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Content:

The submission from the Berrima Residents Association is lodged here as Attachment 1. Three attachments referred to in the Submission will be included here as Attachments 2, 3 and 4.

Other attachments referred to in the Submission will be lodged separately due to their file size.

One document accompanying this Submission will be lodged by Dropbox to the following email address:

[paul.freeman@planning.nsw.gov.au](mailto:paul.freeman@planning.nsw.gov.au); this document is entitled 01\_FINAL Berrima Sutton Forest and Exeter Cultural Landscape Study June 2017.pdf

IP Address: cpe-121-218-39-178.inse4.ken.bigpond.net.au - 121.218.39.178

Submission: Online Submission from company Berrima Residents Association Inc (org\_object)

[https://majorprojects.accelo.com/?action=view\\_activity&id=214104](https://majorprojects.accelo.com/?action=view_activity&id=214104)

Submission for Job: #7172 Hume Coal Project

[https://majorprojects.accelo.com/?action=view\\_job&id=7172](https://majorprojects.accelo.com/?action=view_job&id=7172)

Site: #3137 Hume Coal Mine

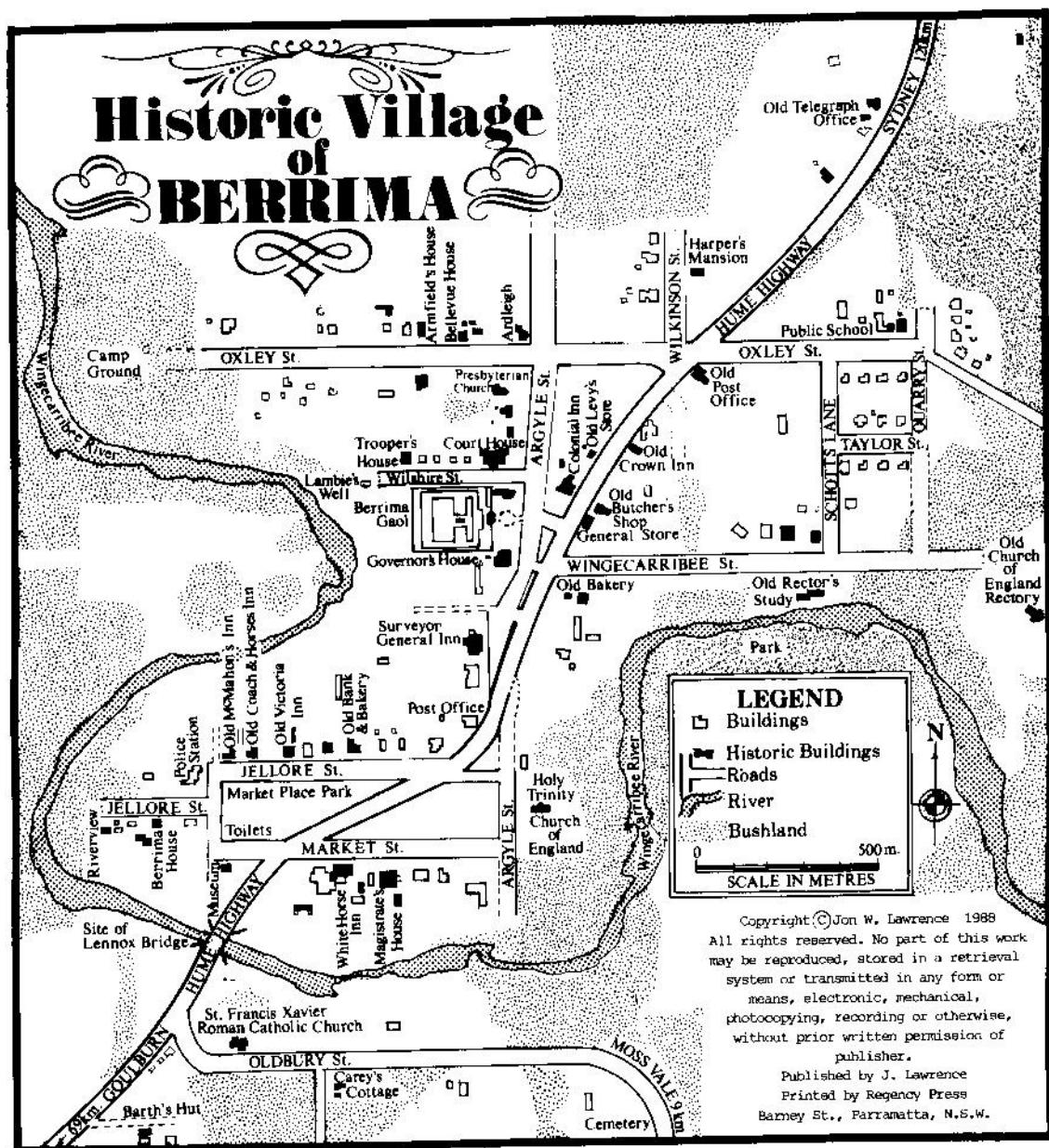
[https://majorprojects.accelo.com/?action=view\\_site&id=3137](https://majorprojects.accelo.com/?action=view_site&id=3137)

