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HUME COAL PROJECT EIS SSD 15_7172

SUBMISSION TO COMMENT ON PROPOSALS OUTLINED IN THE EIS

I totally object to the underground coal mine proposed by Hume Coal in the Southern Highlands of NSW for the following reasons.

1. **Impact on Groundwater**

If the mine proceeds the main aquifer for the Southern Highlands will be drained and more than 90 water bores, primarily used for agriculture, will be left totally or partially dry for decades. Even the mining company acknowledges this will happen in the EIS. This is totally unacceptable.

The people who rely on their bore water for agricultural businesses during our long, hot, dry summers will have their livelihoods destroyed. It is physically impossible for anyone to truck enough water to these properties and the EIS does not explain how the loss of water will be addressed.

The EIS claims that the ground water in the aquifer will be recharged in between 36 and 65 years. This means the agricultural land affected will remain unusable for decades. This prediction is bad enough, but what if things go wrong. There is no guarantee that the mine tunnels will be able to be perfectly sealed off to prevent water draining from the aquifer forever. Mining operations will result in cracking in the remaining coal reserves and very possibly unplanned cave-ins which could mean some parts will not be able to be sealed. The mine plan has a timetable, but nearly always these timetables blow out due to unforeseen circumstances. The time frame before sections of the mine are "sealed" could be much longer. It is not clear whether the calculated time for the aquifer recharge has taken into account that the climate in the future will be hotter and drier, and therefore using rainfall data for today's climate will be totally wrong. The government cannot allow our agricultural land to be rendered unusable for many generations to come.

In addition, as the aquifer is drained of its water reserves, the general water table level will also be lowered in areas where the aquifer sandstone is exposed at the surface, such as the Sutton Forest and Berrima localities. The EIS acknowledges that this will happen. The EIS claims that the water table level in the basalt clays and shales that overlie the sandstone will not be affected because there is no transfer of ground water across this interface. This needs further investigation because a far greater area (south to Exeter and Bundanoon) will be affected by lowering of the general water table if they are wrong.

The lowering of the water table will then very likely affect the large, old trees in this area. During the hot, dry summers and periods of drought they rely on the deep groundwater reserves to survive, and if these are depleted or non-existent many will be severely stressed or die. The EIS attempts to address the fate of the trees, however it only considers a few pockets of remnant native trees along a few creeks in the northern area of the mine affected land. The EIS totally ignores the huge number of trees that have been planted by landowners over the years, many of which are large, old trees now. The trees that have been planted on private land are both natives and exotic species, and are equally important as they both provide the wind breaks, shade and shelter for animals and the beautiful landscapes that tourists drive

through. The EIS claims that the lowering of the water table will only have a minimal affect the root zone of the few naturally occurring Eucalypts they have considered, but makes no mention of how it will affect all the remaining trees. The EIS notes that where the water table is lowered by greater than 10m there will be a moderate effect on the root zone of trees, but it's pretty vague as to where that might be and what trees will be affected and how. These claims are based on the ground water study carried out for the EIS, however the comparable study commissioned by "Coal Free Southern Highlands" finds that much more of the groundwater will be lost from the aquifer due to mining operations, and hence the effect on the root zone of the trees also could be much worse. Much more work needs to be done to assess the effect of ground water loss on *all* trees situated on land above the area to be mined. The assessment also needs to take into account the fact that the climate is getting hotter and drier (only those with a vested interest in fossil fuels don't agree with that) so that the ground water available to the trees from rain will be a lot less in 20 years or more time than today.

The government cannot allow a mining operation to proceed when there is such a high risk that such a large area of the natural environment will be damaged or destroyed. Once the large, old trees start to die there is nothing anyone can do to revive them and it is not physically possible to water such trees in times of drought or stress. If the trees above the mined area die the whole ecosystem in this area will also die. The government cannot risk this happening.

