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Nature Conservation Saves for Tomorrow

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Department of Planning and Environment
Sydney NSW 2000.

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Submission opposing Bylong Coal Project: SSD 14_6367

Summary

- The Peer-reviewing process, when commissioned by the company through the managing consultant, causes concern – this is a long-standing failure of the assessment process and regrettably remains unaddressed by government.
- The need for the Project is based on the usual distorted economic arguments. Environmental, social and cultural values are largely unquantified or inadequately quantified. The collapse in the price of thermal coal makes accepting revenue predictions over the next 25 years both difficult to substantiate and unduly optimistic. Such predictions should be heavily discounted.
- The company further distorts the assessment by comparing the dollar-values over 25 years of a finite thermal coal resource with sustainable agricultural utilisation. This is despite the declining local and export markets for thermal coal and the 'near infinite' long-term potential of the expanding agricultural market.
- The company minimises the importance of the area's agricultural lands by expressing the level of production as percentages of the total agricultural productions for NSW and Australia. One could similarly argue that the area's coal should not be mined because its production would be a mere fraction of that for NSW and Australia. The exercise is nonsensical.
- The local and export demands for thermal coal are declining: government should not compromise (through short-term expedience) the long-term more sustainable uses of land. The Society strongly recommends that government makes the statutory identification of 'no go' areas a matter of extreme priority.
- The potential impacts of acid-forming soils and spontaneous combustion are minimised and deemed manageable; the risks demand more careful attention.
- Rehabilitation of open cuts is a cosmetic exercise in which disordered waste is covered by a veneer of damaged soil. It is incapable of restoring the land such that it behaves in the manner originally understood and rationally used by the one-time owner.

- For 25 years, the open cuts and longwall underground mining will collectively compromise the integrity of Bylong R, Dry Ck and the local hydrologic regime. Damage to the hydrologic regime will be irreversible. Farmers hoping for the return of their once-idyllic lands will be disappointed.
- Offsetting is government-sanctioned destruction and is, in any case, woefully inadequate. Offset area five will be impacted by fracturing and irreversible hydrologic modification. Despite the offsets being in accordance with relevant policies, they serve only to demonstrate the totally unsatisfactory compromises made to facilitate exploitation of finite resources.
- Subsidence-related vandalism to cliffs and their scenic values was rejected in 2003-4 in NSW. Yet the company blithely advocates substantial collapses along 20% of the cliff lines and visible fracture-damage along up to 70% of the cliffs; damage to two major cliffs is dismissed because it is not easily seen by the public. The company must not be allowed to wage open warfare on the cliffs of the Bylong Valley.
- The Bylong Valley must be declared a –no-go' area for coal mining.

1. Introduction

The Blue Mountains Conservation Society (BMCS and also 'The Society' in the present submission) has a membership which fluctuates in the range 800-850. The membership is mainly drawn from the City of the Blue Mountains and the Greater Sydney region, but a scattering of members exists throughout NSW and also interstate.

The Society has a strong interest in the Greater Blue Mountains World Heritage Area (GBMWHA) in terms of protecting its many parks and reserves. It is also extremely active in campaigning for the reservation of the Gardens of Stone Stage 2 (GoS2) Proposal over the western portion of the Blue Mountains and the Western Escarpment between Blackheath and the Capertee valley, and pursuing the National Heritage Listing of parts of these areas with a view to having them ultimately being assessed for addition to the GBMWHA.

Much of the Society's region of interest is underlain by the Western Coalfield. It has extensive experience in dealing with EIS' related to coal-company development applications and, in relatively recent times, has been exposed to excessively glossy EIS' documents prepared by Hansen Bailey. As always seems to be the case, the documents are voluminous and designed to present a strong case in support of the applicant. It would be extraordinarily refreshing if, just for once, there was an overt attempt to be even-handed when presenting value-judgements, particularly when many authorities see thermal coal as having a less than certain future.

2. Peer reviewing

It now seems to be common practice for the EIS main report to be assembled by one consultant (in this case Hansen Bailey) from appendices by consultants specialising in the various sections of the report. A further factor now seems to be increasingly employed: namely, a specialist-consultant's report is covered by a 'peer review' assessment (another consultant!) which commonly finds that the specialist-consultant has done the work in accordance with government's requirements and that the conclusions and opinions offered are essentially justified.

The problem with this whole system is that the company pays the 'managing consultant' to produce a 'favourable' outcome, the managing consultant uses like-minded specialist-consultants who rely on repeat business, and the 'peer reviewers' are selected on the basis of 'past performance'. This is not to impugn the integrity of those involved, but it is highly likely that, in this whole field of repeat business, the paymaster-company's requirements are presented in the most favourable way.

