



Southern Highlands Greens Submission on the Hume Coal EIS

The Southern Highlands Greens strongly object to the Hume Coal Project – SSD7172

The Basis of the PAC's Authority to Receive Submissions

The Minister for Planning is the consent authority for State Significant Development applications. In the case of Hume Coal, the department's recommendation to the Minister will be referred to an independent Planning and Assessment Commission (PAC).

The DOP website for State Significant Developments (www.planning.nsw.gov.au › ... › [Development Assessment › Systems](#)) requires the PAC to take into account local government policies and planning rules:

SSD applications are assessed by the Department of Planning and Environment. The Department considers the following when assessing SSD applications:

- ***existing strategic plans and policies (including State, regional and local)***
- feedback and comments from the relevant local council(s)
- specialised and technical input and advice received from Federal and State Government agencies
- ***public submissions received during the exhibition***

The Southern Highlands Greens support the submission from Wingecarribee Shire Council on the Hume Coal EIS (passed by Council on 28 June 2017). The deep concern expressed on behalf of the community of the Shire in that submission is an accurate representation of the concern of the community. We ask that the PAC give great weight to the detailed scientific and heritage studies prepared by local organisations and individuals opposed to the proposed mine. These submissions reflect the extent and depth of the community opposition, as well as providing strong technical grounds for rejecting the proposed mine.

The Hume Coal EIS, on the other hand, is lengthy but with little to commend it. It ignores many serious technical risks, as well as blithely assuming away issues that need to be addressed before proceeding further (such as the extent of the water licences the company needs and can draw on). Deep flaws also exist in their analysis of the mining and industrial history of the area affected, effectively denying the blatantly obvious rural and historic nature of the landscape. The area's high heritage significance is effectively denied, as well as the likely impact the mine and its infrastructure will have on that significance.

Our community is shocked and traumatized by the prospect of the mine. As the sheer scale of the proposed undertaking becomes apparent this will only increase. To put the amount of material to be extracted in some sort of conceptual framework, the volume will be equivalent to the volume of Uluru. For Hume Coal to assert that the impacts will be negligible and the

risks minimal defies belief. In short, the Hume Coal EIS is not believable. Set out below are the detailed reasons for our assertion that this is so.

(1) Social Impact

There are various levels and manifestations of the negative social impact arising from the coal mine project.

First, there are the negative impacts experienced to date. The uncertainty relating to the financial value of the land directly affected has given rise to stress on the part of the landowners. Then there is the uncertainty and consequential stress experienced by those in the community who are aware of the likely negative impact on the environment and their enjoyment of it.

Secondly, there is the enormous trauma suffered by those who have been made victims of Hume Coal's aggressive approach to its survey and preparatory work. This is exemplified by the legal action taken against the landowners who refused entry onto their property. Hume Coal sought and obtained costs against the landowners, which threatened to bankrupt them. It was only the concerted efforts of community fund-raisers that ensured that the judgment debt regarding costs would be met. We understand that Hume Coal has now issued letters of demand for hundreds of thousands of dollars to two prominent community activists in the battle against Hume, further evidence of the personal nature of their tactics.

Thirdly, there is the perceived impact on freedom of speech. The local newspaper, Southern Highlands News, in the name of a "right of reply" by Hume Coal, has given what is perceived to be limited coverage of the case against Hume Coal. There is a feeling that this is because of the large sums spent by Hume Coal on advertisements in the newspaper.

Fourthly, there is the negative social impact if the mine is approved. Dozens of businesses reliant on the attractiveness of the rural landscape will be negatively impacted, and the social consequences of the loss of income will be considerable. Those in the community who are concerned with a clean environment and protection of our heritage will be devastated if the mine is approved. Recent community involvement in the preparation of the local planning strategy and community strategic plan indicates that the majority of those surveyed placed great emphasis on protecting our environment and heritage. To witness these being severely compromised will give rise to widespread community distress.