# **BERRIMA RESIDENTS ASSOCIATION Inc**

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## **Submission by the Berrima Residents Association Hume Coal EIS June 2017**



# **Submission by the Berrima Residents Association**

## **Hume Coal EIS**

### **June 2017**

**The Berrima Residents Association** strongly objects to the mine proposal by Hume Coal as set out in the EIS currently on exhibition and asks that the Hume Coal Project not be approved.

#### Background - Berrima Residents Association

The Berrima Residents Association (BRA) was formed in 1983 to provide a village forum to discuss issues affecting the Berrima community and to represent residents to government in planning and associated administrative matters. Members meet monthly in the church hall; non-members are welcome to also attend these public meetings. An executive Committee is elected at the AGM. The Association is an incorporated body in NSW and is managed by a constitution registered with the NSW Department of Fair Trading.

**This submission on the EIS is divided into 6 sections. For completeness, comments on the Berrima Rail Project are included, although the submission was lodged separately.**

1. Almost complete absence of assessment in the EIS of the impacts of the mine proposal on Berrima, its residents and its local business community
2. Inadequate consultation by Hume Coal with the Berrima community
3. Direct impacts of the mining proposal on the village from noise, dust, light pollution, groundwater drawdown and bores, groundwater contamination, bushfire risk, and traffic;
4. Adverse heritage and visual impacts and the associated commercial risks to local businesses that depend on tourism for their livelihood;
5. Cumulative risks to the community from the project due to: unique local geology; lack of detailed geological information; inadequate assessment of groundwater impacts; unproven mining method; and uncertain future demand for steel, metallurgical coal and prices.
6. Adverse impacts from the Berrima Rail Project;

# **1. Almost complete absence of any assessment in the EIS of the impacts of the mine proposal on Berrima**

The Association draws the Department's attention to the almost complete absence of any reference to Berrima in the EIS, whether in relation to:

- the EIS describes the mine as being located 7.2 kms from Moss Vale, but omits to say that the proposed rail loop is actually 2 kms from the southern boundary of the Berrima Heritage Conservation Area (BHCA), which is a listed heritage item on the NSW State Heritage Inventory
- the proposed railway bridge over the Old Hume Highway is just 1250m from the southern boundary of the BHCA
- the rail maintenance siding and associated infrastructure between the Hume Highway and the Old Hume Highway is immediately adjacent to the Berrima Landscape Conservation Area (BLCA), which is also a listed heritage item on the NSW State heritage Inventory. This industrial maintenance facility, designed to operate 24 hours a day, is on land proposed to be included in the BLCA (Wingecarribee Shire Council, Local Planning Strategy, Berrima Village Precinct Plan, March 2016)
- the statement in the EIS that Berrima is '4 kms' from the mine is designed to mislead the reader
  - see Vol 1, p. 95. s. 5.1 Project location and character
- the EIS omits to mention that Berrima attracts over 200,000 visitors a year. Agricultural land uses are mentioned but the economically significant tourism and related service industries in Berrima (accommodation, cafes, museums) are omitted from the description of "character".
- Photograph 5.1 to 5.4 (p.95) purports to illustrate 'character of the project area, include an image of the Berrima Cement Works, but not Berrima village
- the narrow definition of heritage impacts in the EIS excludes impacts on landscape values (including on *Berrima Landscape Conservation Area and surrounds*) and on 16 items of State Heritage significance (in the *Berrima Heritage Conservation Area*)
  - see Vol 1, p. 63. s. 3.4.2 Heritage Act 1977



