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14 February 2019

Submission: United Wambo project

Thank you for the opportunity to make a submission. Lock the Gate Alliance objects to this proposal and urges the Independent Planning Commission to reject it. The standard of assessment and the scale of impact of this project are such that it must be refused consent.

We are particularly concerned that:

- The information provided to the IPC about air quality impacts of this project models the impact of this and other nearby mines against a background concentration of particulate pollution that is lower than the air quality actually experienced in the area in the last two years;
- The clearing of 250 hectares of good condition Central Hunter Valley Eucalypt Forest and Woodland which is critical to the survival of this ecological community is likely to contribute to its extinction in the coming decades;
- Mistakes and misrepresentations in the Department of Planning's assessment material regarding critically endangered species impacted by clearing for this project;
- The proposed unrestricted use of future mine rehabilitation as an offset for critically endangered ecological communities and species
- The failure of the proponent and the Department of Planning to address queries and information requests raised by the Commission in its review, notably, the absence of advice from the Commonwealth Department of Environment about the acceptability of unlimited offset credits sourced from mine rehabilitation, the absence of certainty about stage 2 and 3 offsets and the failure of the proponent to provide the Office of Environment and Heritage with the information it needed to conduct the requested review of mine rehabilitation outcomes at other Glencore sites.
- Failure of the Department of Planning to include NSW's Climate Change Policy Framework 2016 among policies against which this project is considered, particularly in light of the judgment in *Gloucester Resources v Minister for Planning*.
- The Assessment Report does not provide the Commission with a quantification of the drawdown this project will, cumulatively, cause in the Wollombi Brook and Hunter river alluvial aquifers and this information is necessary for an accurate assessment against the Aquifer Interference Policy.

Air quality and greenhouse

OEH air quality monitoring data for 2018 shows poor air quality in the region, well beyond what is modelled by mining assessments and numerous breaches of thresholds for particulate pollution in areas near to this project.

Data for PM₁₀ measurements at monitoring sites from 1 January 2018 to 6 December 2018 showed 179 recorded days above the 24 hour standard. The spread of these days at monitoring sites is shown in Table 1 with the worst effect at Camberwell, where 12% of days last year saw PM₁₀ pollution levels above the 24 hour standard of 50 micrograms per cubic metre.

The Air Quality study completed by Jacobs and provided to the IPC for this project dated July 2017 uses 2014 as the background year against which increases in particulate pollution from this project and other nearby mines are measured. As can be seen in Table 1, particulate concentrations of PM₁₀ have been higher in the last three years in than they were in 2014 at most sites. We used air quality monitoring data available via OEH's website and have calculated annual averages as the average of daily average concentrations for the relevant year.

No doubt meteorological conditions have exacerbated PM₁₀ pollution in the Hunter but the establishment of background conditions must account for the not uncommon recurrence of dry conditions. In addition to the drought, there has likely been an increase in the overall load of particulate pollution being experienced in the central part of the Hunter Valley which would be exacerbated by this mine.

We would draw the IPC's attention to Jerrys Plains, last year had 11 days over the 24 hour average PM₁₀ standard and recorded annual average PM₁₀ in 2018 close to the threshold of 25 micrograms per cubic metre. The number of days in Jerrys Plains that exceeded the 24 hour standard for PM₁₀ is nearly twice the highest number of days shown in Table 7 of the Jacobs report provided to the IPC. In the last year both the Wambo pit and Hunter Valley Operations have extended towards Jerrys Plains.

Table 1: Annual PM10 concentrations for selected Upper Hunter monitoring sites (exceedances of annual average PM₁₀ standard of 25 micrograms per cubic metre are in red)¹

Date	2012	2013	2014	2015	2016	2017	2018
Singleton	22.3	23.3	21	19.3	19.3	20.8	24
Maison Dieu	25.8	25.8	22.7	20.4	20.4	23.1	27.9
Camberwell	26.4	27.8	24.6	22	24.5	27.4	31.1
Singleton Nth West	25.9	25.9	22.7	20.9	21.9	22.7	26.9
Mt Thorley	24.8	24.7	21.5	19.8	22.8	25.4	29.1
Bulga	18.7	19.2	17.7	15	16.1	17.2	21.3
Singleton Sth	19	20.2	18.3	16.9	18	19.4	23
Jerrys Plains	10.8	18.6	18.2	15.5	16.8	18	24.3
Warkworth	21.1	21.4	20.6	18.2	18.6	21.8	26.4

Contrary to the assessment provided by the proponent and the Department, it appears to us highly likely based on the existing air quality environment that there will be further non-mined owned properties that will experience air quality beyond the daily and annual PM₁₀ standard as a result of this project but the assessment has failed to identify this because it has used 2014 as the baseline. Certainly the IPC cannot be satisfied with an assessment using 2014 as the background air quality given the stark difference between air quality in 2018 and air quality in that year.

