Comments on the PAC Coalpac recommendations by Dr Haydn Washington, Colo Committee, Feb 2013

I submit these comments on behalf of the community group 'The Colo Committee', which has been active in seeking protection of the pagoda country since 1980. We have comments on a number of the recommendations of the Coalpac PAC assessment:

Recommendation 38: The Commission recommends that there should be no impacts to the pagodas and cliff lines from blasting. The Commission does not accept that a 50m buffer will guarantee this outcome, but is unable to determine a satisfactory buffer distance from the available information. To accommodate this situation the Commission recommends that no blasting occur within 300m of the pagodas or cliff lines without an independent geotechnical surveyor certifying that the blasting proposed will not cause impact to the pagodas or cliff lines. In any event a minimum stand-off distance of 100m must be maintained for blasting from all pagodas, cliffs and other rocky outcrops.

The PAC has made a thorough assessment of likely impacts of blasting, though there could be more recognition of joints and cracks in pagodas which blasting may worsen and lead to collapse. We consider the 300 metres to be a reasonable figure that should be imposed completely (in line with habitat buffer zones), not be subject to an independent geotechnical survey. We submit that a geotechnical survey in fact cannot actually *guarantee* that blasting will not cause impact, and that the precautionary principle means that the 300 m zone should be mandated.

Recommendation 39: The Commission recommends that strict monitoring requirements which allow detection of any blasting-induced impacts to pagodas, cliff lines or rocky outcrops be required in the event that the project proceeds.

We commend the PAC for requiring strict monitoring, though we point out that the history of monitoring in the Western Coalfields has *not actually stopped* subsidence or protected pagodas. All it does is document the damage caused. Hence the need for an absolute 300 m blast free zone from pagodas and cliff lines.

Recommendation 45: The Commission recommends that the pagodas and the associated escarpments be considered natural features of special significance and that they be fully protected from any mine-induced impacts.

We commend the PAC's recognition of the significance of pagoda landforms and associated escarpments. However, for the second part of this recommendation to be achievable will require 1) there be no highwall mining and 2) that there be at least a 300 metre blasting and habitat zone from the open cut to pagodas/cliff lines.

Recommendation 46: The Commission recommends that highwall mining not be permitted under the pagodas or escarpments in the project area.

We commend the PAC for this essential recommendation and their careful assessment of likely impacts from highwall mining and the uncertainty involved. Given the acknowledged international significance of the pagodas, the PAC has done the correct thing in applying the precautionary principle to ban highwall mining under this internationally recognised heritage landform.

Recommendation 47: The Commission recommends that to provide adequate protection for threatened species and other fauna that use the pagoda landform, a minimum setback distance of 300m be maintained from the open-cut highwall to the pagodas and the escarpments. This will provide a significantly improved209 habitat buffer for the listed threatened species that utilise the pagoda landform and are either present on the project area or could potentially use this landform within the project area. A buffer of this size will also lessen the risks to the pagodas and escarpments from blasting210 and slope instability and lessen the visual impact on the landform.

We commend the PAC for its consideration of both threatened and protected fauna in terms of habitat buffers. This is an essential and important recognition that the impacts of such a development extend *far further* than its footprint. 50 metres is a ludicrously short distance to situate a huge open cut from pagoda landforms and their fauna and flora. We commend the PAC for asking OEH for its views on what a habitat buffer zone should be. *OEH suggested 500 metres*, and for some reason the PAC has compromised and reduced this to 300 metres. Blue Mountains zoologist Dr Margaret Turton has stated to the Colo Committee this comment in regard to habitat buffers of two species:

> **Large-eared Pied Bat (*Chalinolobus dwyeri*)**
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> The Large-eared Pied Bat (as well as the Large Bentwing Bat which also occurs in the area, and is also classified as Vulnerable under the TSC Act), would be severely impacted by any blasting, habitat removal, direct operational impacts, etc., and indirect impacts, e.g. subsidence, altered hydrology, dust, noise and lighting within at least several kilometres of their roost sites.
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> The Coalpac assessment notes that foraging for this species occurs within close proximity to the roost sites in caves and overhangs on sandstone cliffs. This is in fact, untrue. The author has trapped this species up to 2 kilometres from escarpment habitats, foraging over woodlands and cleared lands – while another researcher has trapped and recorded this species travelling substantial distances along watercourses draining from escarpments. It is not uncommon for bats to fly 5- 10 kilometres while foraging.
>
> If this species is present in the proposed mining area – it WILL be impacted.
>
> **Brush-tailed Rock Wallaby (*Petrogale penicillata*)**

> Home ranges for Brush-tailed Rock Wallaby have been found to be roughly rectangular around clifflines, ranging from 6 to 30 ha in size (400-900 m along the cliff), with an average of 15 ha (700 m along the cliff). Males appear to have larger home ranges than females, and studies indicate that animals usually move no more than 2 km from their refuges (Lim *et al.* 1981).
>
> Any buffer less than 2 km from any populations of this species is inadequate.'