(2) Climate Change

Climate change is relevant to the EIS on 3 fronts:

a. Wingecarribee Shire Council policy

As indicated above, the PAC is required to take into account Council strategic plans and policies. Wingecarribee Shire Council has made it clear that it does not want the coal mine. Its draft community strategic plan (adopted by Council on 14 June 2017) addressed climate change on page 27:

4.4 Wingecarribee addresses, adapts, and builds resilience to climate change

(<http://www.yoursaywingecarribee.com.au/26652/documents/54843>)

The mine output is expected to consist of 45% thermal coal. This will contribute unnecessarily to climate change. It is estimated that the thermal coal to be extracted will of itself lead to an additional discharge of 54.35 million tonnes of CO² into the atmosphere. The remaining 55% of output that is metallurgical coal will produce a slightly diminished percentage, but still significant volume, of additional CO² into the atmosphere.

b. Finance and Commercial Risk

In the past Hume Coal has placed great emphasis on the fact that the mine will produce metallurgical coal. However, it is now clear that the mine output will consist of only 55% metallurgical coal, with the remaining 45% of output being thermal coal.

In light of the recent Westpac decision not to offer finance for the Adani mine in Queensland, because of its impact on climate change, a serious financial risk arises in respect of the source of financing for the Hume Coal mine.

c. Social and Environmental Responsibility

It is Greens policy to oppose new coal mines. This is particularly so with respect to coal destined for power generation, because of the proven impact on climate change of the increased release of CO² into the atmosphere. This proposed mine, if it proceeds, will inevitably add CO² to the atmosphere, both through its operation and much more so through the thermal coal it produces.

(3) Water

Until 2012 groundwater protection was governed by the 1998 NSW Groundwater Quality Protection Policy.

(www.water.nsw.gov.au/__data/assets/.../nsw_state_groundwater_quality_policy.pdf)

In 2012 the NSW government promulgated its Aquifer Interference Policy.

(www.water.nsw.gov.au › Water management › Law and policy › Key policies).

The wording of the Aquifer Interference Policy indicates that the licence requirements cover not only water extracted from the aquifer, but also water put back in. Hume Coal is proposing the return of water as a mitigating factor, whereas the opposite is the case, with the two volumes being cumulative (see below).

The relevant wording is:

A water licence is required under the Water Management Act 2000 (unless an exemption applies or water is being taken under a basic landholder right) where any act by a person carrying out an aquifer interference activity causes:

- ***the removal of water from a water source; or***
- ***the movement of water from one part of an aquifer to another part of an aquifer; or***
- ***the movement of water from one water source to another water source, such as:***
 - from an aquifer to an adjacent aquifer; or***

- from an aquifer to a river/lake; or

- from a river/lake to an aquifer.

A water licence is required whether water is taken for consumptive use or whether it is taken incidentally by the aquifer interference activity. For example, dewatering of groundwater during building construction and groundwater filling and evaporating from a void post-activity requires a water licence (unless an exemption applies) even where that water is not being used consumptively as part of the activity's operation.

The calculation of the volume of these two different types of interference is cumulative. In other words, the water pumped back in (moved from one part of the aquifer to another part of an aquifer) is added to the water initially extracted as dewatering from the aquifer above the coal. Hume Coal does not have sufficient licences to cover this amount of water.

The Hume Coal EIS also indicates that the company will mix water extracted from the aquifer with wastes from the cleaning process (see next paragraph), and pump this toxic mix back into the voids created by the proposed pine feather technique for coal extraction. These voids are to be sealed with concrete as a means of avoiding contamination of the aquifer. However, this is an unproven technique, and therefore carries a high risk of leakage. If this experimental technique fails, there will be massive environmental damage in perpetuity.

In addition, the area, geologically, has many fault lines crossing the coal seam and the aquifer, which add to the risk of leakages and contamination of the aquifer. The geology of the area concerned is far more complicated than the Hume Coal EIS appears to admit.