- Berrima is not mentioned in the discussion of local history (see Historical context – Exploration and early settlement; Vol 1, p. 548. s. 22). The historical review presented suggests that nothing happened in the district between land grants around 1819 and the coming of the railway in the 1860s. This is a completely misleading report of the actual historical development of the area.
- The impression given to the reader is that the historical development and resulting cultural landscape is of no significance. This false impression is further compounded by the juxtaposition of a long text on the history of mining, which itself exaggerates the importance of the minor coal mining operations in the 19<sup>th</sup> century and omits the fact that the small Medway mine was closed due to concern over pollution of the Wingecarribee River, part of the Sydney water catchment.
- the Berrima Residents Association was never consulted by Hume Coal concerning the project, contradicting assertions made in the EIS, which state that stakeholders, including “*special interest groups, cultural heritage groups ...and not-for-profit organisations*” were identified and consulted.
  - Hume Coal was aware of the existence of the Residents Association because the Association wrote to the GM of POSCO in Korea in late 2015
- Despite claims that Hume Coal provided “project briefings to interested stakeholder groups” and “issued formal letters to community members”, no such communications were received by the Residents Association.
  - see Vol 1, p. 78, 79, s. 4.4. Stakeholder engagement process
  - If these claims are taken at face value then the omission to exclude the Berrima community from the consultation process must have been a deliberate decision
  - An information session was held in New Berrima (6 August 2016); no session was held in Berrima
    - See Vol 1, p. 85
- Noise assessments include those for New Berrima, but not Berrima, even though similar distances from noise sources and wind directions suggest that an assessment should be presented
  - See Table 11.4, Vol 1, p. 289. “Noise catchment areas”
  - This section does not include a discussion of the cumulative impacts on Berrima from rail movements on the proposed elevated rail overpass over the Old Hume Highway, with other rail and surface mine

operation noise and noise from traffic traveling on the Hume Highway and the Berrima Cement Works. The new rail overpass on the Old Hume Highway is located 2 km south of Berrima village on an elevated plateau about 100 higher than Berrima Village. The prevailing winds are such that noise and dust are likely to be directed toward the village located at a lower elevation on the Wingecarribee River.

- Assessment of economic benefit (see Vol 1, s.19, p 453) excludes impacts on tourism, which is the mainstay of business in Berrima. The visual impact of a large scale industrial enterprise on the experience of visitors attracted to an historic village can be expected to be negative and felt most locally. Accordingly, estimates of net economic benefit from the mine need to be discounted.
- The list of heritage items presented in Table 2.2 in Vol 10, Appendix T (Statement of Heritage Impact), p18 is misleading as only 8 items of State significance in Berrima are shown, when in fact there are 16 items of State significance located in Berrima; incredibly, Berrima Correctional Centre is not included in the table. Is this sloppy research or an attempt to downplay Berrima heritage significance?

The above list of places in the EIS is not an exhaustive list of places but is indicative of where, in the EIS, any reasonable person would expect the fact of Berrima's existence would, at least be acknowledged, and an assessment of the impact on Berrima would be presented.

Berrima is located about 4 kilometers NE of the proposed surface infrastructure for the mine, which includes administration buildings servicing 414 employees in construction, and 300 full-time equivalent employees during operations; access roads; staff service buildings; overland conveyors; coal washery; coal stockpiles; coal reject handling facilities and stockpiles, surface groundwater facilities and rail load-out facilities, including an extensive rail-loop and rail maintenance yards.

It is not as if Berrima is an insignificant place or hard to find. Over 200,000 people visit Berrima every year from within Australia and overseas, attracted by Berrima's unique heritage and natural setting. Berrima is a key factor attracting tourists to the Highlands, not only from within NSW, but also from inter-state.

