

BVPA SUBMISSION TO NSW INDEPENDENT PLANNING COMMISSION ON THE BYLONG COAL PROJECT

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BACKGROUND

The Bylong Valley Protection Alliance Inc (**BVPA**) was formed as an alliance of people opposed to mining in the Bylong Valley. The members of the BVPA are closely associated with the Valley and adjacent localities, and are either residents, landholders, former landholders or have relatives in the Valley.

We oppose the approval of the Bylong Coal Project (**Project**), proposed by KEPCO (**Proponent**) because of the irreversible and destructive impacts on the water resources, agriculture, heritage, social fabric and the biophysical environment of this greenfield site. The Valley is relatively small and has never been mined. The fertile Valley floor is framed by woodland and spectacular cliff lines. Much of the Valley is adjacent to the Greater Blue Mountains World Heritage Area. Accordingly, the Bylong Valley is of national and international significance.

In 2018, the BVPA made a detailed submission to the Planning Assessment Commission (**PAC**) review (BVPA 2018 PAC Submission) in which it raised concerns including about the adverse social and environmental impacts of mining in the Bylong Valley.

After the conclusion of the PAC review, the PAC released its report which raised a number of concerns, including; the continued availability of water for farming, impacts on agriculture and loss of heritage, in particular Tarwyn Park. The PAC concluded that it did not have enough information to make a decision to approve or not approve the Bylong Coal Project.

BVPA submits that the Bylong Coal Project Final Assessment Report SSD 63-67 (**Final Assessment Report**) by the NSW Department of Planning and Environment (**the Department**) 2018 has not adequately addressed a number of serious issues raised by the PAC report and the BVPA's 2018 submission.

From our perspective the Department's assessment processes and associated planning legislation functions as a 'rubber stamp' for approving mining projects irrespective of the costs involved. In this submission the BVPA outlines the most serious problems with the Department's Final Assessment Report.

THREATS TO WATER

Many farmers remaining in the Bylong Valley are deeply concerned about the availability of water and believe that the Final Assessment Report seriously understates the risk to water resources in the Valley. The Department has not given sufficient weight to the following issues.

Shallow, variable and seasonally dependent aquifer

The alluvial aquifer which supports farming is variable, shallow and dependent on seasonal rainfall.

The alluvium in the Bylong Valley and Upper Bylong Valley are hydraulically connected meaning water extracted for the mine (via direct pumping and indirect pit ingress) in the Upper Bylong Valley will adversely affect alluvium groundwater in the Bylong Valley.

Numerical groundwater modelling commissioned by the Proponent shows the alluvium groundwater table will decline by up to 15 meters near the mines pumping bores and will take 100 years to recover.

Water licences are over-allocated

The current water licences in the Valley are over-allocated. Based on widespread experience of farmers in the Bylong Valley the available groundwater is less than the licenced volume. Landholders have also observed that irrigation pumping causes drawdown up to many kilometres away. This is typical of a local shallow alluvium groundwater system that is dependent on rainfall recharge and has little storage, (Anderson 2018). In fact, Anderson (2018) argues that the modelling that the Proponent has relied on overestimates the storage.

The Proponent, to our knowledge, has not sought to obtain any knowledge of the water issues from local farmers. The failure to widely consult locals about water uses and issues shows inadequate research and also a complete disregard for the agricultural practices in the valley and their future viability.

No field testing of water availability

The proposed water take by the mine is a large proportion of the groundwater available in the Bylong Valley. The publicly available documents for the Project do not discuss how the volume of groundwater needed for the Project has been proven to be available under various climate scenarios by field testing. In addition, there is no contingency mine water supply option; this needs to be in place in the event of the alluvium groundwater not being available. A contingency plan has been requested by the NSW Department of Industry. BVPA is not aware that a contingency plan has yet been provided.