In a recent paper prepared and presented by 2 Hume Coal geologists at a Wollongong University forum (ro.uow.edu.au/cgi/viewcontent.cgi?article=2301&context=coal), they state that the drill holes do not give a complete picture, because of the court case supporting landowners rights to exclude the company from their land i.e. the company was not able to complete its exploration:

Coal Operators Conference The University of Wollongong (8-10 February 2017)

EXPLORATION ACTIVITIES AND RESULTS

*There are 167 historic holes drilled in the A349 area. These holes were drilled in the 1970's. In addition Hume Coal has drilled 179 exploration and water piezometer holes. This combines to a total of 346 holes, in an area of about 89 square km. On average this represents about 4 holes per square kilometre or holes with a radius of influence of about 300 m, in other words a reasonably well drilled out resource on a well-known coal seam. However, some areas have a lack of holes and others are drilled at closer spacing than the above. **This tends to reflect the difficulty in obtaining land access with current landowners.***

The difficulty in obtaining land access reflects the strong opposition from the landowners who will be directly affected by the mine, as well as the broader community who rallied together to pay the legal fees to defend suits brought by Hume Coal to obtain access

We understand that Hume proposes extracting saline water from the aquifer below the coal seam to wash the coal. It is salty water mixed with toxic rubbish from the washing process that will be pumped back into the voids. The level of contamination if the voids leak is, therefore, very high.

The extent of the risk is indicated by the closed Medway coal mine, where remediation has been found to be impossible. As a result, toxic waste flowing into the river and unsustainable drainage of the aquifer is now a problem in perpetuity. This is borne out by the Wingecarribee Shire Council's submission, which notes that the aquifer is now no longer sustainable in the long term, because the continuing outflows from the closed mine tip the balance against sustainability. This continuing contamination and unsustainable draining of the aquifer has a direct and negative impact on Sydney's water supply through the river system as well on the emergency supplies contained in the aquifer. Hume Coal's proposal to pump toxic waste into the aquifer to fill the voids increases the risk of contamination of Sydney's water supply even further.

(4) Noise and Dust

Noise

The head of the mine, together with the 117 hectares of land used for handling, storage, and shipping of the coal is located within the vicinity of Koala habitat, as well as habitat for a wide range of native animals. This proximity is exacerbated by the direction of the prevailing winds, that will carry the noise in the direction of the river and large tracts of pristine bushland.

The operation of the mine and the processing plants will be 24 hours a day, seven days a week.

In addition to the native species affected, local inhabitants will be disturbed, especially the heritage village of Berrima. Berrima is a heritage village of recognised State and national significance, which draws a disproportionate percentage of tourists to the Highlands, as well as tourists from within the Highlands. The noise will diminish the amenity of the village, and have a consequential economic impact on the village and, as a result, on the Shire.

As well as the noise from the above ground operations, there will also be noise rising up from the underground operations. Hume's assumption that noise is only a factor above ground also ignores the distance that noise and vibration carry underground. Thus, properties which are a considerable distance from the underground activities will still suffer from the noise and vibrations emanating underground. This will have a significant impact on the amenity of the dwellings at ground level.

Of particular concern is the impact of noise on the notable equestrian activities and events held regularly in close proximity to the proposed Hume Coal industrial site. These events bring many high revenue visitors to the Shire. This is also a major training centre for Australia's Olympic Equestrian Team. These equestrian facilities were recognised as "significant improvements" to the land in the access suits brought by Hume Coal against the landowners.

Dust

The Hume Coal proposal assumes that the prevailing wind will have minimal impact on dust levels around the mine and its storage and processing areas. However, the wind measurements used in support of this position are defective, in so far as they are averages and do not measure the carrying capacity of the winds when they are at their maximum levels.

Also, the measurements have been taken in the mornings, when wind speeds generally are at their lowest.

The monitors used to measure the dust levels (particulate matter, “pm”) rely to a large extent on the dust monitors at the Boral Cement Works. These, however, only measure pm10, not the smaller more dangerous pm2.5. The latter are far more carcinogenic, as they penetrate the lungs far more deeply.