Berrima's national heritage significance is widely recognised. Founded in 1831, Berrima is the only settlement surviving virtually intact from the colonial Georgian period in Australia. Other colonial towns like Campbelltown and Windsor in NSW, and Richmond and Evandale in Tasmania, continued to develop, while Berrima remained frozen in time.

The imposition of a major industrial enterprise on the landscape just a few kilometers from the village, and through which tourist must pass to visit Berrima, threatens this unique heritage and demands that the EIS present a comprehensive and honest assessment of the impacts of the mine proposal. In this Hume Coal and the EIS fail.

The Association contends that avoiding any discussion of Berrima in the EIS is not an oversight on the part of Hume Coal but is deliberate policy to minimise the importance of Berrima in the EIS with the clear intention to mislead by avoiding any discussion or assessment of the impacts of the mine proposal on Berrima, its heritage significance, the amenity of residents and the risks to the livelihoods of its local businesses.

Accordingly, the Association contends that the *bona fides* of the company are compromised and the EIS significantly misleads the reader into concluding that local impacts are not significant, when the opposite is the case.

Inevitably, this raises questions as to what other parts of the EIS are misleading and deceptive, and raises doubts about the validity of the company's claims that the mine will have minimal adverse environmental, economic, heritage and social impacts on Berrima in particular, Sutton Forest and the Southern Highlands more broadly.

## **2. Inadequate consultation by Hume Coal with the Berrima Community**

Hume Coal refused our offer of June 2016 to hold a public meeting in Berrima, in which the company could present its case in favour of mining. This is despite saying in its letter of February 2016 to the Association that:

*“POSCO...looks forward to working with yourself and other residents of Berrima to resolve any outstanding issues as the project progresses through the statutory approval process.”*

Although Hume Coal opened an office in Berrima in May 2016, this did not lead to consultations with our community. In our view, the office was an empty gesture designed to present the appearance of consultation while actually avoiding dialogue.

The Association wrote to Hume Coal on 3 June 2016 in the following terms:

*“We appreciate that you would prefer to proceed to mining with the support of the community. Accordingly, to enable your company the opportunity to put its case to our community, we invite representatives of Hume Coal to participate in a public meeting in Berrima, at a mutually agreed time and date, where a panel of experts representing both sides of the issue can present the arguments in favour of, and opposed to, the Hume Coal Project, followed by time for questions from the audience.”*

Previously, the Berrima Residents Association had written to the CEO of POSCO Dr. Oh-Joon Kwon in South Korea on the 4 December 2015 to express our concern over the proposed export coal mine. In particular, we stressed the close proximity of the mine to the historical village of Berrima; the impact of an export coal mine on the landscape; fears over loss of groundwater and pointed out that an alternative to constructing a *greenfields* mine in such a sensitive area would be to purchase an ongoing concern, that was either in-operation or closing due to current adverse market conditions.

Copies of the relevant correspondence **are attached** to this submission:

- **BRA Letter to POSCO Dec 2015; POSCO Letter to BRA Feb 2016;**
- **BRA letter to POSCO Sydney June 2016**

In our view, the company’s decision not to engage with the Berrima community in a meaningful way, and to deny us any open public debate of the impacts of the mine on Berrima in the EIS, reflects Hume Coal’s assessment that the adverse impacts of the mine plan on Berrima are significant and if they were brought into clear view, the chance that the project would be approved, would be diminished.