We therefore urge the Department of Planning and the PAC to listen to the expert advice of OEH and *return the habitat buffer to the 500 metres stipulated by OEH*. The PAC report itself acknowledges the problems of 'edge effects' and that many animals living in the pagodas will use habitat on the talus slopes and valley bottoms. Given this fact, a 500 metre habitat buffer would seem essential if we are serious about not adversely impacting on the pagoda landform fauna. Indeed studies of wildlife corridors has indicated that: 'As a general rule the wider the corridor the better', as noted by OEH's previous incarnation as DEC (see: http://www.environment.nsw.gov.au/resources/nature/landholderNotes15WildlifeCorridors.pdf). DEC recommended that such corridors should be *wider than 500 metres*.

Recommendation 48: The Commission recommends that, given the significance and sensitivity of the pagodas and the pagoda landform environment, before the project is submitted for determination the uncertainties in the Proponent's supporting information identified in section 6.2 are resolved and the caveats and qualifications on the various commitments are removed so that the Determining Authority has an unequivocal understanding of what the outcomes will be and the risks associated with them.

We are concerned regarding this recommendation, as it seems to backslide from recommendations 46 and 47, which are clear and unequivocal. The PAC itself repeatedly noted that Coalpac's statements have been questionable in many places in the EA, and in fact have been shown to be incorrect in several of these. Given this, we do not see how the community and the Dept of Planning can in fact rest assured that Coalpac will *provide certainty* that the caveats and qualifications in section 6.2 are resolved. The history of the proponent to date has been *less than reassuring* in this regard, where they ignored many of the EA errors pointed out by community submissions in their response to submissions. We thus believe that this recommendation is virtually impossible to enforce. The PAC has shown a willingness to apply the precautionary principle elsewhere in the report (e.g. p. 65). This recommendation is thus something of an anomaly. These uncertainties will in our view *never be resolved* (though Coalpac will claim that they are, as it already does). Due to this situation, highwall mining should not be allowed under pagoda landforms and the open cut should not be allowed within 300 metres of pagodas for both blasting and habitat buffer reasons already listed by the PAC in recommendations 46 and 47. We urge the Dept of Planning to alter this recommendation accordingly, possibly by deleting it.

Recommendation 50: The Commission recommends that, given the acknowledged high quality and species richness of the native vegetation present in the project area, the assessment focus should be on the overall quality of the habitat under threat and its biodiversity value rather than just on the threatened species component which is the focus of the EA.

We commend the PAC for acknowledging the high conservation status of the area, and that consideration should be given to the overall quality of habitat and biodiversity, rather than just to threatened species. We commend the PAC's acknowledgment that rare (ROTAP) plant species are deserving of conservation planning even though they are not specifically listed under the Threatened Species Conservation Act. Environmental scientists agree on this point also. We also commend the PAC on acknowledging the need to consider *cumulative impact* in the area.

Recommendation 51: The Commission recommends that calculation of edge effects be required to the satisfaction of OEH before the project is submitted for determination.

We commend the PAC on acknowledging the existence and importance of ecological edge effects, which are often ignored or denied. Edge effects can include:

- **Introduction of invasive exotic vegetation**
- **Higher severity and frequency of fires**
- **Companion animals acting as predators and competitors**
- **Use of and creating trails**
- **Introduction of exotic animals**
- **Pollution, erosion**
- **Loss of foraging habitats (Arroyo, E. (2000). "Urban Edge Effects". *California State Parks-Inland Empire District*: 1–30.)**

Most of these would apply to the Coalpac project area and the project would impact severely on the high conservation bushland that PAC acknowledges Ben Bullen SF currently is.

Recommendation 52: The Commission recommends that the cumulative impacts on the biodiversity values of Ben Bullen State Forest and the region of this project, together with the proposed Pine Dale Stage 2 Extension, be considered before any assessment of this project is finalised.

We commend the PAC for acknowledging and discussing *cumulative impact* on an area, an issue commonly overlooked by the planning process. This is why environment groups have asked for a regional planning strategy for the GOS2 area that assesses the many new proposed stresses on the area.

Recommendation 53: The Commission recommends that the following three principles be accepted as underpinning assessment of biodiversity impacts for this project:

 rehabilitation cannot restore the existing vegetation associations or ecological balance of the area;
 rehabilitation to mature woodland is unproven for open-cut mines in NSW; and
 the impacts on biodiversity from this project are incompatible with reservation proposals for Gardens of Stone Stage II.

We commend the PAC for cutting through much of the window-dressing presented by Coalpac in the EA on this proposal. The PAC summarises clearly that rehabilitation is *not restoration* to the original high quality ecosystems, that this is physically and ecologically impossible. Rehabilitation can only come a very poor second. In particular we note the fact that mature woodland has *never* been shown to be restored to the pre-mining condition. Finally we thank the PAC for stating the obvious, that the huge proposed Coalpac open-cut is clearly incompatible with the GOS 2 reserve proposal. Suggestions that post-mining rehabilitated land could be added to GOS2 are absurd. Given that the high conservation status – both biodiversity and geodiversity – of the site are acknowledged by government, the responsible decision is to create the GOS 2 reserve and prohibit the Coalpac proposal.