The DPE is currently developing its Integrated Mining Policy and its many component documents to make things more 'transparent and efficient'. Yet nowhere has the Society seen any serious approach to overcoming the problem related to a consultant's need for repeat business. In fact, what the Society has seen

to date, seems to be directed at facilitating approvals; rather like taxation matters, company's pay experts to ensure that systems can be suitably exploited.

3. The Project Need

This involves the usual claims made by the proponent in terms of employment, royalties and capital investment. Thus, from the Executive Summary: *"During operations, the Project will provide direct employment for up to 470 workers with an average annual direct workforce of approximately 290. It will also provide indirect employment in the regional economy from employee and Project expenditure. The Project will result in total royalties of up to $763 Million (or $290 Million net present value). The capital investment associated with the Project is estimated to be in the order of $1.3 Billion."*

The Society notes that:

- These types of data are invariably biased to the extent that the quantification of the main environmental, social and cultural impacts (as included in the cost/benefit analysis) is largely subjective; the quantification typically downplays/disregards issues such as climate change and the implications of approval for such things as renewable energy development in Australia and in the receiver countries to which the coal is exported. It may well be that the peer reviewer believes the economic analysis meets the Secretary's Environmental Assessment Requirements and relevant NSW Government Guidelines, but these matters are subject to review by the DPE in terms of the Integrated Mining Policy, including the Economic Assessment of Mining and Coal Seam Gas Proposals. A significant factor leading to the Economic Assessment of Mining and Coal Seam Gas Proposals has been the unacceptable distortions embodied in current practices
- Having determined an outcome in terms of the so-called economic efficiency perspective, it is stated that unquantified residual social, environmental and cultural impacts would need to exceed at least $592 million for the Project to be questionable. This is a neat way of avoiding the fact that much is either unquantified and/or inadequately dealt with. It emphasises the limitations of these cost/benefit analyses.
- The multipliers used in these analyses are always very impressive: an average of 290 direct jobs per annum over 23 years is multiplied into 830 direct and indirect jobs per annum for the region and 1496 per annum for the State. A similar use of multipliers is involved in developing the direct and indirect dollar benefits of business turnover, value added and household incomes. The legitimacy of the process is justified in terms of being current practice, but if current practice is deficient (as has been argued by The Australia Institute *inter alia*), then legitimacy is correspondingly baseless.
- Royalties, general profitability and the like are based on production predictions, maintenance of the coal price, and the specifics of contractual arrangements which are largely unrevealed. In view of the collapse in the price of thermal coal, and despite the apparent vertical integration of Kepco with the power generators in Korea, predictions over the next 25 years should be treated with extreme caution.
- It could overall be argued that the company is not going to engage in capital investment in the order of $1.3 billion without being reasonably confident of the benefits it will receive, but three things should be realised: (i) the company's bottom line is a substantially different matter from the predictions given in the economic assessment; (ii) Glencore (Xstrata) has needed to curtail production at some of its mines and Centennial's Angus Place Colliery is under care and maintenance – companies are not immune from substantial changes in the market; and (iii) in the absence of guarantees that the operation will continue for 23 years, the economic benefits become little more than optimised 'hopes'!

4. Agriculture, soils and rehabilitation

4.1 Agricultural land

The Society contends that a significant amount of prime agricultural land will be destroyed and an even larger amount will be substantially degraded. The mine's footprint will disturb 2,875 ha of land, this including 440 ha of Bioregional Significant Agricultural Land (BSAL), 260 ha of which will be destroyed within the open cuts, and 700 ha of mapped Critical Equine Industry Cluster land. This is an unacceptable outcome given

major concerns over the future of coal-powered energy, the belief that Australia has a role to play as a major food-exporter, and the need to promote long-term sustainability in country areas.

The company's response to this is to engage in minimisation. Thus, it states that:

- the combined gross value of production from the agricultural land and water impacted by the Project is approximately 4 % of the total agricultural production of the Mid-Western Regional Local Government Area, only 0.02 % of that for NSW, and only 0.005 % of that for Australia; and similarly,
- the foregone gross value and net value of agricultural production from land and water resources required for the Project have estimated present values of $5.4 million and 1.4 million respectively (using a 7 % discount rate) – this is then compared with the present value (estimated as $596 million) of the total net production of the Project to Australia, and obviously found to be significantly less.

The Society suggests that these types of comparison are ludicrous.

For dot-point 1, it would be ridiculous in terms of the respective areas of the impacted agricultural land versus the areas of NSW or Australia if there were not major differences in the dollar-value of agricultural production. As justification for sacrificing the production, it makes no more sense than saying (for example) that the whole of the Mid-Western Local Government Area should be open cut because its production is much less than that of the whole of Australia.

