BMCS-LEG Comments on
Coalpac's Response to PAC Review Submissions [CRPRS]

PART 4

12. Introduction

PART 1 comprised Sections 1 to 6 and mainly responded to Sections 1 to 3 and principally 3.1.1 to 3.1.5 within the 'Coalpac Response to Further Submissions'. The latter is available on the DP&I website [http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4332].

PART 2 preserves continuity of section numbering and footnotes commencing with Section 7. Much of the content of Sections 8 and 9 was provided by and modified by BMCS. It principally deals with Sections 3.1.7 to 3.1.10 within the 'Coalpac Response to Further Submissions'.

PART 3 again preserves continuity of section nomenclature, plate numbers and footnotes. Much of the content of Sections 11.1, 11.2.1, 11.3 and 11.4 was provided by Mr Chris Jonkers of LEG and Mr Yuri Bolotin, and modified by BMCS. It principally deals with CRPRS Section 3.1.11 pp32and briefly examines Sections 3.1.12-3.1.14.

The Joint Groups regret the size of PART 3, but when the matter of the long-recognised Baal Bone damage was taken as 'accepted' in the previous JS (Joint Submission), the CRPRS elected to criticise the lack of evidence.

PART 4 again preserves continuity of section nomenclature and footnotes. It principally deals with CRPRS Section 3.2 and briefly examines Sections 3.1.12-3.1.14, 3.3-3.5 and 3.8. Comments on these sections, unless otherwise acknowledged, are principally those of BMCS.

13. Sundry items featured by the CRPRS

13.1 Adequacy of Biodiversity Offsets

CRPRS Section 3.1.12 p43: *"The EDO submission is misleading and incorrect, both in its description of the proposed offsets as fragmented, and in its comparison with…the Bulga Milbrodale Progress Association v Minister for Planning & Ors (2013) NSWLEC 48 (Bulga case) covered in the NSW Land and Environment Court."* The CRPRS has this view because the EDO suggests that the biodiversity offset package is fragmented and inadequate in that it cannot compensate for the impacts of the Contracted Project.

The Joint Groups believe the biodiversity offsets are indeed inadequate and therefore support the EDO's opinion. In particular, BMCS has strongly contended that the biodiversity offsets process is a flawed concept in that it facilitates the destruction of important biodiversity by offering a form of compensation, far too often based on pointless offset ratios; you give me what I need to make a profit and I will give you four times the amount of what you don't want!

The CRPRS spends much space saying how different the Contracted Project is from the Exhibited Project, but the company and its consultants just don't get it. They still want (and in the case of consultants, provide 'appropriate' supporting argument) to destroy a unique land system (the BBPLS).

Once again the CRPRS resorts to claims about rehabilitation as justification for being allowed to trash the region (p44): *"Coalpac has already mined and successfully rehabilitated 193 ha of woodland and forest in existing approved operations at Cullen Valley Mine and Invincible Colliery and that the rehabilitation is growing back into a well vegetated landscape ranging from 6 months to 10 years in age."* This totally disregards the fact that 'greening' a trashed landscape does not recreate the original habitat and its biodiversity in 6 months or 10 years. They are never recreated in terms of the mature and old growth forest which was once there. Over periods of 20-100 years, when people have long forgotten what was destroyed, there will be

a 'forest' cover and even an ecosystem developed on a sculpted landform. As used by the industry and accepted by government, 'rehabilitation' is environmental graffiti!

13.2 The GoS2 proposal

CRPRS Section 3.1.13 p44: *"…there were no existing proposals generated by Government or under consideration by Government, to extend the existing Gardens of Stone National Park."* This is deceptive in the extreme. Let's examine why:

- *"…no existing proposals* ***generated by*** *Government…to* ***extend the existing Gardens of Stone National Park.****"* This is correct because government didn't generate the GoS2 proposal. It is also correct because the GoS2 proposal involves creating an SCA over the BBSF, **not an extension of the Gardens of Stone National Park**.
- *"…no existing proposals…****under consideration*** *by Government, to* ***extend the existing Gardens of Stone National Park.****"* The first part is seemingly **incorrect** – the fact that parts of the GoS2 proposal are under consideration has been extensively documented[14] **–** as recently as June 5 2013, Minister Parker indicated that OEH wished to reserve the BBSF as an SCA. However, the seemingly incorrect statement is made correct by the weasel words, viz: *"…extend the existing Gardens of Stone National Park"*. This is because, as indicated in dot-point one, the SCA would not constitute an extension of the Gardens of Stone National Park.