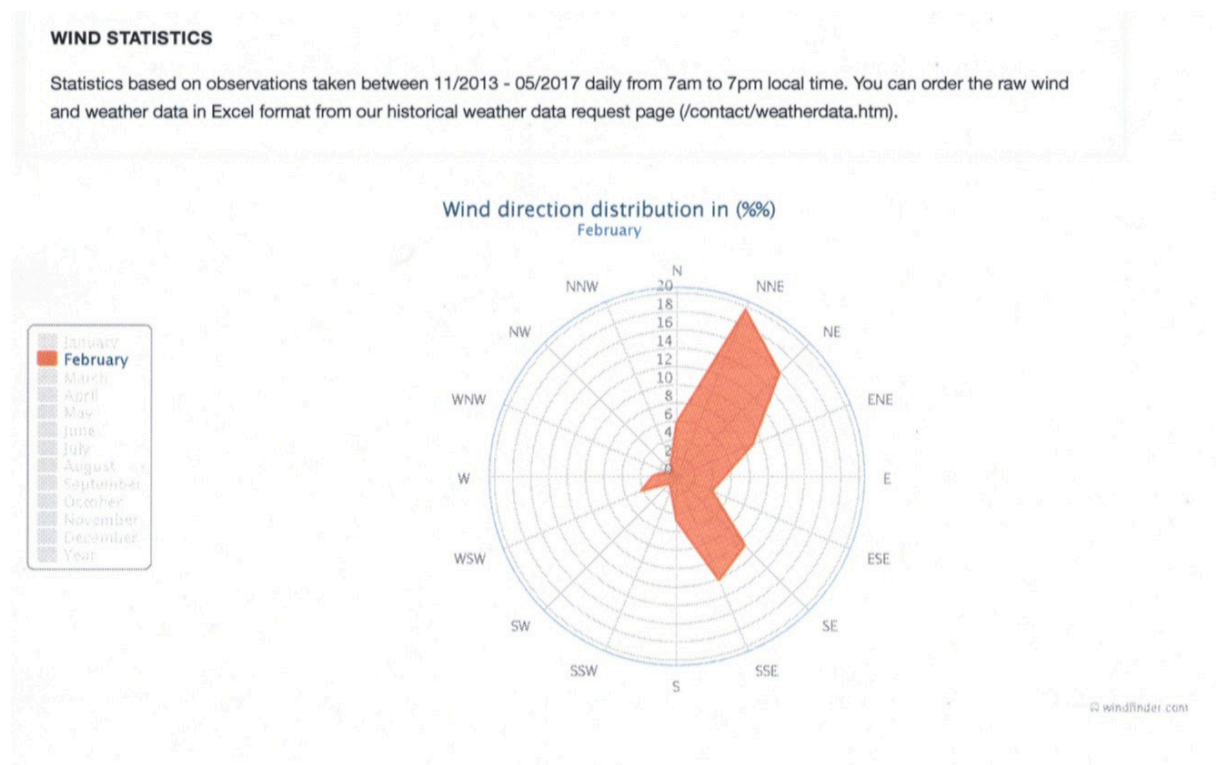
We consider that the company’s presentation of the project, in so far as Berrima is concerned, is disingenuous and misleading.

### 3. Direct impacts on Berrima from noise, dust, light pollution, groundwater drawdown and bores, groundwater contamination, bushfire risk, and traffic

#### 3. a. Weather data used for modeling noise and dust impacts is problematic

Modeling the impact on residents of dust and noise depends in part on meteorological data. Data was collected by Hume Coal from two weather stations, but only data from one station (the southern station), and only for one year (2013) is presented in the EIS.

- The wind speed and direction data presented in Table 11.5 is unrecognisable to any Berrima or New Berrima resident.
  - Official meteorological data for Moss Vale shows that for most of the year - September to March, (including the hot summers months), winds blow strongly to the NE (see [www.windfinder.com/Moss Vale NSW](http://www.windfinder.com/Moss Vale NSW))
    - i.e. in a direct line from the site of the proposed coal stockpiles and rail loop toward Berrima and New Berrima
    - as a result, Berrima and New Berrima lie directly in the path of wind borne noise and dust, and any fire, during this hot summer period



- Hume Coal's southern station is located near the Illawarra Highway and is quite remote from the two populations centres (Berrima and New Berrima), which are most impacted by noise and dust.
  - Accordingly, the assessments presented in the EIS of impacts of noise (and dust) on these residents should be discounted
  - **Hume Coal should be required to use official local meteorological data in its modeling of noise, dust and fire impacts, and be required to:**
    - **re-assess the noise and dust impacts on Berrima and New Berrima residents**
    - **undertake a risk assessment of the bushfire risk from the coal stockpiles under 'catastrophic' fire conditions, which have occurred in the Berrima area twice in the past two years**

### 3. b Noise

Noise impacts are presented in the EIS Vol 1 Main Report, pp 283-314.