Dot-point 2 may seem less ridiculous because the comparison is between the values of different uses of the same area over a set number of years. However, the comparison is really between a finite resource within a declining market (even to the extent that the coal might become a stranded asset) over 25 years or perhaps much less, versus sustainable utilisation within an expanding market over an 'infinite' number of years. Put simply, investment in long-term 'food supply' carries a high level certainty.

4.2 Soil considerations

The company states that 5.51 million m^3 of soil will be available for management across lands which will be directly and permanently impacted. BMCS observes that this is intended to provide comfort because it exceeds the 4.73 million m^3 required for rehabilitation. But note the next paragraph!

The company says that five *Land and Soil Capability* classes exist within the Project disturbance boundary and that, subsequent to mining, the five classes will remain. It also states that a management plan will be prepared to *"…minimise impacts to soil resources during stripping, stockpiling and emplacement activities."* It furthermore states that the 206 ha of directly and permanently impacted BSAL will be reinstated to mitigate impacts.

The Society finds these types of statement an abuse of common sense. Thus:

- Even if the five classes are reinstated, there will be little likelihood of them being in the same proportions and/or having the same distributions – this the company acknowledges in the context of the 'reinstated' BSAL by indicating that the spatial distribution will differ from the pre-mining landscape.
- Soils have differing compositions and structures as a result of their protracted development. Their agricultural values and hydrologic properties reflect this. It is ridiculous to contend that a soil which has been stripped, stockpiled (for how many months/years?), and then 'emplaced' will have retained its compositional, structural and hydrologic characteristics. The whole notion of soils being removed and replaced is part of the rehabilitation fable perpetuated by mining companies and seemingly accepted by government.
- And regardless of the company's claims, how are property owners meant to continue with their livelihoods over the periods when their agricultural lands have been destroyed? What are the real chances of the Bylong Valley ever surviving the periods of infrastructure-construction, open-cut mining and longwall mining over the next 25 years? Not surprisingly, many will sell to the company rather than live with the destruction of their land and livelihood

4.3 Acid-forming impacts and spontaneous combustion

The propensity of certain parts of the mine to be acid-forming is of concern. Some of the floor material and coal-reject materials from the Coggan Seam have acid-forming capacity and could adversely affect the open-cut and longwall operations. The company suggests that there is little cause for concern because it will be resolved by *"…appropriate mitigation and management measures…"* The Society admires the company's confidence but believes that more than assurances is required.

The risk of the high sulphur content in certain layers leading to spontaneous combustion is similarly considered to be manageable. The Society believes that this risk is underestimated.

4.4 Rehabilitation

Comments on rehabilitation in terms of the disruption of the structure, composition and hydrologic properties of soils are made in section 4.2 above.

The rehabilitation fable is continued in euphemistically misleading terms when the company implies that rehabilitation will create a final landform which will overcome the depredations of the two open cuts and ensure that all will be 'as before' or even better!

Open cuts remove the coal and stockpile the rock-waste. The rock with its stratigraphy and primary and secondary structures would have had a gradational relationship with the overlying soil-profile. The open cuts will have a negative relief and inevitably depress the local watertable. When the rock-waste is returned, the rock's stratigraphy and structure have totally lost their integrity and the hydrologic properties will therefore have changed. Likewise, the gradational relationship between the soil-profile and the bedrock will no longer exist.

The bottom line is that the open cuts will have changed from pits filled with air, to ones filled with rubble and masked by a cosmetic veneer of soil. Yes, it is likely to become useable over time, but it is extremely unlikely to behave in the manner originally understood and rationally used by the one-time owner.

5. Groundwater and surface water consequences

The Society considers that the potential impacts on groundwater and surface water are unacceptable. The highly connected alluvial aquifer system within the stressed Bylong River catchment will have predicted peak losses of up to 295 million litres per year (ML/yr), while loss of base flows to the Bylong River is predicted to be 918 ML/yr. As the mine proposes to use up to 1,942 ML/yr, this being over 75% of the annual rainfall recharge, it is clear that the river system is over allocated and local farmers will lose important water supply.

Executive Summary Figure 14 shows the distribution of the maximum 2 m drawdown in the alluvium due to the open cuts and in the Dry Ck region related to underground mining; it also shows the much broader impact linked to the depressurization of the Coggan Seam due to longwall extraction.

BMCS notes that although showing the 2 m drawdown maximum, a much more extensive area of damage (within the alluvium) would be demonstrated by say a 1 m maximum – this must adversely affect base flows in Lee Ck and the Bylong R over a protracted period and must impact the availability of groundwater for other purposes – such impacts are recognised by the EIS but effectively treated as collateral damage.

Connective fracturing from the longwall mining will likely extend to surface over the greater part of the 'Underground Extraction Area'. The loss of flow from Dry Ck to the underground workings is said to be a 'negligible' <0.2 ML/day, in comparison with what is termed *"…predicted inflow from the wider groundwater systems"*.

BMCS considers this to be very strange thinking.