Permian take not licensed

The mine will intercept Permian groundwater but the Proponent still doesn't have the licences to cover the predicted volume of water take, according to the estimates of water take in the Final Assessment Report. In their response to the PAC Review the Department of Industry has advised that there is no guarantee that a controlled allocation will occur, and consequently new licences may not be available for the Permian take. The Proponent has not identified any plan to obtain the 3,689 ML of entitlement needed for lawful operation.

Lack of climate planning in the numerical groundwater model

It is almost certain that future droughts will be more frequent and more severe due to climate change. Therefore, the extreme climate scenarios referred to in the numerical modelling (i.e. 95th percentile) should be considered to be more likely, and not dismissed as 'very unlikely', (AGE 2018). The numerical modelling adopted by the Proponent does not take into account the worst-case rainfall reductions, increased temperatures and increased evaporation predicted in medium to long term climate models. The Millennium Drought was used in modelling as the worst case, however there are historical records and predictions of worse droughts, (Steffen 2018)

No guarantees for farmers

There are no guarantees that water will be available for landholders during mining operations.

While the mining conditions stipulate continuation of water supply neighbouring landholders in the Hunter have found that arguments with mining companies about water can be at worst fruitless and at best expensive and drawn out. Taking legal action to secure water is not a practical option for farmers. Legal action unfairly advantages mining companies.

It has been reported to the BVPA by some farmers in the Valley that they have been recently offered two weeks 'make up water' for stock by the Proponent but this is clearly inadequate to offer only two weeks water. It is also difficult to see how water in the volumes needed for irrigation could be supplied on a long-term basis.

Mine waste water

The Proponent's water management plan does not detail how the pits which will be full of mine waste water at the end of mining will be managed. How will this water be treated and disposed of so as not to contaminate groundwater or surface flows? BVPA does not consider it as acceptable to leave a giant pool of contaminated waste water in the mine pits.

Cumulative impacts

The Final Assessment Report ignores the cumulative impacts of mining on the Hunter River system. The problem is that each mine is assessed in isolation from the other mines in the water catchment and as more and more mines are approved in the Hunter catchment the impacts on the waterways become additive, in particular reductions in water flows and increased salinity. The single project assessment process ignores the additive (or possibly the multiplicative) effects of many mines on the whole catchment. The proposed mine will add to cumulative impacts of reduced flows and increased levels of dissolved salts in the Bylong, Goulburn and Hunter Rivers, (Imrie-Mullins, 2017).

AGRICULTURE IN THE VALLEY

The Bylong Valley is relatively small and mining will significantly impact farming. The Department paints a rosy picture of 'co-existence' but BVPA is concerned that the agricultural character of the Valley will be drastically and adversely changed forever, due to noise, dust, light and physical impacts.

Removing prime agricultural land from production

The mine Project will remove options for more intensive agricultural activities such as thoroughbred horse breeding or vegetable cropping. Historically the Valley has supported at least three thoroughbred horse breeding farms and area has been mapped as an Equine Industry Cluster. The options for horse thoroughbred breeding and cattle studs will be removed by the mine. Also removed will be the option for vegetable and agricultural cropping in the vicinity of the mine because of dust and blast fume pollution.

The mapping of Biophysical Strategic Agricultural Land (BSAL) used in the assessment process is at a course level that has not been adequately verified on the ground. Areas of obvious BSAL (fitting the definition) have not been included as being impacted by mining operations, as witnessed on the mine tour on Tuesday 6 November 2018. The Department and the Proponent have underestimated the loss of BASL.

Not maintaining Natural Sequence Farming

The Department's Final Assessment Report does not explain how Natural Sequence Farming (NSF) will be maintained. Further, to BVPA's knowledge the Proponent has not contacted anyone with practical experience of NSF to ensure this unique practice is continued. Accordingly, there is real risk that Natural Sequence Farming methods pioneered on Tarwyn Park will not be maintained.