2. **Dust**

The mine plans to have 3 coal stockpiles at its operations site at Medway. This means coal dust will be deposited over large areas of the Highlands by the wind. Being significantly elevated, the Highlands is subjected to often severe to gale force winds on a seasonal basis. In the summer the strong north westerly winds will blow coal dust over the southern towns of Moss Vale, Exeter and Bundanoon and the rural areas around them. In the autumn, winter and spring the winds are predominantly very strong (or worse) west to south westerlies, and can blow for a week straight (without even dying down over night). These winds will cover Mittagong, Bowral and Berrima with coal dust. There is no way anyone will be able to stop the wind blowing the coal dust everywhere. The air associated with these winds is typically very dry and wetting down the stockpiles sufficiently to prevent windblown coal dust spreading everywhere will be an impossible task.

The dust will cause respiratory problems for many people, especially those at higher risk, such as the elderly and people who suffer from asthma. Given that the Southern Highlands has attracted a large number of retirees to move here from Sydney, there will be a huge proportion of local people that will likely suffer.

The coal dust will also cover and make unsightly the beautiful gardens, parks and rural areas that visitors to the Highlands come to see.

3. **Impact on Village of Berrima**

The proposed mine will have a huge impact on the historic town of Berrima because it is so close to the mine surface operations centre and the proposed railway extension runs just south of the town. Businesses in Berrima totally rely on tourism, and with the coal dust issue, noise and unsightly rail facility close by it is very likely tourists will prefer to go elsewhere and hundreds of businesses will be adversely affected or ruined.

The proposed rail crossing of the Old Hume Hwy is at the southern end of the historical Remembrance Drive section, which is a popular scenic drive for visitors to the area. At this crossing a rail maintenance facility is also proposed, including sidings and provisioning facilities which will operate day and night, which will be extremely disruptive and noisy for local residents. The EIS claims the proposed bridge crossing the Old Hume Hwy will be designed to RMS standards, which means it will be required to have a 5.3m minimum clearance to the highway. Therefore the embankments either side will be 7-8m high, and

assuming a 2% (approx.) grade required for freight trains these embankments will be around 400m long. The natural topography here is relatively flat, so such large embankments will appear overbearing, out of place and extremely unsightly. We cannot allow a popular tourist drive and historical site to be desecrated like this.

In addition, the town's water supply will be significantly affected by the drawdown of the groundwater, to the point where it might eventually run dry. This area also has a high risk of losing many of its trees, as previously stated. This is totally unacceptable.

4. **Impact on the Economy of the Highlands**

The economy of the Southern Highlands is very much dependent on tourism. The EIS totally misrepresents the area's economy by claiming that there are only 20 tourism establishments in the whole of Wingecarribee shire, and just 3 in the area affected by mining. This is so incorrect it is a joke. The EIS is trying to pretend that there is no significant tourism industry in the Highlands.

In fact thousands of people visit the Southern Highlands every year because they love the clean air, peace and quiet and the beautiful trees and gardens. If these things are adversely affected or ruined by this mine visitors will go elsewhere. Thousands of local people are employed by businesses which directly and indirectly service the people who come to visit the Highlands, in accommodation places, retail, restaurants, transport and many other areas. If visitor numbers reduce significantly these businesses will not survive.

The EIS claims that 300 jobs will be created by the mine, but most of these will not be local jobs. The few jobs that may go to locals will be swamped by the thousands of local jobs and livelihoods lost in the tourism and agricultural sectors.

Unemployment in the Southern Highlands is currently relatively low compared with the NSW average. If the proposed mine adversely affects tourism here unemployment will definitely increase. This will create social problems, such as younger people moving away to find work, people struggling to pay bills and depression in those who lose their job.

5. **Risk to Sydney's Water Supply**

If the Hume Coal mine proceeds there is a big risk that Sydney's water supply could be contaminated. The EIS states that waste water from the mine will be released into Oldbury Creek, which runs into the Wingecarribee River and Sydney's water supply. It would only take one serious accident and the water supply could be contaminated with toxic mine waste. The government cannot risk this happening.

In addition, the Southern Highlands often experiences severe wet weather events with sustained, heavy rainfall over a long period. A good example of this was the "east coast low" in June 2016, which dumped nearly 300mm in the area in just 24hrs. There was flash flooding, landslides and other damage from the excessive, heavy rain. Such a weather event could cause a serious problem with mine waste being washed into local waterways and creeks, and eventually Sydney's water supply.

