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### **Mangoola Coal Modification 6 of Project Approval 06\_0014**

Thank you for the opportunity to make a submission about this mining proposal.

#### **I object to this expansion proposal.**

Mining threatens our soils, our water, our land, our air, our communities and the future of agriculture in the Hunter Valley.

The cumulative impacts of mining on the Hunter River and Hunter Valley are yet to be quantified. Mining expansion adds to the total accumulation of air pollution in the Valley.

#### **Our Community**

Denman and the surrounding area still retains a rich community network, with each landowner who is 'bought out', a part of the history and fabric of the community is lost and remaining residents are further isolated, demoralized and detached from the world around them. You need these people to support existing agricultural, tourism and viticulture based industries. You need these people who identify with the land and a community as they're a vestige of the Australian national identity, one that is quickly being transformed and sadly lost. This expansion would further drive a stake into an already disadvantaged area, further destroying viable land with an ingrained Aboriginal heritage – if you destroy that, what else have we got left to show for ourselves in years to come.

#### **Our Soils and Farming Land.**

Coal mining operations are progressively taking over the majority of developed land in the Muswellbrook Shire. Mining Companies now own more than 50% of the rateable land in the Muswellbrook Shire (by area). Farming land is being underutilized or wasted under coal mine ownership. We must keep all our farming land and soils intact for future generations. This is crucial for future food production and the long term economic viability of our valley.

#### **Our Water.**

Water is critical resource for the survival of the Hunter Valley. Water in the streams, rivers, dams and aquifers needs to be protected to maintain the quantity and quality of our water for the residents of the Hunter and for growing food. Water is life. Without water of quantity and quality the future of farming in the Hunter Valley is challenged. Discharge of saline water from mine sites is an ecological insult. Saline water that is seeping from mine storages is raising the background salinity levels of the Hunter River.

### **Our Air and our Health.**

Mining is a significant contributor to air pollution. Not just dust from mechanical excavation but gaseous emissions from open cut mines, machinery diesel exhaust and explosives. The various components of this pollution act differently, but the dust stays suspended in the air and travels great distances. The cumulative impact of many mines releasing air pollutants, amounts to a constant elevated level of air pollutants in the atmosphere that is not acceptable. The consequent negative health impact on our community and the cost to our government for health services is also not acceptable.

### **To expand on the points made:**

#### **Our Soils and Farming Land.**

##### *The importance of Agriculture*

Australia may be a large continent but the area of land and soils suitable for growing food is small in comparison. Our population is growing and the demand for food worldwide is growing.

Mining sterilises farming land and replaces it with at best poor quality rehabilitated land that is no longer commercially viable for farming.

The Hunter Valley has rich farming soils. Where else is there a better area to grow food? The Upper Hunter is two hours to markets in Newcastle, four hours to markets in Sydney. Newcastle is well served by transport, road, air, rail and shipping.

We have the capacity in Australia to feed not only ourselves but a sizeable amount of South East Asia.

Mining is a 'once only' use of land. No mined land has yet been shown to have been returned to its previous quality. Rehabilitated land is lacking in essential elements usually found in soil. For example, cattle grazed on rehabilitated land are stunted due to the lack of Copper in the top soil.