Background noise monitoring and assessment in the EIS is inadequate and unrepresentative for residents of Berrima because:

- no station was installed in Berrima ( see Fig 11.2, p.290).
- no station was installed on the Old Hume Highway, near the proposed rail maintenance siding, south of the Medway Road round-about
- the only weather station near local centres of population centres, Station BG-5, is located in bushland to the east of New Berrima. This location would not pick up background from traffic on the:
  - Old Hume Highway passing through Berrima
  - Noise from grinding at the Boral cement works heard in Berrima
- The strategic decision by Hume Coal to locate the BG-5 station in such a remote location means that estimates of the cumulative impacts of noise on residents from the Project, including from the rail transport and siding operations, will be underestimated
  - Accordingly, estimates of the number of properties expected to experience noise impacts is underestimated and unreliable

The EIS claims that noise from the rail maintenance facility would not lead to increased noise impacts (s. 11.4.5, p. 306, despite operating 24 hours a day).

However, no assessment is presented of the noise impacts from trains traversing the proposed elevated bridge over the Old Hume Highway, which one would expect to have significant noise impact on residents living just 1250 metres away, given the height of the rail bridge above the road, and the length of the coal train.

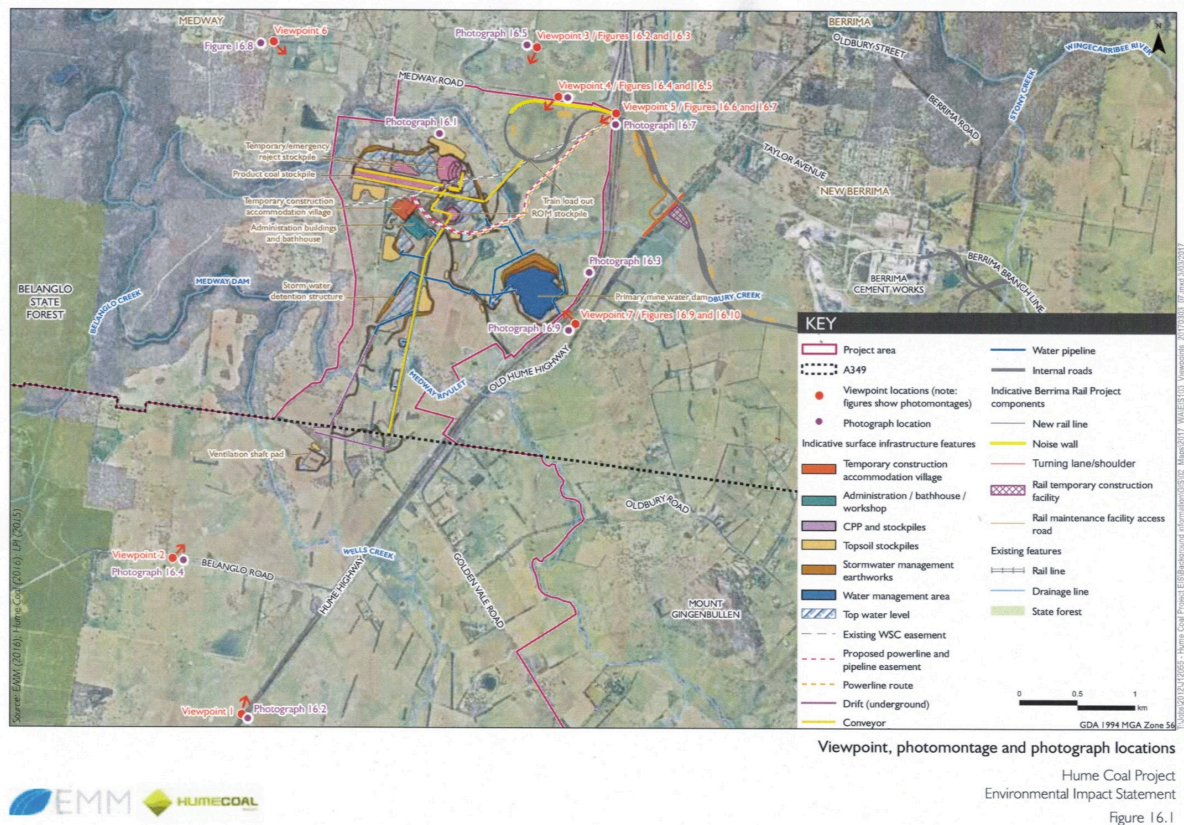
- Hume Coal should be required to model impacts on residents from this noise source
  - It should be noted that the Berrima Residents Association has asked the Department of Planning to relocate the maintenance siding to the west side of the Hume Highway (See BRA submission of the Rail Project EIS)
    - Relocating the facility would avoid noise, light, dust and heritage impacts
- Noise from helicopters moving back and forth to the proposed heli-pad are an additional source of noise pollution; this requires a separate impact assessment.