Recommendation 54: The Commission recommends that, given the considerable uncertainties concerning the likelihood of rehabilitation on this project area being capable of delivering a satisfactory biodiversity outcome, rehabilitation not be given credence as a mitigation strategy in the assessment.

The reasons for the recommendation are:
 rehabilitation is unable to reproduce the existing vegetation associations or species diversity;
 it is not possible to reproduce the existing landform or soil profile across the project area;
 there is no demonstrated mature woodland rehabilitation in NSW and it is likely that the disturbance to the deeper layers of the soil profile and the altered hydrology will limit the capacity for mature woodland to develop; and
 this project is further complicated by the interaction between underground combustion and its management and rehabilitation.

We again commend the PAC for its clarity of thought in acknowledging that rehabilitation is *not mitigation*. If the huge Coalpac open-cut proceeds, high conservation bushland will be destroyed. Rehabilitation can only encourage some native species to return. The original ecosystems will be lost forever (at least on human time-scales).

Recommendation 55: The Commission recommends that, until the baseline biodiversity characteristics of the site have been resolved to the satisfaction of OEH, assessment of the adequacy or otherwise of the revised offset package should not proceed. The Commission also recommends that particular attention be given in the assessment to the essential nature of

the trade-off being proposed, i.e. it is a proposal designed to exchange a number of fragmented areas that generally require extensive rehabilitation work and are currently not considered suitable for reservation, for a single area of high quality habitat that adjoins other areas of high quality habitat and is already proposed for reservation.

We commend the PAC on its thoroughness in assessing the biodiversity offsets suggested by the proponent. It shows clearly that it is highly dubious whether 'like is being replaced by like'. The biogeographic aspect of the recommendation is especially important in our view. A single large natural area such as Ben Bullen SF will *protect many more native species* in the long-term than several fragmented offsets with far greater edge effects. The offset strategy thus does not mitigate the damage the proposal would cause.

Recommendation 63: The Commission recommends the predicted changes in weather due to climate change in NSW should be included in the water balance modelling for the life of the project unless it can be demonstrated the modelling to date has been conservative enough to account for this.

Climate science tells us that with climate change, the weather will become *far more unpredictable*. 'One in a hundred year' floods will occur far more frequently, as will heat waves, extreme weather, etc. The nature of such changes is their unpredictability and hence modelling may be inadequate. We believe that climate scientists from several universities (e.g. Prof. England from UNSW and Prof. Karoly from Monash Uni) and the Climate Commission should be asked to comment on this aspect. It is very unlikely that existing models used in the EA will have sufficient safety margins built in to cope with possible extremes due to climate change. Hence the need for expert assessment by climate scientists.

Recommendation 83: The Commission recommends that in the event of an approval appropriate conditions are included requiring compliance with the Proponent's Statement of Commitment 13 and for Coalpac to minimise its Scope 1 greenhouse gas emissions.

We express our disappointment with this recommendation. The PAC has previously acknowledged the inadequacy of the Coalpac EA in regard to flora and fauna assessment and other issues. However, it fails to make clear that Coalpac sought to deliberately mislead the community in regard to its statements regarding climate change. They attempted to substitute figure for the pool of carbon dioxide in the atmosphere for 'human CO_2 emissions'. Their main report thus attempted to downplay tenfold the world percentage impact of the CO_2 that would be produced by burning this coal from 0.02% to 0.003%. This basic error was pointed out to Coalpac by environmental scientist Dr Haydn Washington in his submission on behalf of the Colo Committee. In its response to submissions, Coalpac *continued to maintain this blatant error* in climate science and refused to correct it. Dr Washington had to attend the

hearing with confirmation from two scientists of the error, including one by climate scientist Prof. David Karoly of Melbourne University. Page 146 of the PAC assessment notes that Coalpac finally acknowledged:

> **'typographical errors were made in the EA and concurred that if the project's estimated annual contribution is compared against the estimated global anthropogenic annual emissions (~28.9 Gt CO2-e/annum) this project represents 0.02% rather than the comparison against global emissions as stated in the EA at 0.0003%.'**

However, the PAC report does not make clear the significance of this attempted deception. We do not believe that this was 'a typographical error'. Rather we believe it was a deliberate attempt to *mislead the public* in regard to the climate impacts of the proposal. When caught out in the act, Coalpac sought to bluff its way through and continue to misrepresent the climate science. We believe that the PAC should have made this clear, as this strategy may be common in some EAs carried out. However, proponents should not be allowed to get away with blatant misrepresentations of climate science. We urge the Department of Planning to acknowledge the misrepresentation of climate science that Coalpac had in the EA, and continued to make until it was forced to accede to the correct science in this regard. Proponents of development activities should not be allowed to misrepresent scientific facts.