CRPRS Section 3.1.12 p44: *"…there are numerous examples where mined out areas have been added to the States' conservation estate…"* This is another deceptive statement: the mined out areas have not involved destructive **open-cut processes**; and, as with recent reservation of Mugii Murum-ban, it is usually an SCA over relatively low-impact underground mining.

13.3 Mine rehabilitation as mitigation

CRPRS Section 3.1.14 p45: *"Cumberland Ecology assert that…forest and woodland can be reinstated in the Contracted Project Disturbance Boundary…While rehabilitation is not likely to provide a facsimile of the original vegetation, it is asserted that rehabilitation can provide valuable habitat…and maintain an ecological balance in the area in the long term."*

The above is the CRPRS' response to five submissions and to PAC1, all of whom question the value of rehabilitation as an effective means of mitigating impacts of the Contracted Project, and consider that that rehabilitation to mature woodland is unproven for open cut mines in NSW.

The lack of credibility remains:

- The whole concept of rehabilitation disregards disruption of the geological substrate, its interaction with a long established soil profile and the disruption to the hydrologic regime – the CRPRS accepts that the 'rehabilitation' cannot provide a facsimile of the original vegetation – the CRPRS fails to see that it doesn't restore the physiography, hydrology, pedology, vegetation types and age-profiles, the various habitats and fauna.
- The rehabilitation concept was devised by industry with the connivance of government and the lucrative consulting industry to rationalise open-cut devastation.
- Yes, (p45) *"…adequate preparation and a commitment to ongoing management…"* (for the next 100 years?) may help to preserve the fantasy, but does anyone seriously believe rehabilitation is little more than a cosmetic exercise comprising *'the unspeakable in full pursuit of the impossible'* [15]

14. Stability and subsidence

14.1 Open cut and highwall mining

[14] In: (a) Section 3.2 item (d) of *"BMCS Response to Coalpac's Evaluation of the Planning Assessment Commission's Review (PAC1) of the Coalpac Consolidation Project (CCP)"*, March 26 2013; (b) Appendix 1 *"The case for rejecting the Coalpac 'contracted project' proposal and securing a reservation outcome"* April 17 2013.

[15] With apologies to Oscar Wilde who spoke of fox hunting as the *'unspeakable in pursuit of the uneatable'*.

The vast majority of this material in relation to slope stability and highwall design is repetitive: all care will be taken; the various consultants think everything is appropriate and will lead neither to slope instability above the open cut, nor pagoda-damage in relation to highwalling; and Prof Hebblewhite continues to believe that risk-mitigation practices are acceptable![16]

The Joint Groups appreciate that (CRPRS p46) *"…the final design parameters and risk assessment will be reviewed by the NSW Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS) mining subsidence approval authority prior to commencement of any highwall mining."* Unsurprisingly, the Joint Groups take no comfort from this. As these are likely to be the same people who were involved with assessing risks related to Newnes Plateau Shrub Swamps from longwall mining, and ensuring the integrity of river systems entering the Blue Mountains World Heritage Area. Their guiding principle seems to be *'Oops! There goes another one, but mining must continue'*.