### **3. c   Dust**

The major sources of coal dust pollution is from:

- the 2.2km covered overland conveyor from the drift portal to the ROM coal stockpile
- the ROM coal stockpile, next to the Coal Preparation Plant (CPP) with a capacity of 60,000t
- 2 separate temporary/emergency rejects stockpiles
- 2 washed coal stockpiles with approximate total capacity of 300,000t and up to 20m high; one for metallurgical coal and one for thermal coal
- conveyors transporting washed product from the stockpile to the train load-out bin, which will be partially enclosed
- coal in train wagons, intended to be covered (Vol 1, s.2.3.4, p17)

The location of these facilities is shown in Figure 16.1 below, taken from the EIS Vol 1, p. 398.



The section describing the washed product stockpile (s.2.8 in the EIS Vol 1, p.30) does not provide information on its physical dimensions of the product stockpile. However, Table 16.4 (Vol 1, p.400) notes that the stacker will be up to 20m high.

Based on the scale on the Figure, it is estimated that this stockpile is about 800m long.

Table 12.14 “Best practice dust control measures review” (Vol 1, p. 338) states that “water sprays will be fitted to the ROM and product stockpiles: and that the “water spray intensity will be adjusted in real-time based on .... wind speed and temperature”

- the EIS does not provide any assessment of the capacity of the watering system to cope with extreme weather conditions, as experienced on 11 February 2017.
- The temporary rejects stockpile is a potentially major source of dust
  - If the slurry operation is halted for any reason, the rejects stockpile could grow substantially as coal continues to be washed in the CCP creating new rejects.
  - If this pile is not controlled with water sprays or applied with impermeable films, wind is likely to whip up dust and in summer blow this toward Berrima.

The product stockpiles are to be “aligned with dominant westerly air flow to reduce erodible surface area during peak wind events”.



- As noted in this submission, the prevailing wind direction for most of the year, including the hottest summer month of February, is NNW
- Contrary to the claim in the EIS, the planned E-W alignment of the stockpile places it perpendicular to the prevailing wind direction and thus maximizes the risk of coal dust blowing toward Berrima, which is located directly up wind during these months
  - Coal dust poses serious risks to personal health for Berrima residents. A study published by the Lock the Gate Alliance in March 2016 (*Free Loaders Air and Water Pollution from NSW Coal Mines*) details the 38 pollutants emitted into the air by NSW coal mines.
  - anecdotal evidence from residents living near underground coal mines in the Southern Coalfield indicates that coal dust settles on roofs and vehicles, on solar panels, enters domestic water tanks supplied by rain water off roofs, and accumulates over time. Berrima residents are in the front line to receive this fall-out.

### **3. d. Light pollution**

Night lighting of mine surface infrastructure, including on the 20m high stacker, high product stockpiles, on conveyors, around buildings and along roadways, as well as at the proposed maintenance siding, which will operate 24 hours a day, will be visible from Berrima village and by travellers on the Highway, Medway Road and the Old Hume Highway.

As the Hume Highway cuts north-south across the rail line and through the mine surface works, traffic will experience a lit-up large scale industrial complex set in an otherwise rural environment. Residents and tourists exiting the Highway to visit Berrima from the south, and tourists leaving Berrima toward the south, will see lit-up administrative and industrial buildings.

The brightly lit tower at the Boral Cement Works at New Berrima is a very prominent in the night sky; so much so that it is known locally as “Mt Boral”.

The light pollution from the cement works, combined with additional light pollution from the Hume Project, would create an arc of industrial light stretching high into the night sky across the landscape south of Berrima; this would have

- an adverse impact on the amenity of residents, and be
- incompatible with the heritage significance of Berrima as the best example in Australia of a colonial-era settlement

### **3. e Groundwater drawdown and bores**

The Berrima Residents Association has commented elsewhere on the inadequate modeling in the EIS of impacts on groundwater and the drawdown in the water table resulting in the loss of production from bores.