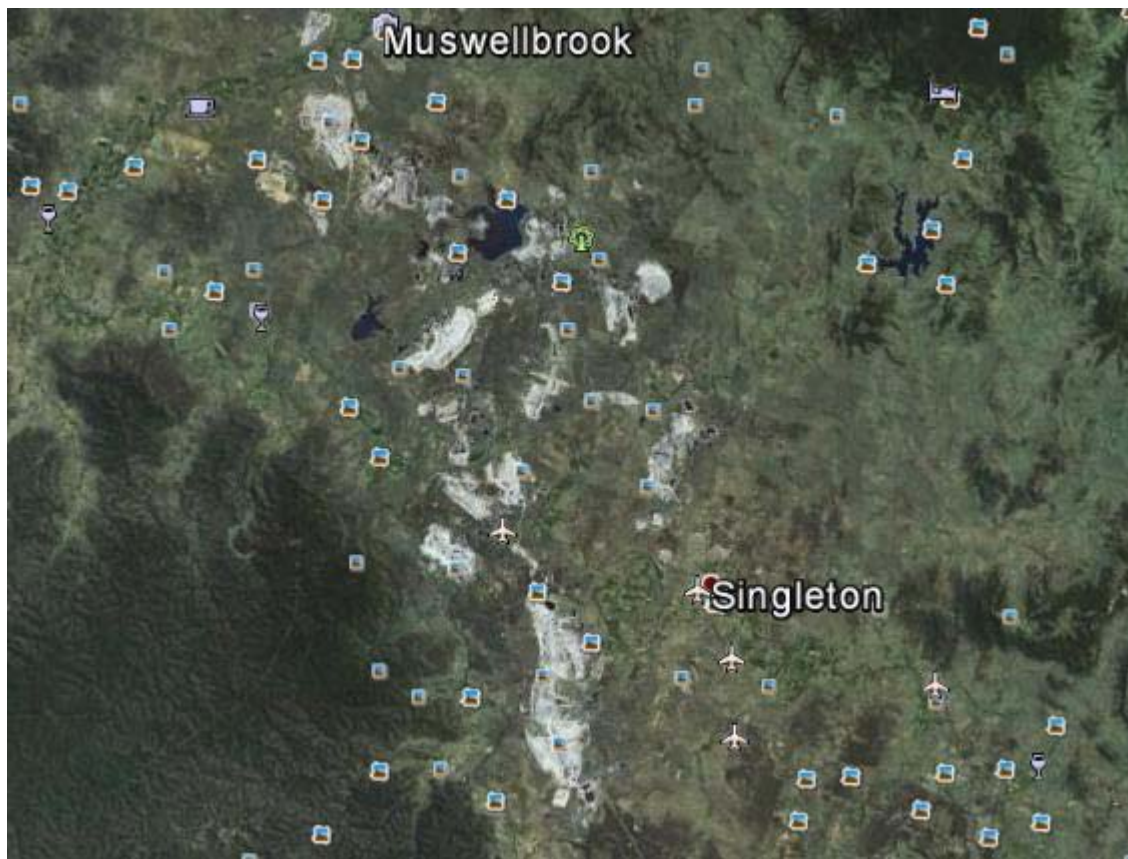
Land that has been rehabilitated continues to subside, especially after rain or irrigation. Crops grown on rehabilitated land can only be used for grazing as the uneven surface makes the use of harvesting machinery impossible.

Up until ten years ago mined areas kept away from our rich soils and rivers. But the mining industry now threatens that richly productive farming land and the water source for farming and town that draw on the Hunter River.

## *After the Mining*

After mines finish production, there is often no attempt to maintain any established rehabilitation or continue rehabilitation. The land cannot be returned to its previous agricultural usefulness. When the coal is extracted, the overburden is aerated during excavation and occupies forty percent more volume than when it was in the ground. This means that even if you fill all the voids you still end up with a considerable amount of excavated material on the surface in spoil banks or mountains. This aerated spoil is unstable and very susceptible to erosion. Inevitably, these mountains of spoil are exposed to the weather and are eroded by wind and rain, adding to the dust in the air and silt in the water ways.

When an open cut mine ends there is a final void left. The voids depressurize aquifers which fill the void with ground water. These lakes become more saline and toxic as time goes on. Mines do not take responsibility for managing these voids and lakes post mining. The mining company departs and leaves us, the people, to bear the consequences. As time passes after the mine has closed, lines of responsibility for the mine site become more obscured. A plane flight over all the mining voids and waste lands that have been left by a century of mining in the Hunter Valley shows the poor record of looking after the land post mining. The damage is so great, that it can easily be seen from satellite images as a white scar across the Hunter Valley. See the satellite photo that follows:



There is presently no certainty that mined land can be returned to viable agricultural use. The NSW Minerals Council Stakeholders workshops are only now investigating how to remedy the soil and water destruction that has occurred with open cut mining during the last thirty years.