It should be noted that the prevailing winds are from the South and Southwest. As noted at the time of the approvals for the Boral cement kilns, this sends any emissions in a plume toward Moss Vale, Burradoo and Bowral. According to the Hume Coal EIS there will be multiple separate stockpiles for the differing grades of coal and spoil from the mine, as well as conveyor transport over a long distance for these materials. With Boral, there was testing of emissions by a company employed by Boral and as it turned out that company manipulated the figures to pass the ‘standards’. With the rosy gloss put on the measurements cited in the Hume Coal EIS, doubts must be raised as to their accuracy and relevance.

Hume Coal assures our community that the wagons will be covered:

2.3.4 Covering rail wagons: Rail wagons to transport product coal will be covered, thereby reducing the potential for dust emissions during transport. Hume Coal will be the first coal mining company in Australia to do this. (Hume Coal EIS Volume 1, page 17)

The reason Hume Coal will be the first to do this is because it is very expensive, and given the low coal recovery rate and the high costs of production for this proposed mine, it is another reason for concluding that the mine will be uneconomic. The statements in the Hume Coal EIS are vague assurances and are not backed up by measures to ensure that these assurances will be met.

The reliance on trust raised by the EIS is highly questionable and our community has little confidence or trust in Hume Coal because of their aggressive tactics against opponents and POSCO’s international reputation for environmental vandalism and steamrolling over local opposition.

(5) Biodiversity

The site will emit considerable noise and dust, notwithstanding the overly optimistic projections of the mining company. These will seriously disturb the native fauna and flora, and as such impose an unacceptable environmental cost. The risk of this is increased when consideration is given to the assumptions made by the company regarding wind velocity. The wind measurements are only on an average basis, and do not provide for maximums. It is the maximums and their frequency that are important when considering the likely impact. This faulty methodology alone substantially increases the environmental risk.

The site of the above ground infrastructure is in a particularly sensitive location, being in close proximity to the Wingecarribee River, the Belanglo State Forest, koala habitat and nearby properties acting as private nature reserves (e.g. Wendy and Mark Alexander’s property on the other side of Medway Road).

The biodiversity study in the Hume Coal EIS is cursory and totally inadequate. This is evidenced by the failure to recognize the importance of the Koala communities in the Shire,

one of which is in close proximity to the infrastructure site. The significance of the local Koala communities is borne out by Wingecarribee Shire Council's Koala Study. The Koala project has received strong volunteer support in the community. The clearing of significant trees increases the risk to Koalas moving through the bushland corridors in the vicinity of the proposed mine infrastructure site.

(6) Transport

Impact of rail: There will be significant delays 8 times a day at railway crossings. This is particularly serious in the event of a medical or other emergency, when emergency vehicles will be unable to cross the railway. Robertson will be particularly impacted in this regard.

Impact of diesel trucks: The use of large numbers of diesel trucks during the construction phase will give rise to noise, dust and toxic pollution, as well as considerable CO² emissions. This will continue into the operation phase, as diesel trucks will be used for moving supplies to, from and around the site, as well as for carting limestone to mix with the slurry to fill the voids in the mine. Again this will give rise to noise, dust, and toxic pollution, in addition to considerable CO² emissions.

(7) Tourism/Economy

The Highlands are a rural escape for Sydney's population. Its rural landscape is a major attraction, giving rise to demand for retail sales, accommodation and events (weddings etc). Council policy is to maintain the rural landscape. Sutton Forest and Berrima in particular have extremely high heritage significance (see heading 8 below). The industrial complex alongside the freeway and between the freeway and the Old Hume Highway would be the overriding image of the landscape, which is contrary to all the local planning laws. There has never been a coal mine of this magnitude and visibility in the Highlands before.

To expand on the growing importance of the Southern Highlands to Sydney, it should be noted that the NSW Department of Planning forecasts that Sydney will grow to 9.9 million people by 2036 (which is within the expected life of the proposed coal mine).