Threats to Natural Sequence Farming

Natural Sequence Farming is a significant part of the Bylong Valley heritage. Despite the change to exclude mining from Tarwyn Park (and Iron Tank) the property will still be negatively impacted. It is almost certain that groundwater and surface water flows on the property will be seriously reduced by mining and possibly to the extent that Natural Sequence Farming will be impossible. For further discussion of the groundwater impacts see the report by Anderson, (2018). Regenerative agricultural methods, such as Natural Sequence Farming, are gaining increased recognition in Australia and internationally. The loss of the Natural Sequence Farming methods would represent a loss to agricultural heritage of national and international significance.

Unproven claims for rehabilitation

Furthermore – and critically - the Department claims in the Final Assessment Report that rehabilitation of prime agricultural land will be possible after the closure of mining. The only current example of an attempt to re-establish alluvial flats on rehabilitated mine land is at Hunter Valley Operations where 63 ha has been reinstated. However, in a site visit by community members some years ago it was apparent to the visitors that the rehabilitation was not totally successful. We believe there is a pressing need to independently validate claims of successful rehabilitation and publish the results in reputable scientific journals.

The BVPA believes that the quality of the replacement land at Hunter Valley Operations does not resemble the original values. To our knowledge there is no precedent for re-establishing 400 ha of prime agricultural land on a rehabilitated mine site. In the Final Assessment Report Table 12 page 43, the Department refers to rehabilitation trials but does not provide citations to show that the results of these trials have been published in peer reviewed scientific journals.

In addition, the cumulative impacts of losing high quality top soil have not been considered. Throughout Eastern Australia BASL is lost each day as a result of housing, industrial, transport and mining projects yet no-one appears to be taking account of the total loss of soils for agriculture. Soil is a finite resource, however by assessing each project in isolation the impact of the total loss of soil is not considered. There is increasing concern about soil destruction and the loss of top soil globally, that is accelerating at a rapid pace. High quality top soil is an increasingly precious resource that cannot be replaced, (Soils for Life 2018).

We note that the Proponent has made extensive use of before and after (photoshopped and imaginary) photographs to demonstrate that following the completion of mining the landscape will be fully restored. This technique is not convincing given the patchy rehabilitation results obtained by other coal mines in the Hunter coalfields, (Munroe 2012). The photographic impressions produced by the Proponent do not show the damage to the aquifer or loss of a critically endangered woodland or the subsidence (up to 3 metres) above the underground mine.

HERITAGE LANDSCAPE

It is essential to acknowledge that the whole Bylong Valley has unique heritage values. It is an iconic natural landscape with rich Indigenous and agricultural heritage. The Final Assessment Report recommends a small reduction in the mine footprint to ensure mining does not take place on Tarwyn Park. This is not adequate and does not mitigate against the Project's many impacts.

Indigenous Heritage

The proposed mine area is rich in Indigenous sites and artefacts and it is not clear how Indigenous heritage will be protected, especially in the area above the underground mine which will be subject to subsidence of up to 3 metres. Most importantly the cumulative effects of mining on Indigenous Heritage in the Western and Hunter Coal fields has not been considered at all by the Proponent or the Department in the Final Assessment Report.

Heritage Landscape

The Department also completely ignores the heritage value of the Valley, as a whole. The Bylong Valley Way is an extremely popular tourist route because of its natural beauty and the mine will diminish its appeal as a tourist destination. Mining will also adversely impact on the adjacent Greater Blue Mountains World Heritage Area if over-extraction of groundwater occurs. Wildlife and amenity in the World Heritage Area are also under threat from dust, light and noise pollution.

SOCIAL IMPACT

In the Final Assessment Report the Department downplays the extremely negative social impacts of the Project. The Social Impact Analysis in the Final Assessment report is inadequate and flawed, (Askland 2018). It is disingenuous for the Department to quote a petition in favour of the mine when many of those people whose lives have been severely disrupted have been prohibited from speaking due to 'gag' clauses in contracts. In the Final Assessment Report the Department has neglected to mention the widespread opposition to the mine.