¹ Note that the annual average standard was reduced to 25 micrograms per cubic metre in 2016, so the exceedances in red for the years before that are anachronistic. Data obtained from OEH air quality monitoring website in January 2019. Annual averages are obtained by downloading daily average readings and deriving the average of these across each year.

In our view, the cumulative air pollution already being experienced in the central Hunter is chronic and causing population harm and the IPC must refuse consent to this project which will substantially add to the overall load of particulate pollution in the area.

On the subject of greenhouse emissions, as the Commission would be aware, on 8 February 2019 the Land and Environment Court of New South Wales delivered its decision in *Gloucester Resources Limited v Minister for Planning*. The decision clarifies key elements of a consent authority's task when considering a development application, particularly as relates to the assessment of impacts from greenhouse gas emissions. Where a particular project will result in greenhouse emissions, the judgement clarifies the manner in which the consent authority must determine the acceptability of those emissions and the likely impacts on the climate system, the environment and people.

We note that the 266 million tonnes of greenhouse emissions to be created over the life of this project is seven times the volume of greenhouse emissions that would have been created by the Rocky Hill mine which the Land and Environment Court found was grounds for it to be refused.

We believe it is now incumbent on the IPC to consider whether "the refusal of the project could be seen to make a meaningful contribution to remaining within the carbon budget and achieving the long term temperature goal," following the Gloucester Resources judgement at [554]-[555]. This may require a request for further information, putting the entire greenhouse gas emission from this project in the context of NSW's Climate Change Policy Framework and pathways to achieve the temperature goals of the Paris Climate Agreement, neither of which have been provided by the proponent or the Department of Planning.

Biodiversity

To make way for this mine, the proponent proposes to clear nearly 250 hectares of the critically endangered Central Hunter Valley Eucalypt Forest and Woodland and 203 hectares of potential Regent honeyeater and Swift parrot habitat.

In an indication of how poorly the Department of Planning has considered the impact of this project on nationally significant matters, Table E1 of Appendix E to the Final Assessment report incorrectly ascribes Endangered status to the Regent honeyeater and Swift parrot under the EPBC Act. In fact, both of these birds are critically endangered. There may be less than a thousand Regent honeyeaters left on the planet and its habitat continues to be cleared. The species is a migratory visitor to the Hunter and it is critical that mature habitat for Regent honeyeaters be retained.

The Department's Appendix E states that "all credits required for MNES during Stage 1 have been secured through land-based offsets." This is a deliberate misrepresentation since a significant proportion of the offsets in stage 1 are actually the mine site itself and will not be available as habitat for three or four decades.

This appendix also states that OEH considers the Stage 1 Biodiversity Offset strategy "acceptable" and that it is "in accordance with the Conservation Advice" but it does not mention crucial aspects of that advice that indicate that this is not the case.

There is a serious question mark over whether the Departmental officers that wrote the Assessment Report and Appendix E have even read the Conservation Advice for the Regent honeyeater which is a mandatory consideration for a decision about this project. Not only have they got the conservation status of the species wrong, they have misrepresented what that advice says about threats to the

species. The Department claims that the Conservation Advice “identifies the main threat as disease.” In fact, the first sentence of the threats section of the advice identifies that “The decline of the Regent honeyeater is thought to be mainly due to the clearing, fragmentation and degradation of its habitat.”

The species’ Recovery Plan also lists clearing existing habitat as among the primary threats to the regent honeyeater and notes that “Current government policy frameworks in relation to development assessment and the offsetting of impacts don’t adequately address the key threats of habitat loss and degradation and habitat fragmentation.” The first action listed in the Recovery Plan is “Protect intact (high quality) areas of regent honeyeater habitat.”

We have repeatedly raised with the Office of Environment and Heritage and the Department of Planning and Environment the failure of the proponent and the Department to consider the cumulative loss of Central Hunter Valley Eucalypt Forest and Woodland as a result of recent planning decisions in its assessment of this project. The table below summarises recent decisions to allow clearing of this community for mining projects in the Hunter Valley, which is reproduced below.

Table 2: Clearing of CHVEFW approved with mining project consents. Projects highlighted in red have been granted consent since the community was listed as critically endangered under the EPBC Act.