6. **Mine Waste**

The EIS claims that the mine waste will be pumped as a slurry underground, back into the mine cavities, which will then be sealed off. This is a very expensive way of dealing with mine waste, with many technical challenges to overcome. There is a high risk that this plan will be abandoned because it is too costly or just won't work. What is Hume Coal's contingency plan? While they are working out how to do this mine waste will be stockpiled above ground, adding further to the dust problem.

If the mine waste is pumped back into the mine cavities there is a real risk that the high concentration of toxins in the waste material will contaminate the remaining ground water in the aquifer, because the aquifer water will continue draining into the sealed mine shafts for some time. The diagrams in the EIS

show that the ground water in the aquifer eventually flows into the Wingecarribee River. Therefore the mine waste toxins are likely to reach there too, again posing a risk to Sydney's water supply.

7. Economics of the Mine Proposal

The proposed mine is relatively small, but will be extremely costly due to the groundwater issues, the rail extension works, the limited amount of coal that will be extracted and the fact that around half the coal is cheap, thermal grade coal. The claimed royalties that the state would receive are tiny compared with the state's expenditure.

The EIS claims that there will be a net state revenue benefit from taxes, etc paid due to the additional employment the mine will create, but it does not consider the substantial state revenue losses that will be caused by the unemployment and ruin of businesses in the tourism industry.

The price of coal is already in decline, and will most certainly reduce further in the future as world-wide demand for coal reduces in favour of renewable energy. It is very likely the mine will become uneconomic if it is allowed to proceed, which would result in the State government receiving no royalties at all and the very likely possibility that the mining company could simply abandon the project. It would be hard to chase the company's funds to South Korea. There are already 50,000 abandoned mines in Australia so no one can say this will not happen.

There is a huge risk that the government could be left with an expensive environmental disaster to try to repair or a permanent disaster that no one can fix. It is just not worth the risk of destroying our environment and underground water reserves for a project that will deliver the NSW people and the Southern Highlands residents little or no monetary returns.

8. Social Impact

The proposed mine has already caused a huge social impact, particularly on the landowners and business owners who are directly affected by the mine. They have had to live for many years with uncertainty and worry about what will happen to them and their livelihood in the future. Many agricultural and tourism businesses have put on hold expansion and development plans until their fate is clearer. If the mine is approved this uncertainty will just get much worse.

The EIS is very vague about what, if anything, Hume Coal will offer to landowners who lose their ground water. Deepening or redrilling bores is unlikely to help because the drawdown of water is so great – they might have to drill into the coal mine itself to find usable water! In addition, many of the landowners affected by the mine have planted large numbers of trees on their properties over the last few decades, to improve the biodiversity and amenity of their land. It is likely that these trees will be severely affected by the loss of ground water and these people will have to watch all their hard work and commitment die. It will be both financially devastating and heart breaking for them.

The local tourist businesses that will be affected by the mine will not be offered any help or even recognition that they are struggling. These people and their families will be the unseen victims of the mine.

The government cannot continue to allow development like this, at any cost. It has a moral obligation to look after the people who it supposedly represents, not just big business.

9. Impact on Global Warming

If the proposed mine is approved it will have an adverse impact on the fight to limit global warming and its devastating effect on our planet. While this mine represents only a small fraction of the total amount of coal mined world-wide, it must not be approved because we must reduce our dependence on coal. That means no new coal mines.

The EIS states that around half the coal will only be thermal grade coal, and demand for this is reducing rapidly. Even in developing countries new renewable energy projects are now cheaper than new coal based energy projects, and the difference will only increase. Therefore, the amount of usable (ie metallurgical) coal that would be available from the mine will be much, much smaller than originally claimed and will make little difference to what is available world-wide.

Summary

If the proposed Hume Coal mine proceeds there is likely to be an environmental, social and economic disaster in the Southern Highlands. We just cannot risk destroying this beautiful area and its community forever.

I therefore totally object to this proposed mine and ask the government to reject this proposal.

I have not made a reportable political donation in the last 2 years.