- The <0.2 ML/dy is only negligible in comparison with the more general 'predicted inflow', but this does not mean that the impact on surface flows in Dry Ck is negligible; up to 0.2 ML/dy is up to 1.4 ML/week over a period up to 18 years – this is far from negligible, particularly when this loss in turn affects the Bylong R which has already suffered during the open cut operations and continues to be impacted by the regional depressurization (see Exec Summary Fig. 14).

- Looking more generally, connective fracturing from the underground workings to surface will lower the watertable and concurrently enhance infiltration all the way down to the goaf. Apart from making the longwalls wet, there must inevitably be a reduction of surface run-off to the various small tributaries which feed Dry Ck; so Dry Ck will be depleted in terms of reduced surface flow and, due to the lowered watertable, reduced base flow. The general impact will progressively increase as the cumulative volume of ground fractured by the longwalls increases.
- This effectively means that for the 23-year period of open cut and then longwall mining, the surface flows of the Bylong R and Dry Ck will be substantially impacted due to early (say up to 7 years) demands for bore water and then longwall-generated connective fracturing. The hydrologic regime will be irreversibly modified by the open cuts (even when rehabilitated) and then the progressive longwall extraction and irremediable fracturing.

6. Ecology and offsetting

The Society notes that the mine disturbance area has very high biodiversity values. Nationally endangered species recorded in the area include the Brush-tailed Rock Wallaby, New Holland Mouse, Regent Honeyeater and Spotted-tailed Quoll. Three entirely new plant species have been recorded, and a significant area of critically endangered Grassy Box Gum Woodland will be destroyed. The proposed mitigation and offset arrangements are woefully inadequate.

A Biodiversity Management Plan will be developed to guide mitigation, this including *"…avoidance of impact to sensitive ecology wherever possible, staged disturbance, rehabilitation activities and…a biodiversity offset package to compensate for any residual impacts."* The foregoing are meaningless words! Thus: avoidance will unsurprisingly not be possible, staged development is normal practice, rehabilitation inadequately substitutes a cosmetic veneer for what was once integrated geomorphology, geology and hydrology, and offsetting involves little more than government-sanctioned destruction.

In relation to offsetting, four of the six areas are entirely or partly within the Project boundary and impacted by the mining operations including depressurization. It is notable that offset area five is largely within the area impacted by fracturing and hydrologic disruption above the longwall mining. The company emphasises that the offsets are in accordance with the relevant policies and 'more than adequate'. This serves only to demonstrate the totally unsatisfactory offsetting regulations and policies.

7. Subsidence

This has partly been addressed in the context of the connective fracturing above the longwalls, the impacts on the hydrologic regime and the inadequacy of Area 5 from an offsetting viewpoint.

The other principal factor is the destruction of cliffs and the loss of scenic values. Little or no attempt is being made to avoid damaging scenic values. The company seems to feel that collapsing 20% of the length of the cliffs in the Underground Extraction Area is satisfactory; the society does not accept this. Similarly, the company notes that additional *"…visible mining subsidence movements…"* will impact 50-70% of the cliffs in the Underground Extraction Area; the Society deems this totally unconscionable.

Two particularly spectacular cliffs, some 30-40 m high and 250-300 m long will be particularly prone to damage. The Society is dismayed that the company does not consider this a problem because they are not easily visible from every-day public vantage points. Such mining-induced vandalism was rejected by government as a consequence of destructive late twentieth century practices; the subsidence management planning process was introduced in about 2003-4 to ensure that such destruction was 'prevented'. Yet here we have an EIS blithely advocating open warfare on the cliffs of the Bylong Valley. This must not be approved!

8. No-go areas

In a recent submission to government regarding the Strategic Release Framework (SRF) it was asserted that:

- The agricultural and livestock communities, and also the environmental groups, have lobbied for areas which should be protected from open-cut coal mining, while at one time the National Party advocated

significant buffers around villages and other small-community clusters of habitation. It made sense (and still makes sense) to clearly define areas from which coal exploration and exploitation should be excluded; this should most certainly be before any form of exploration tenement is issued so as to avoid uncertainty.

- Some 'no go' areas are recognised, but it is critically important to also provide clarification in relation to drinking water catchments, productive aquifers, critically endangered ecosystems and productive agricultural land. At a time of declining demand for thermal coal and gas, it would be irresponsible for government to compromise (through short-term expedience) the longer term more sustainable uses of land.
- The Society strongly believes that the only sane way of operating is for the government to clearly identify 'no go' areas as part of the SRF. Enough work has already been done on this to achieve a satisfactory outcome.

This is directly applicable to the Bylong Valley, which also has substantial social values, together with aboriginal and non-aboriginal heritage values. These too would be compromised by the mining.

Dr Brian Marshall,
For the Management Committee.