Mining project	Hectares	Year
Mount Owen Continued Operations	223	2016
Bulga Optimisation Project	556	2014
Bengalla Continuation Project	10	2015
Warkworth Continuation Project	380	2015
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
Total	3,109	

In 2006, it was estimated that there was 37,000 hectares of this community left in existence.² We estimate that clearing approved for mining projects since that time is 8.4% of that extent and with the additional clearing for the United Wambo project, 9.1% of the remaining extent will have approval for clearing.

Offsets

Clearing critically endangered woodland is permissible under NSW and Commonwealth law and policy if the clearing is suitably “offset,” but the offset proposal for this project is incomplete and sub-standard and there is a need for urgent clarification of policy regarding the use of promised mine rehabilitation as a biodiversity offset for critically endangered ecological communities.

² 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.

The offset proposal for this project is problematic and there are crucial unanswered questions that make it, in our view, impossible for the IPC to satisfy itself that impacts on biodiversity can or will be offset and grant consent to this project. This project is being assessed under the bilateral assessment agreement with the Commonwealth but there are substantial gaps and problems with the assessment of matters of national environmental significance, particularly nationally critical threatened species and ecological communities. Advice from OEH gave only “conditional acceptance” to a proposal that 25% of the offset requirement for this community will be made up of post-mining rehabilitation. The condition of this acceptance is agreement from the Commonwealth Department of Environment and Energy (DOEE). The Commonwealth has previously opposed the use of any mine rehabilitation as an offset for nationally endangered species and communities. OEH warned both the Department of Planning and the proponent that “DOEE may therefore find the proposed 25 per cent offset proposal under the [Framework for Biodiversity Assessment] to be unacceptable.”³

Lock the Gate has repeatedly sought clarification from the Department and OEH about NSW and Commonwealth policy regarding the use of mine rehabilitation as an offset for nationally-listed species and communities, particularly those that are critically endangered. There is no advice or response from the Commonwealth Department of Environment and Energy before the Commission indicating whether it accepts the use of mine rehabilitation for offsetting impacts on the Regent honeyeater and Central Hunter Valley Eucalypt Forest and Woodland, and, if it will accept this, whether there is any limit on the proportion of offset obligations that can be met this way. In the absence of any stated policy on this question, we are faced with the absurd proposition that there is no limit at all, and a mining company could clear a critically endangered woodland and provide no compensatory habitat at all, merely the promise that it will replant and regrow it in two or three decades’ time.

The Commission’s review of this project earlier this year specifically requested of the Department of Planning that it “confirm the current status of discussions with the Department of Environment and Energy (DoEE) and OEH regarding offset requirements and give consideration to appropriate conditions of consent to reflect agency requirements.” This has not been done for the Department of Environment and Energy and has been only partially done for OEH.

Using mine rehabilitation as an offset has previously not been accepted by the Commonwealth. With the new bilateral assessment agreement, the Major Projects Offset policy prevails, which does allow this but the Major Projects Offset policy provides no guidance as to what proportion of the offset requirement can be met through proposed mine rehabilitation. We have sought and not obtained advice from OEH and the Department of Planning about whether they consider there to be any limit to this provision, and, if there is, what that limit might be, and whether it is the same for critically endangered entities that are, quite frankly, likely to be regionally or totally extinct before this mine ceases operation.

The Commission’s review also asked OEH to provide advice about the Umwelt study of ecological rehabilitation at Mount Owen mine, upon which the proponent and the Department are relying in their confidence that mine rehabilitation is an appropriate offset strategy. OEH has advised that it

³ OEH, 13 October 2017 “Response to Additional Info”

was unable to provide comments on Umwelt's report without reviewing the supporting data, which has apparently still not been provided. OEH advises that "As such, OEH is unable to form a view on the ability of the Applicant to create CHVEFW in mine rehabilitation areas." This is crucial to the Commission's decision. Had the proponent provided this data, the Commission would have an independent evaluation of the proponent's claims. Similarly, had the proponent published a peer-reviewed scientific paper evaluating its progress, the Commission would have been able to rely on such a document in its consideration. But no such evaluation is available.