14.2 Definition of Surface Subsidence

CRPRS p47: *"BMCS questioned the assumption in the subsidence and geotechnical studies in the PAC Response Report that surface subsidence of less than 20 mm resulting from highwall mining would have no capacity to destabilise cliff faces or pagodas."*

The Society appreciates the explanation in CRPRS Section 3.23 pp47-48. It appears to be based on the work of Holla and Barclay (2000) which suggested that there is up to 20 mm of 'natural' subsidence possible in **non-mining regions**. In effect, **any subsidence of 20 mm or less is ascribed to 'natural' causes**. This raises several concerns:

- Holla and Barclay's work seems **not to** indicate whether damage eventuates from 'natural' subsidence and seems **not to** consider (even if it were possible) the stress, strain and strain-rate characteristics of 'natural' systems versus those of mining-induced subsidence; it is like comparing apples and oranges, or, perhaps more appropriately, the response to a slowly applied stress versus the response to the same level of rapidly applied stress. In effect, 20 mm of 'natural' subsidence may not trigger instabilities whereas the same amount of mining-induced subsidence may have significant impacts.
- Pagodas and any rock mass with well-defined fractures and one or more free surfaces can experience toppling and sliding during the ground motions accompanying mining-induced subsidence – there is no absolute boundary such that 21 mm is a catastrophic failure whereas 19 mm is 'safe'.
- If the design is to limit mining-related subsidence to less than 20 mm and natural subsidence is concurrently moving towards 20 mm, potential exists for the two to interact – one might partially negate the effect of the other, or they might locally be cumulative such that subsidence and tilting are exacerbated.

Regardless of the 'accepted' but contentious practice of ascribing subsidence of 20 mm or less to 'natural' causes, **any subsidence-related tilting can cause toppling and sliding**.

15. Air quality, noise and blasting

These matters involve extensive repetition of Coalpac's previous and now refined claims based on additional modelling by consultants. All their arguments are based on modelling expressed in terms of isopleths. The results are no better than the inputs and yet they are treated as 'absolutes', and of course the process is inevitably claimed to be best practice.

Much effort was expended in outlining the limitations of the approach adopted by Coalpac and its consultants[17]; **the detail will not be repeated here but should most certainly receive close attention.** The concerns raised have largely been disregarded by the CRPRS, but this in no way reduces their pertinence. BMCS is forced to conclude that any attempts to introduce reality when considering the impacts of air-quality

[16] All very easy when the environment carries the risk and deep-pocketed companies reap the profits.

[17] Refer to *"BMCS Response to Coalpac's Evaluation of the Planning Assessment Commission's Review (PAC1) of the Coalpac Consolidation Project (CCP)"* March 26 2013, Sections 4.1-4.3. This document is available on the BMCS website at http://www.bluemountains.org.au/submissions.shtml; it may also be found on the DP&I website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4332

degradation and the imposition of noise are subjugated to the predictions of modelling according to practices devised largely by the industry in conjunction with pertinent government departments. The views of those impacted, and others concerned with the disregard of social and health issues, hold little sway.

15.1 Air quality and health – CRPRS Sections 3.3.4-3.3.6

CRPRS p50: *"Coalpac has committed to set up and maintain a compliance monitor measuring PM2.5 and PM10 in the vicinity of Cullen Bullen Public School (i.e. close to the centre of Cullen Bullen) to monitor long-term and short-term levels… The results from this monitor will be published on Coalpac's website on a monthly basis."* The implication of this is that provided certain levels are not exceeded, the citizens should be aware but not alarmed. Yet this is total nonsense. NSW Health has indicated that there is no such thing as a safe level of PM_{10} inhalation; and arguably the $PM_{2.5}$ is as bad or worse**. BMCS again asks whether Coalpac understands what 'no safe level' means?**

BMCS states (from the document cited in footnote 17): *"In summary, the consultants have done their jobs and Coalpac is confident, but the real question BMCS would put to the consultants is would you be happy to live for the next 20 years in or close to Cullen Bullen and send your children to the local school?"* The Society continues to have concern about the Cullen Bullen residents and the School.

The following comments were provided by Dr Richard Stiles in relation to CRPRS Appendix B.