Negative Social Impacts

The negative social impacts will continue and many of those remaining in the Valley have found the mine management, in practice, is not interested in re-building any community, despite assurances to the contrary. The Proponent has sought to win support in the regional towns, within commuting distance of the mine, by promising jobs and growth. We note that at the IPC meeting in Mudgee all the speakers in favour of the mine used the growth in jobs and mine spending as the overwhelming reasons for approval of the mine.

The Community Newsletter produced by the Proponent reports on the small grants that have been provided to a wide range of community organisations in an effort to win support for the company. However, this attempt to win community support has created intense divisions in the community that were not manifest previously. Additionally, the BVPA is aware that

some supporters of the mine are using social media to denigrate anyone who opposes the mine.

The Department glosses over the negative social impact on the Bylong Valley which includes; the loss of people in the Valley, increasing social division between those for and against the mine , the end of the popular Mouse Races in 2014 and the lack of volunteers for community activities.

Social Impact Report

A detailed and thorough discussion of the shortcomings of the social impact analysis has been submitted to the IPC by Dr Heda Askland who points out that the analysis of social impacts were not conducted in accordance with the Department's actual guidelines, (Askland 2018).

In particular, Askland (2018) demonstrates that the social impact analysis relied on by the Department ignored distributional equity and cumulative impacts, (Askland 2018). In the BVPA's view, the Department has uncritically accepted the Proponent's position on the social impact of the Project.

ECONOMICS AND FINANCE

Costs and benefits

The Department has not weighed up the benefits of increased employment opportunities from the Project against the cost of losing the opportunities for other types of jobs. BVPA is concerned about the costs of irreversible reduction in the availability of water for farmers, removing options for more labour-intensive agriculture and reductions in tourism.

Further, the Proponent has not costed the irreversible environmental impacts on aquifers and the biophysical environment.

However, BVPA is concerned that the Project will cause irreversible damage to agriculture, the wider environment and community in return for jobs in the relatively short term. An object of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act 1979) is to promote ecologically sustainable development (ESD). The Final Assessment Report does not show how the Project meets this object of the Act.

While BVPA acknowledges that there will be an increase in jobs if the Project goes ahead, it submits that such jobs come at an unacceptable cost. The BVPA submits that cleaner, healthier jobs, which are sustainable in the long term, need to be created in the region instead.

Institute of Energy Economics and Financial Analysis (IEEFA) Report

The report submitted to the IPC by IEEFA highlights a number of incorrect assumptions in the Proponent's economic justification for the Project, In the IEEFA report authors, Buckley & Nichols (2018), argue that the Department and the Proponent have used out of date figures for the estimates of coal demand and likelihood of new coal power stations being built. The Proponent has also used out of date estimates for the predicted coal price. Most importantly Buckley & Nichols (2018) maintain that the Proponent and the Department have failed to take into account the rapidly changing policy environment in South Korea. IEEFA conclude that when all the above factors are considered, as well as the overstatement of tax revenue,

the economic feasibility of the Project is substantially less than that claimed by the Proponent.

It should also be noted that the presentation by Alistair Davies to the IPC meeting in Mudgee on 7 November 2018 raised a number of serious questions about the transparency of the economic modelling relied on by the Department and the Proponent, (Davies 2018).

Davies (2018) also pointed out that a number of the assumptions about coal prices and demand were out of date.

BIODIVERSITY

The Project involves the destruction of the critically endangered White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.

According to the Final Assessment Report (pages xii, xiii) the Department states that the proposed off-set for this endangered community is suitable, even though the off-set land has not been clearly shown to be equivalent to the critically endangered community. In our opinion it is certainly not a 'like for like' off-set. In the Final Assessment Report the Department is not explicit about the loss of a critically endangered ecological community, but rather presents a somewhat confusing narrative about off-set credits. Furthermore, the Department reports that the final acquisition of land for off-sets will take place following approval and to be finalised following mine closure.