Mine rehabilitation is not an appropriate offset for a critically endangered woodland or for habitat for a critically endangered species like Regent honeyeater that is at risk of extinction before such rehabilitation would reach maturity. It is also experimental. The final report into Glencore's biodiversity rehabilitation attempts at its nearby Ravensworth mine concluded that, "Current evidence suggests that over the long term, plant diversity on rehabilitation areas declines which could jeopardize meeting rehabilitation objectives."⁴ That report makes clear that this field of research is still highly uncertain and successful establishment of complex, species-rich and self-sustaining ecological communities is elusive. The Minerals Council's 2017 study *Assessment of Mine Rehabilitation against Central Hunter Valley Eucalypt Forest and Woodland CEEC* concluded rehabilitation of this community is *possible*, but it has not yet been achieved. It is laudable that this research is being done, since the Hunter Valley is a heavily-cleared landscape and restoration of biodiversity corridors will help the region recover and respond to climate change. But this uncertain work must not be used as a "compensation" for clearing viable, functional and good condition habitat that is critical to the survival of this ecological community.

Absurdly, the Department of Planning's Final Assessment report, recognises that "there is an element of uncertainty around whether CHVEFW can be established through mine site rehabilitation," and to address this uncertainty "has recommended a condition requiring the Applicant to retire relevant deficit biodiversity credits to make up for any shortfall." How does the Department imagine such credits will be generated when the proponent has been unable for three years to find suitable offset sites to retire credits for this project?

The Commission's review also stated that, "The Applicant and the Department must clarify what the Project's total offset requirement is alongside what has been secured at the time of any final determination" and that "The Applicant shall demonstrate that it has sufficient offsets secured and/or identified for all stages of the Project prior to final determination of the Project and a clear and detailed strategy for meeting future unsecured offsetting obligations required under the Project. Additionally, assumptions in relation to the probability of purchasing additional land-based offsets should be disclosed together with a reconciliation to any historical experience in undertaking such purchases."

This has also not been provided. In its most recent advice, OEH confirmed that the offset obligation for all stages was clear, but that contrary to the IPC's recommendation, "the proponent has not provided details of how they will meet the offset obligations for Stages 2 and 3."

⁴ Ravensworth Hunter Ironbark Complex Research Program Final Report. June 2016.

All of the above factors indicate that the impact this project will have on biodiversity is not acceptable and cannot be satisfactorily offset. The Commission should refuse consent for this project.

We also note that the Department has not provided a table indicating how much of the proposed offsets for the Regent honeyeater offsets come from proposed mine rehabilitation and the above remarks about the inappropriateness of using mine rehabilitation as an offset for critically endangered entities apply equally to the Regent honeyeater.

Rehabilitation

Beyond the offsetting issue, we have further concerns about the project's rehabilitation plans. We note the recent Land and Environment Court judgement regarding Mount Arthur mine and the mine owner and Department of Planning's successful argument that the conditions of consent for that mine only require leading practice methods of reshaping spoil piles to return the landscape to natural contours to be applied to new disturbance areas under the 2014 expansion consent, not the rest of the mine area. This is very disappointing and a salutary warning for the Commission about the importance of clarity in conditions of consent.

We note that in Wyoming in the United States, one of the two members of this joint venture is required by law to back fill voids and restore the landscape to approximate original contours.

While the proponents claim that the combined sites as part of this joint venture project will result in the number of voids proposed to be left behind being reduced from 3 to 2, the actual area of the landscape lost to voids will increase not decrease. The United void will retain high walls it will be 230 metres deep. Wambo pit will be 85 meters deep. Angles of the high walls will be between 63 and 80 degrees. Both pit lakes will hypersalinate over time. The United pit will reach sea water levels in 500 years. Wambo's salinity will be greater due to less volume and higher concentrations and reach hyper-saline levels within 50 years.

We do not accept the proponents' and the Department's arguments that backfilling voids is not economic and that it is preferable environmentally because having a groundwater sink avoids impacts on groundwater quality. The proponent has cited a backfilling cost of \$450 million. This figure needs to be put in the context of the overall cashflow generated by the site over the life of the mine, which is likely to be several hundred million dollars a year. If the coal mined from United Wambo. If the 150 million tonnes of coal from this project were sold at \$60 a tonne, revenue over the 23 year life of the mine would be \$9 billion, so the \$450m cost of backfilling voids represents about 5% of total revenue of the mine.

The proponent proposes to cap tailings and dumps will be capped, but supplies no details of cap design. These engineered structures will fail over time but no residual risk assessment or costing is supplied. There is an implicit assumption with the tailings cap proposal (which will be above ground) that once the area is capped, it can be forgotten about. Geo-chemical analysis is not provided nor is a risk assessment of the caps failing. Encasing tailings and dumps in purpose-designed cells at the bottom of the pit and then backfilling substantially reduces any long-term risks, but this option has not been canvassed.