App B p4 regarding emissions estimations: *"These measurements were subsequently carried out on 31 January 2013 for both Cullen Valley Mine and Invincible Colliery…Using the site specific data has led to considerable reductions in emission estimates for the Contracted Project."*

At the time of the measurements (31/1/13), much of Coalpac's activity was at a standstill. Consequently, if the collected emissions data were used as an estimate of general site data under 'normal' mining operations, the results would yield an erroneously low emissions outcome.

App B p5 also raises concerns: *"…a site specific measurement for threshold friction velocity (TFV) was made at the Invincible Colliery on 31 January 2013, to determine the wind-blown dust from exposed areas"*. Such concerns are obviously justified because (App B p6): *"Using the site-specific measurements (Table 3.1)… would result in almost no wind initiated dust lift-off emissions from exposed areas, which is unrealistic. For this reason, we…have adopted the US EPA's AP42 factors of 0.1 kg/ha/hr factor (for exposed areas) and [1.8 x wind speed] kg/ha/hr (for active stockpiles) for modelling the Contracted Project."*

The TFV is an important parameter in determining 'dust' emissions. Disregarding it in this instance is understandable, but substituting 'plug-in' data implies that **modelling results for the Contracted Project are approximations and most certainly should not be treated as absolute.**

App B p6 Table 3.3: having used the site specific parameters and the updated wind-blown dust equation, the consultant indicates that the contracted project will result in about half the annual total suspended particulate (TSP) emissions over each year modelled[18]. This is rather surprising given that the rest of the mining operation is little changed. **It again raises doubts about the applicability of the site specific parameters and the wind-blown dust equation**

In relation to App B Section 4, the isopleths are still based on the potentially dubious site specific measurements and updated wind erosion equation. Nevertheless, even if taken at their face value, there are many residences where dust exceedances will occur; and despite many of these residences being beneficially owned by Coalpac, this does not negate the impact on the community and on its school.

15.2 Noise considerations – CRPRS Section 3.4

CRPRS Section 3.4.2 p53: *"…all residences would experience a minor reduction in noise impacts due to the removal of operations from the Hillcroft mining area and the removal of the sand extraction component previously proposed."* **This is no doubt true, but the corollary is that all residences are still exposed to**

[18] Year 2 is an exception in that, if the Hillcroft mine is disregarded, the reduction is ~24%

noise. Indeed, the report (App C) shows in both the tables and isopleth mapping that a significant percentage of the residences modelled will have noise impacts above the intrusive criteria.

BMCS has previously raised a number of concerns in Section 4.2 of the document cited in footnote 17. Coalpac has failed to address these and has persisted with treating the modelling as absolute; it isn't!

CRPRS Section 3.4.3 p53: *"Infrasound impacts were not mentioned in the acoustic impact assessment for the Exhibited EA or Contracted Project because consideration of such impacts was not required by the DGRs…infrasound impacts to receivers are considered unlikely to occur due to:*

- *No complaints of adverse infrasound impacts being made to Coalpac in response to noise from the ICPP in the period 2009-2013;*
- *Infrasound associated with coal mining activity principally being generated by coal processing infrastructure such as crushers and vibrating screens. The existing operation of this equipment…has not caused any reported infrasound issues and the location and design of the proposed East Tyldesley Coal Handling and Preparation Plant (ETCPP) is such that infrasound impacts to closest receivers are not anticipated; and*
- *Infrasound is rarely reported as an issue associated with coal mines due to the significant source to receiver distances associated with mining development, particularly in rural areas with low background noise levels such as the receivers located around the Contracted Project Boundary."*

The above is a pathetic response, irrespective of the DGRs failing to mention infrasound. So why?

- Infrasound and its health impacts have received relatively little exposure in the media and like many such issues, anecdotal evidence[19] precedes peer-reviewed proof, despite the latter accruing[20]. Coalpac's lack of complaints (first square-point above) could well reflect insufficient community awareness, particularly in the earlier part of the period cited.
- The second square-point raises two aspects: first, the lack of any reported issues from Coalpac's existing operations – already answered (dot-point above) and frankly, were any steps taken to investigate the possibility? Second, the design of the ETCPP seemingly ensures *"…that infrasound impacts to closest receivers are not anticipated"*. As Coalpac wasn't required to consider the issue, BMCS suspects that the design claims are very much 'tongue in cheek'!
- The third square-point is at best uninformed – it seems to imply that the receivers 'hear' rather than 'feel' infrasound, this being contrary to the facts that 'infrasound' is below the 'hearing' capacity of most people.