<http://www.planning.nsw.gov.au/Research-and-Demography/Demography/Population-Projections>

A large proportion of this population will need to be housed in apartments, giving rise to a massive demand for green recreational space within a short drive of Sydney. The Southern Highlands is 45 minutes drive from Campbelltown and 1 hour 20 minutes drive from the Sydney City Centre. The economic opportunities made available to the Highlands to meet this demand will far outweigh any short term economic benefit from the coal mine and its touted employment of 300 people. These visitors will be seeking to enjoy the rural landscape, not an industrial complex overshadowing it.

(8) Heritage

A heritage study has been undertaken by Colleen Morris, a nationally recognised heritage expert. This was financed by Battle for Berrima and Sustainable Southern Highlands Inc. The study is extensive and comprehensive, and lists all the heritage properties in the Sutton Forest landscape, which are far in excess of the items listed by the Hume Coal EIS. There are

in fact 21 items listed on the State Heritage Register within the study area. The EIS, on the other hand, states that 8 heritage properties will be affected, but that these are only of “local significance”.

The Hume EIS contains a very cursory section on the heritage impact of the mine. It makes no mention of Berrima at all. It lists a number of listed heritage items in the Sutton Forest landscape, but not all that are listed on the State Register. As noted above, it states that the items listed are only of “local” significance, notwithstanding that they are listed on the State Register and as such are of State significance. This displays an appalling ignorance of the State legislation governing heritage protection. These omissions are predicated on the fact that the heritage items omitted are “outside the project area”, which completely denies that there can be any impact on them. Again, this is a spurious assumption.

The most notable of the missing items is the farm and buildings at “Oldbury”, perhaps the most heritage significant item in the Shire. As indicated above, it appears that the items not listed or discussed were omitted because the underground mine plan skirts around them, as is the case with Oldbury (and, similarly, Nicole Kidman and Keith Urban’s property). This assumes there will be no drawdown of the aquifer unless the underground mine is directly underneath, which is a nonsense assumption. It assumes that the subterranean noise will not be transmitted other than directly vertical, also a nonsense assumption.

In addition to the impact on ground water and of subterranean noise, there will be subsidence, with resulting structural damage to many of the early settlement and convict built farmhouses. The project area is riven with geological faults and the fact that the mine is not directly underneath the heritage item will not avoid earth tremors and other kick-on effects causing structural damage to the items.

The heritage study prepared by Colleen Morris also examines the heritage significance of Berrima, and recognizes it as possibly the most heritage significant village in the State, if not the country. Attached is the Heritage Impact Statement, also prepared by Colleen Morris and based on her heritage study.

Berrima has its original pre-industrial early colonial town plan intact, with all of the Colonial Georgian buildings still in existence.

Between 1829 and 1842 a total of 53 new towns and villages were planned for NSW. Governor Darling determined that if there were to be towns in the interior to serve the rural community they must be planned and their layout controlled.

People had begun moving out of the Sydney area earlier than 1829, but their emphasis had been on obtaining grants of land for farming or raising cattle or sheep. Inns alongside the tracks, particularly at river crossings, were often the nucleus for small communities, but towns were largely limited to the coast, such as Newcastle and Port Macquarie, or heads of river navigation such as Parramatta and Maitland. After consultations a General order was issued on 27 May 1829 that determined what those 53 towns, including Berrima, would look like.

Of the 53 planned towns from that period, all but Berrima have been absorbed into Sydney or become regional cities. Berrima alone has remained a small village that never grew beyond its early colonial nucleus. This makes it a heritage village of State and national significance. It also meets the criteria for UNESCO World Heritage listing, as the village is an excellent example and surviving relic of the successful integration of convicts into the local population (see below). There are presently 11 UNESCO World Heritage Sites in Australia based on the

period of “Convictism”, which formed part of a world-wide phenomenon of forced emigration. None of these to date represent the second stage of Convictism, the successful integration of convicts into the local population, which Berrima represents.

