section 5.4 describes how “The biodiversity risk weighting for a species is used in Chapter 10 to determine the number of species credits and ecosystem credits required to offset the residual impacts of all proposals except biodiversity stewardship sites.”

Section 7 outlines a process by which proponents need to document their efforts to “avoid” impacts, but avoidance is always in effect, mitigation. That is, “avoidance” is about the design of the development which it is always assumed will proceed: consent authorities are not applying the “avoid” test with respect to the development overall.

Some species may be deemed at risk of “serious or irreversible impacts” and a more thorough consideration is afforded to these. In reality, this more detailed assessment corresponds to the old “eight-part test” under the repealed *Threatened Species Conservation Act 1995* which used to be applied to *all* threatened species found to be present at a development site. At various times in the last ten years, offsetting policies and guidelines have attempted to define or ring-fence impacts that are red lines, species that “cannot withstand further loss” “irreversible impacts” but these are never applied cumulatively, and result in actual red-lines only in extreme cases. In the current Biodiversity Offset Scheme, there are effectively no red lines. The result is the facilitation of more and more clearing of remnant habitat, and threatened species lists and evaluations of conservation status that are frozen in time, unable to keep pace with the rate of loss.

### **Use of future mine rehabilitation as biodiversity offsets**

The concept of using future mine rehabilitation as a biodiversity offset was part of the Upper Hunter Strategic Assessment, which was never finalised, and was formalised in the Major Projects Offset Policy which applied on an “interim” basis from 2014 until the *Biodiversity Conservation Act* came into force for state significant development. Objectively, the proposition is absurd: the very area being cleared is being used as its own biodiversity offset, with the promise of re-establishing complex ecosystems a decade or two in the future after mining ceases. Some mining companies have dedicated resources to researching and experimenting with the establishment of endangered ecological communities from scratch on post-mining lands. Notably, Glencore’s Mangoola and Mount Owen mines have increased the sophistication of biodiversity establishment and monitoring in rehabilitation areas. But this re-establishment, important as it is, should never have been allowed to be used as a biodiversity offset for extant, mature and functional habitat.

In principle, the practice completely ignores the role of displacement, time and extinction debt. For fauna particularly, once habitat features are removed, and populations are displaced or destroyed, the impact should be assumed to be more or less permanent. Generally, good condition habitat means mature habitat, which would take decades to become functional after first establishment, so the gap between habitat loss and offset creation is perhaps half a century. For species that are at risk of local or regional extinction, functional habitat must be continuously available and it is highly speculative to assume that loss of that habitat can be reversed decades into the future, with any

benefit to the species concerned which may be long gone from the region by that time. Whether or not efforts to re-establish endangered ecological communities on mined land will be successful in the long-term is unknown.

Gradually, since the concept was first introduced, the proportion of a mining company's offset obligation that is to be met with future promises of rehabilitation has increased. Initially, there was a proposal that this be limited to 10%. Then it increased to 25%. In recent decisions, there has been no limit imposed. For some recent projects and some ecological communities the majority of the offsets proposed by mining companies and accepted by the Department of Planning, Industry and Environment and the Planning Assessment Commission have been mine rehabilitation. For the recently approved Mangoola Continuation project, for example, the proposed offsetting strategy rested almost entirely on future mine rehabilitation for two ecological communities. For the Forest Red Gum grassy open forest community, 72% of the proposed offsetting relied on future promises of rehabilitation, and for Swamp Oak grassy riparian forest it was nearly 90%.

### **Like-for-like**

One of the fundamental principles of offsetting when it first became practiced in NSW was that offsets must be "like-for-like" – the entity suffering loss must be the entity compensated for, and there must be "no net loss" suffered overall. In the Biodiversity Offsets Scheme, variation rules allow offsetting on the basis of degree of threat. So, when 15% of the remaining extent of Warkworth Sands Woodland was approved to be cleared for the Warkworth Continuation Project, the rules permitted this to be "offset" by the protection of a small plot of land adjacent to a residential area which harboured a critically endangered orchid.

#### *Case study: Warkworth mine*

At the time of the Warkworth Continuation Project's approval, there was only 464ha of Warkworth Sands Woodland remaining extant of which the project was to clear 72ha, or 15%. The then-Office of Environment and Heritage conceded that, "the impact is likely to increase the risk of extinction of the Warkworth Sands Woodland EEC." It was also slated to clear habitat for Regent honeyeater and the Swift parrot, both of which were confirmed to be present.

We note that Warkworth Sands Woodland, Regent honeyeater and Swift Parrot are all critically endangered nationally, but for each of these entities, that listing came too late, administratively, to be considered by the Planning Assessment Commission in its determination of the project. In November 2014, the Office of Environment and Heritage gave "certification" to Rio Tinto affirming that the offset arrangements they propose to make for the biodiversity impacts of the Warkworth Continuation Project were adequate. This is the only case of which we are aware of such certification being granted to a coal mine offset package. That certification document noted that the identified land-based offset areas, even with intended credits generated by future mine rehabilitation, *did not provide sufficient offset credits to offset the impacts of the project*. Further, that certification noted that the development was "likely to increase the risk of extinction" of Warkworth Sands Woodland. Warkworth mine has now applied for a modification of its consent to relieve it of the obligation to retire certain biodiversity credits in addition to its land-based offsets.

### **Long-term security and doubling up**

The introduction of the Biodiversity Offsets Scheme has led to delay in the implementation of offset commitments and obscurity about the effectiveness of the scheme. Even before the *BC Act* was introduced, coal mines in New South Wales were routinely seeking extensions to their deadlines to



secure biodiversity offsets with long-term agreements. Some have sought and received approval to mine or develop areas previously set aside as offsets.

Some examples include:

- Mount Thorley-Warkworth: the Warkworth Continuation project was approved in 2015 and has not met conditions setting timeframes for the retirement of credits and security of offset properties. Offsets are now estimated to be secured by November this year. Technically, the mine is in breach of its development consent. Its most recent Independent Environmental Audit found “Significant infestations of a variety of pasture and exotic high threat weeds” in two of its offset area, predominately in places with disturbed vegetation including those where the mine is supposed to be establishing the critically endangered Warkworth Sands Woodland.
- Mount Owen – Glendell. The Mount Owen Continued Operations project was approved in 2016 and has received numerous extensions of time to secure its biodiversity offsets with long-term agreements. They were supposed to have been secured by June 2018.
- Bengalla Continuation project was approved in 2015 and offsets were supposed to be secured within two years of commencement, but long-term security of offsets is still not in place. The Department wrote in October 2020 that it was “concerned that that limited progress has been made since September 2019 and the mechanism for securing the offset areas is still to be identified” but has continued to grant time extensions to the mine’s owner, New Hope Corporation, regardless.
- United Wambo recently requested an extension from the Planning Secretary of the timeframe for securing its biodiversity offsets to 6 January 2022. The Highfields offset site for this mine is also an offset (using “surplus credits”) for the recently approved Mangoola Continued Operations project.
- Mangoola Continued Operations was approved in February 2021 with a proposal to offset the impacts of the project on two threatened orchids that was entirely dependent on “surplus” offset credits created from offsets already committed to the United Wambo project. A United Wambo offset site is also proposed to satisfy nearly 6% of the offset credits required by the project for clearing Narrow-leaved Ironbark - Bull Oak - Grey Box shrub - grass open forest of the central and lower Hunter. When this community was cleared for United Wambo, it was considered a critically endangered ecological community, but it was not considered critically endangered in the Mangoola assessment because of the absence of Permian soils.