15.3 Blasting – CRPRS Section 3.5

Coalpac fails to address the **concerns** raised in Section 4.3.2 of the document cited in footnote 17, beyond reiterating its belief in the procedures recommended by Terrock, and again invoking its 10 years of 'experience'.

CRPRS p54 states: *"This approach takes the PAC review concept of a standoff, and further develops it to dynamically establish a standoff appropriate to the ground conditions at each location…"* It is *"…industry best-practice and is carried out on a daily basis at many mining operations around the world…"* And in case you are unconvinced, there is more: *"…it is proposed that an independent scientific review committee with expert regulatory and technical representation from Government be established…"* to oversee the implementation of Terrock's proposal.

Unfortunately:

- Industry 'best-practice' here and in many other countries has resulted in many environmental and social disasters – 'best-practice' is usually what the industry can get away with!
- The proposal, which largely involves trial and possible error, does **not take the 'standoff' further**; it is aimed at reducing the 'standoff' in order to maximise coal recovery.

[19] E.g., Sharyn Munro, *Rich land- Wasteland*, http://richlandwasteland.com/ – this book discusses several cases of illness engendered by infrasound.

[20] E.g., http://scholar.google.com.au/scholar?as_ylo=2013&q=effects+of+infrasound&hl=en&as_sdt=0,5&as_vis=1

- The 'independent' review committee, once created to oversee implementation of the process, will effectively become part of the approval process!

16. Economics

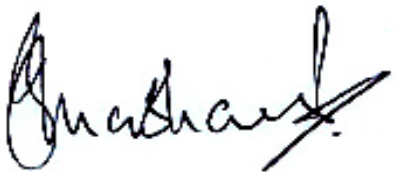
CRPRS Section 3.8.1 p58: *"There is proposed expansion to open cut operations in the area and this supply, once approved, could be joined with that from the Contracted Project to reinforce the low cost coal supply the power stations require to remain competitive."* It is fascinating that Coalpac and its consultants, who collectively reject the notion of cumulative impacts from yet to be approved proposals such as Pine Dale Stage 2, happily recognise that, if Coalpac is approved, the gates will be open for the progressive destruction of BBSF. BMCS stupidly thinks that this is precisely why cumulative impacts mustn't be ignored and should be a major concern for DP&I.

CRPRS Section 3.8.2 p58: Coalpac spends much time saying why its resource can't be mined by other than open-cut methods. It also convincingly argues that *"…in the northern areas, the reduced seam thickness, limited reserve size, low depth of cover, sensitive overlying topography (including the presence of pagodas and publically visible Sandstone Outcrops), poorer coal quality and other contributory factors did not represent a feasible option on environmental or economic grounds"* for longwall extraction. BMCS emphasises that Centennial is able to supply coal. It is arguably not the role of government to (further) subsidise this segment of the environmentally destructive (now privately owned) coal-fired power industry by destroying environmentally sensitive State Forest in order to extract cheap coal.

The Joint Groups wish to draw attention to a paper by The Australian Institute[21] which largely debunks many of the arguments presented in CRPRS Section 3.8.

17. Conclusion

The overwhelming case presented by PAC1 against approving the Coalpac proposal in any of its various forms remains. It is time for government to bite the bullet and recognise that this is a declining industry which should not be perpetuated to the detriment of the local and greater environments.



Dr Brian Marshall, ***19 June 2013***

For the Management Committee of BMCS

And on behalf of the Joint Groups

[21] Richard Denniss, *Coalpac Consolidation Project*, The Australian Institute, Submission June 2013; available through https://www.tai.org.au/