### *Government strategies to protect agricultural land*

The NSW Draft Upper Hunter Strategic Regional Land Use Plan (the Strategic Land Use Plan) indicates that the land adjacent to our rivers, both the colluvium and alluvial land, is strategic agricultural land. The Strategic Land Use Plan's objectives include ensuring the protection of strategic agricultural land and water resources (p19). The proposed project will simply override this objective.

### *The Hunter Valley Agricultural Economy*

This mine proposal will have an impact on neighbouring farming industries and the community. The thoroughbred industry is a sustainable industry that employs more permanent staff than the coal mining industry, and can continue that employment indefinitely. This mine proposal threatens this industry as it is a source of air pollution and water pollution that is planned to be discharged into the Hunter River. Continual challenges posed by the mining industry may result in the Horse Industry moving to an area which fits into its business plan, an area where it is not threatened by mines.

An **economic impact assessment** *must* be undertaken to assess the effect of this mine proposal on all other non-mining industries and businesses in the area. Prospective rural businesses will not locate to areas threatened by coal mine expansion.

### **Our Water.**

Water is critical resource for the survival of the Hunter Valley.

It is a resource that is constantly moving through the Hunter Valley environment in a delicate balance. Water that falls as rain, soaks into our soils, runs down the streams and rivers, recharges our underground water systems, and fills our dams.

Mining breaks water aquifers and interrupts underground water flow. Coal mining creates lakes of waste water and produces toxic waste water with heavy metals that threatens all our water sources. Inevitably these lakes and dams of waste water leak slowly into the environment. Over the last twenty years the background level of salinity in our rivers, particularly the Hunter River, have risen.

The Hunter Valley is a renowned flood valley. Will these mined and rehabilitated soils stay in place during the strong, rushing flooding that occurs in the Hunter? Who will compensate the water users downstream if the artificial mountains of overburden, erode and wash into the river? You can see deep erosion scars on some of the overburden piles that indicate they are loose and prone to erosion.

*Enough is enough!* The Hunter Valley has “copped the lot” for nigh on thirty years. Leave our soils and water for future generations. It takes thousands of years to build up soil and only a short time to lose it. We cannot afford to lose any more.

The Hunter River in the early 1800's was a narrow and very deep, clean water river, with the stones and gravel visible on the river bed. Local residents who grew up with the Hunter River in the sixties and seventies recount how the river was clear and populated with native fish. Now the river is a shallow waterway full of salt, silt and soils. Run off from mining operations is changing the nature of the Hunter River as we have known it.

There has not been enough time to gauge the effect of severe flood rains on rehabilitated lands and bare unvegetated spoil heaps.

### *Waste Water, Salinity and Heavy Metals*

The broken aquifers in the back walls of pits will continue to drain into the refilled pits, eventually saturating the refill. The water leaches out the heavy metals contained in the blasted rock rubble and becomes a liquid medium for transporting heavy metals. This cocktail of water and heavy metals sits in the pits until the pit is saturated, and then leaches into the environment. After the mine has finished, who will monitor and 'fix' this legacy left by mining?

In addition to this toxic waste water escaping from filled pits there is the saline water which mines discharge into the river. In the last financial year, mines and power stations discharged 14,000 tonnes of salt into the Hunter River, three times that of the previous year. Saline water is not good for the downstream water users or river and estuary ecology.

### **I say NO to any more expansion of open cut mining.**

The underground mine at Glendonbrook, the Great Greta Mine, was closed in approximately 1999 and those living in the area were told there would be no problems. The sad reality is that highly saline water from the mine is now poisoning the creek.

### *Impact on proximate water systems*

In the National Water Commission, Waterlines report entitled Integrating the Mining Sector into Water Planning and Entitlements Regimes, March 2012 (NWC Report), Recommendation 4 states that mining should be excluded from proximity to water systems where there is a risk that water will be drawn from aquifers either during the mine operation or post closure of the mine, and will cause significant impacts on a developed water system. In this regard the report identified at page 20 and page 7 that near the Hunter River several mines have resulted in passive water take from overlying aquifers and rivers. This project could easily result in such water leakage.