The town plan was prepared by Hoddle, who a few years later prepared the town plan for Melbourne. Its 1839 gaol and 1839 Courthouse (where the colony’s first jury trial took place) are indications of the future proposed for Berrima as the County capital. The fact that its population never grew beyond 500 people in the 19th century and has since grown very little (it is now 600) indicates how it became frozen in time.

Its history is heavily embedded with the convict period, regarded by UNESCO as part of a world significant period of forced emigration. The 1841 census has details of the 36 households recorded at the time. 20 of the 36 households included one or more convicts still serving time (on assignment), as well as convicts on tickets of leave or with conditional pardons.

The two churches are of very high heritage significance, with the Anglican Church being the first Blackett designed church to be built. The Catholic Church is the most intact Pugin designed church in Australia. Pugin never came to Australia, but was commissioned by the NSW Catholic archbishop to prepare a number of plans for churches in the colony. Pugin is the “father” of the gothic revival style of architecture (he designed the British House of Parliament interiors), a style admired and taken up by Blackett in Australia. Hence the two churches have an architectural connection as well as an historical link in the village.

To ignore this heritage gem which will be directly impacted by the coal mine and its workings is contemptuous of the people in the village, and of Australia’s cultural heritage.

The Southern Highlands Greens support and endorse the Heritage Study for the Berrima, Sutton Forest and Exeter area cultural landscape, prepared by Colleen Morris, and funded by Battle for Berrima and Sustainable Southern Highlands Inc.

(9) Rehabilitation of the Site

This raises 3 further elements of risk, namely, financial, environmental and heritage.

Financial Risk of Rehabilitation

The EIS states:

Around 50 million tonnes (Mt) of run-of-mine coal will be extracted from the Wongawilli Seam, resulting in approximately 39 Mt of saleable coal over a project life of 23 years. The product split will be about 55% metallurgical coal and 45% thermal coal.

Given the protracted period of the mine it is not known what the final impact will be on the site of the surface infrastructure. At present it is significant and productive farmland, that forms part of an historic landscape (dealt with below, Heritage Risk). However, the surface infrastructure is expected to occupy 117 hectares, with a planned stockpile extending 800 metres and 6 storeys high, large reserves of polluted water and extensive handling infrastructure (both rail and road) as well as processing plants, the remediation effort and expense will be enormous.

What is not highlighted in the EIS is the large dump of tailings, that is likely to be enormous, given the delay between extraction and processing of the tailings and pumping them back into the voids as a toxic slurry.

On 11 May 2017, the NSW Auditor General released its *Mining Rehabilitation Security Deposits Report*, a report on the financial risk to the NSW Government of remediation. It concluded that the security deposits were inadequate to protect the government.

This issue, therefore, raises a serious question regarding the financial risk of the project to both the community and the State and local governments.

Environmental Risk

How can remediation undo the environmental damage done ? If the fauna has fled the nearby habitats and the flora is permanently damaged it is not possible to restore the environment to its earlier undisturbed state.

There is also the issue of the private nature reserves on nearby properties. In 23 years time the people who have invested enormous financial and emotional resources are likely to have given up, died or moved on. Their lifetime commitment to nature conservation may well be undermined. The coal mine will be destructive at so many levels, with a low potential for financial feasibility.

Risk to the State's Heritage

The site of the surface infrastructure is on the land forming part of the historical property of Mereworth. This farmland is entirely rural at present, and represents an important part of the cultural landscape evocative of the early colonial settlement in the period of convictism in Australia. In contrast to the dismissive statements about Mereworth's heritage significance, the advertisements for the sale of the property (just prior to Hume Coal buying it) emphasize the property's heritage significance. This largely reflects the company's ignorance about cultural landscapes.

It is questionable as to whether this intact rural landscape could ever be returned to its undisturbed heritage significant state. It will certainly not be the case for the land between the freeway and the Old Hume Highway, as it is highly unlikely that the industrial scale bridge over the Old Hume Highway will be removed. This is also likely to be the case for the very long and high embankment on either side of the bridge.