The Project will be within sight and sound of the adjacent Greater Blue Mountains World Heritage Area. Accordingly, noise, dust, blast fumes and light pollution will impact on wildlife and vegetation in the World Heritage Area. The Final Assessment Report does not address these impacts. As mentioned above the water take from the mine is also highly likely to reduce underground water in the World Heritage Area, (Anderson 2018)

BVPA does not consider that the Project meets the object of the EP&A Act 1979. "(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats."

CLIMATE CHANGE

Expert Witness Report by Professor William Steffen

The report submitted to the IPC by Professor Steffen makes a compelling case for not approving new coal mines in Australia. Professor Steffen argues that Australia will not meet it's Paris greenhouse gas targets by continuing the current policy of approving new mines. He concludes that:

"Australia's existing fossil fuel industries must be phased out as quickly as possible, with most of the Australian fossil fuel reserves (and nearly all of Australia's coal reserves) left in the ground" Steffen page 17

Professor Steffen also provides a rebuttal against oft-stated claims that the Australian contribution is too small to matter or that if Australia does not open mines someone else will.

It is a matter of great concern that the Department has completely ignored the global greenhouse gas from the combustion of coal from the proposed mine. In BVPA's view the object of ecologically sustainable development in the EP&A Act 1979 cannot be met by ignoring the global contribution to greenhouse gases from the proposed mine.

Climate risk

Apart from the urgent need to reduce global carbon emissions the Department has not considered climate risk and the risk of abandonment. There is serious doubt about the long-term viability of the Project, given the global trend away from the use of coal powered energy generation, (Steffen 2018). The recent Intergovernmental Panel on Climate Change report found that the net atmospheric carbon dioxide emissions would need to be almost zero by 2050 keep global warming to 1.5 degrees, (IPCC 2018). The BVPA contends that OECD countries like Australia and South Korea will need to substantially phase out thermal coal use by 2030 to contribute to meeting the global reductions needed by 2050.

CONDITIONS AND MODIFICATIONS

The Department maintains that the conditions outlined in the Final Assessment Report will mitigate the negative effects of the project. On 12 November 2018, in a presentation to the IPC, BVPA heard Jeremy Farrell raise concerns about the effectiveness and enforceability of the Recommended Conditions of Consent. BVPA heard Mr Farrell contend that scientific uncertainty cannot be 'conditioned away'. As such, BVPA heard Mr Farrell contend that a precautionary approach should be taken, by the IPC, in its consideration of the Project proposal.

CONCLUSION

In the final assessment report the Department has failed to clearly demonstrate how the proposal meets the objects of the EP&A Act 1979 with respect to Aboriginal cultural heritage, threatened ecological communities and ecologically sustainable development.

In the Final Assessment Report the Department has not adequately considered the adverse impacts of the Project. The Department has significantly downplayed the negative impacts and overstated the benefits of the Project on a greenfield site. On the key issues the Department has uncritically accepted the Proponent's views apparently without bothering to seriously consider the evidence presented by those opposing the mine.

The Project should not be approved because the Proponent and the Department have consistently underestimated the impacts and failed to adequately assess:

- the Project risks and impacts, particularly in relation to water and financial viability,
- the serious and irreversible impacts on the agricultural, heritage, social and biophysical values of the Bylong Valley and adjacent Greater Blue Mountains World Heritage Area. The Project, if approved, will destroy the iconic and unique values of the Bylong Valley. The integrity of this magnificent landscape will be destroyed forever.

- the cumulative impacts on Indigenous heritage in the wider region
- the cumulative impacts on biodiversity, in particular the destruction of the critically endangered White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland and Regent Honey Eater habitat
- the urgent need to reduce global carbon emissions from coal. Approval would signal that the IPC and the NSW Government were wilfully ignoring the environmental, economic and moral challenges of anthropogenic global warming.

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