At page 44 the NWC Report states “experience with coalmines in the NSW Hunter Valley has shown that uncertainty in estimating effects on proximate rivers is large and effects have occurred in a number of instances despite this being considered unlikely in initial modelling

and assessment". In addition the closer a mine is located to a high yielding aquifer or river, the greater the risk that errors in prediction could result in the water system being compromised (p44 NWC Report). Because of the previous experience with negative effects on Hunter Valley water systems caused by a mining and the regular failure of initial modelling and assessment to predict these problems, it is clear that the risks should not be taken of potentially harming the Hunter River water source.

At page 44 the NWC report also states that "ongoing passive take of water post closure of a mine can represent a perpetual impact that it is difficult to compensate". Such water take can permanently remove productivity from the regional economy. It is my concern that this mining project will permanently damage the Hunter River and will therefore permanently remove productively used water from the regional economy. In this situation the NWC Report recommends that mining be refused.

### **Our Air and our Health.**

We do not yet fully understand the negative impacts of the air pollutants from mining. The smaller the particles, the further into the body they travel. Diesel combustion gases are known to be very small and to be carcinogenic. A toxicological analysis of mine sourced pollutants is presently being undertaken and will be released after the submission date for this modification proposal. The Upper Hunter Air Quality Monitoring Network regularly detects levels of dust that are too high and issues air quality alerts. The cumulative impact of many mines releasing pollutants amounts to a level of pollutants in the atmosphere that is not acceptable. The mines need to do a lot more to reduce air pollution, and until they do, additional mines and mine extensions should be refused.

Our lungs should not be filters for mine pollutants. It has been reported by Hunter New England Health that Singleton and Muswellbrook local government areas have a higher than average rate of respiratory illness and asthma.

The mitigation measures that the mines take to reduce air pollution are not effective, or we would not have such a high frequency of air quality alerts.

The cumulative effect of many mines producing air pollutants needs to be taken into consideration when considering this application. Further study is needed in this area before new mines or expansions are approved.

A health assessment study on the effect of coal mining pollution on human and animal health has never been part of the mine application process. This must now be part of the application process prior to any consideration of a mine extension or new mine.

A recent air quality meeting held in Muswellbrook in May discussed air quality impacts. It is obvious that there is no limit set on the cumulative impacts of mine pollutants. This is a great failing in our planning system.



The view from the Denman Road looking towards Mangoola Coal. Note the brown smudge of smog that is noticeable, especially after the sun goes down.

Mangoola coal is close to the town of Denman. Denman does not have an air quality monitor that is part of the Upper Hunter Air Quality Network. Until Denman is part of the air quality network expansion of this mine and establishment of new mines near Denman should be halted.

#### **Farming for our future.**

Farming has been a vital part of the economy of the Hunter Valley since the 1800's. Mining deters further large scale commercial investment in agriculture. Ask a farmer or agronomist what they seek in a farm. It's clean water, fertile soil, clean air and connection to markets.

Investors in agriculture run a mile from mines. Why invest in land that has a high likelihood of being threatened by new mines or mine expansions. Look at Jerry's Plains, now suddenly surrounded by five mining proposals. Mining areas do not fit the agricultural business model.

As Sydney's population grows and its urban area expands it is losing its agricultural land. Land in the Hunter will be needed for food production. You can't feed a population with coal.

For a region to have a secure economic base, it must encourage diversity of industry. Mining is a commodity industry. While there may be a demand for coal now, the increasing number of coal mines will result in a supply that will exceed demand. The price of coal will fall, and we will see mines go into care and maintenance. Where will the miners find work if we have pushed other industries like agriculture out of the valley?

**As mining continues to permanently change the environment in the valley I wonder what sort of legacy we will be leaving generations to come.**

**I sincerely hope you will help to stop this destruction and support the people that have to live through this trauma.**

**Kind regards,**

**Nerida**