The NSW Audit Office cited the lack of a post-closure financial risk management process as being a major flaw in the NSW regime. A mine like United Wambo which will leave behind hypersaline pit lakes and hazardous features like large waste rock dumps and capped tailings dams should never be

relinquished. Peabody and Glencore should retain the costs and liabilities in perpetuity and this must be reflected in any conditions of consent.

It should be noted that Peabody fully backfills its mines in Wyoming.

The Planning Commission recommended that the Government develop a policy on final voids more than four years ago, but consents continue to be drafted and granted in the absence of such a policy. It is now being argued that final voids are an environmental benefit, but no study has been undertaken to back this claim.

Water

As for biodiversity, there is no cumulative impact assessment for water in the material provided by the Department of Planning in its Assessment report.

The Assessment Report does not provide the Commission with a quantification of the drawdown this project will, cumulatively, cause in the Wollombi Brook and Hunter river alluvial aquifers.

The IESC noted that the project was predicted to cause up to 10m drawdown in the alluvium. In Part B of the response to submissions, the proponent asserts that “The Project is not predicted to cause up to 10m of groundwater drawdown within saturated alluvium as inferred in the IESC comment” (page 88) and that “The cumulative drawdown within saturated alluvium along the Hunter River is generally between 1 metre and 2 metres.” We draw the Commission’s attention to Figure 7-2 on page 68 of the groundwater impact assessment submitted as part of the Environmental Impact Statement for this project. That figure presents the “maximum zone of drawdown due to the Project [alone] – Quaternary alluvium.” The ten metre contour of drawdown in the Hunter River alluvium is clearly shown to the North West of the Wambo open cut, and draw down of more than 5 metres is showing in the Wollombi Brook alluvium to the east of the United open cut.

The Department’s Assessment Report does not provide the Commission with the information it needs to make a decision on this project against the considerations of the Aquifer Interference Policy when it comes to drawdown of the Wollombi Brook and Hunter River alluvial aquifers. The Preliminary Assessment Report states that:

The most significant modelled drawdowns within the Quaternary alluvium are predicted to occur east of the United open cut and north of the Wambo open cut, along relatively small sections of Wollombi Brook and Redbank Creek, as well as north along the edge of the Hunter River alluvium. The Department understands that there are privately-owned groundwater bores within the alluvial aquifers that would be impacted by the Project. The groundwater model shows the theoretical potential extent of drawdown assuming a largely homogeneous alluvial zone. As the alluvial zones have variable properties, the actual drawdown may be less than predicted. Accordingly, the Department is of the view the predicted drawdown impacts to alluvial aquifers are acceptable.

The Department considers the impact on the alluvial aquifers acceptable, but does not lay out for the Commission how it came to this view within the terms of the Aquifer Interference Policy.

With the minimum impact threshold breached in two productive alluvial aquifers by this project, the Commission must turn its mind to whether this project affects the viability of water dependent assets in the aquifers in question. We do not believe sufficient information has been provided to give the Commission confidence that this will not be the case. The broader cumulative context still needs to be provided and the Commission’s review of this mine must be take into consideration the

cumulative impact across the mid-Hunter, where a study by DPI Water has estimated that 123km² of alluvial groundwater sources have been subjected to more than 2m draw down.⁵

Clearly, this is a significant challenge and a full assessment of the cumulative effect of past and existing mining must be undertaken before any further development consents are issued. Certainly it seems a possibility that the viability of the aquifer could be compromised, and in any case further research is necessary on this point. For this project, the finding in the Environmental Assessment, that there will be 10m draw down of the Hunter alluvium is sufficient to warrant refusal of consent.

We note that the Department of Industry Water has requested a water plan that includes Trigger Action Response Plans. It has also suggested that “The proponent should commence undertaking periodic assessments for all private bores within the predicted affected zone for the project in order to establish baseline information to use as a performance measure in the Trigger Action Response Plan.” The Commission cannot allow this mine to proceed without this baseline being established. As the analysis by the Mid Hunter Groundwater Study and the Bioregional Assessment makes clear, there is already considerable system losses being incurred in the Hunter River as a result of mining drawdown. The assessment material for this project makes repeated reference to considerable drawdown being caused by the adjacent Hunter Valley Operations mine. It is clearly imperative that a baseline be established for two years prior to any further mining being undertaken here if there is to be any confidence that triggers can be set that can be attributed to this operation.

⁵ EMM 2015. Mid Hunter groundwater study final draft report, 7 April 2015. Viewed 1 November 2016, http://www.water.nsw.gov.au/_data/assets/pdf_file/0009/660393/mid-hunter-groundwater-study.pdf