The EIS discusses “make good provisions” in s. 7.7.2 in Vol1, p. 187. However, no provision is made for compensating landowners in Berrima who have bores and who experience a loss of production following the commencement of mining.

**The Department should make it a condition of mine approval, that bores not currently identified in Section 7.7 5ii, as outlined in Appendix O of the water assessment report, but are located in the *Berrima Heritage Conservation Area* or in the *Berrima Landscape Conservation Area*, are included in appropriate “make-good provisions”**

### **3. f. Bushfire risk**

On 11 February 2017, the Australian Bureau of Meteorology reported that the noon temperature in Berrima had reached 40 degrees Celsius, with wind gusts reaching 65 km/hour (or 18m/second). Similar conditions prevailed the day before and on the following day, the Rural Fire Commissioner declared fire conditions in the region to the west of the Highlands to be ‘Catastrophic’.

Wind conditions in February (averaged 2013-2017) are shown on page 8 above (extracted from [www.windfinder.com/Moss Vale NSW](http://www.windfinder.com/MossValeNSW)).

Air-borne coal dust blown off the stockpiles also poses a significant fire hazard during periods of extreme and catastrophic fire danger

- The EIS does not present any assessment of the potential increase in risk during bushfires or other localised fires (e.g. on the Highway) from air-borne coal dust during ‘peak wind events’ such as occurred in Berrima on 11 February 2017.
- The Hume Highway passes about 1,500m to the east of the end of the coal stockpile and car accidents, such as the one illustrated below on the Highway at Goulburn in November 2014, could lead to serious fires threatening the mine itself and Berrima.



### **3. g. Traffic**

The construction and operation of the Hume project will necessarily increase traffic on the Hume Highway and local roads over its 23-year life, as a result of the

- movement of employees, particularly post-construction when the mine is operated by 414 full time employees
- delivery of construction materials and mining equipment over the 2 year construction phase
- movement of heavy earth-moving machinery
- the 24 hour operation of the maintenance siding

Increased traffic to service this large industrial enterprise will put pressure on Council to upgrade roads, thus changing the existing rural character of the Southern Highlands

- adversely impacting on the heritage significance of the Berrima Sutton Forest Cultural Landscape that encompasses the mine area but also on traffic in historic Berrima during the week and on weekends
  - imposing costs on Council and ratepayers

The proposal to make Mereworth Road the main entry to the mine is problematic.

- It is unlikely that traffic to the mine coming south on the Hume Highway will exit at Medway Road, travel east, turn right onto the Old Hume Highway, continue south for 2 km, pass under the Hume Highway to join Mereworth Road
- More likely, is the scenario that traffic coming to the mine will continue past the Medway Road exit for 2 kms before slowing down (in the fast moving right lane) to turn right into the short median strip at Golden Vale Road in order to make a U-turn back on to the Hume Highway, then travel north for 500m before taking the Berrima exit and turning left onto Mereworth Road.
  - This maneuver is particularly dangerous but can be avoided if an alternative entrance to the mine is opened off Medway Road, to the west of the Hume Highway. In doing so, traffic heading south to the mine along the Hume Highway could exit at Medway Road and turn right toward the west along Medway Road to the new mine entrance.
  - **The Department should make the construction of a secondary entrance to the mine off Medway Road, to the west of the Hume Highway, a condition of approval.**

**4. Cumulative risks to the community from the project due to: unique local geology; lack of detailed geological information; inadequate assessment of surface and groundwater impacts; unproven mining method; and uncertain future demand for steel, metallurgical coal and prices.**

Hume Coal must demonstrate that their understanding of the local geology and the efficacy of their proposed mining method is sufficient to make valid claims about impacts on the ground and surface water, particularly as the project is in the Sydney Water Catchment Area

- The failure of the EIS to present detailed information in these areas means that the project exposes the community to unacceptable cumulative risks
- It is clear that the serious local environmental risks associated with the project outweigh the claimed financial benefits to the NSW Government

**4. a. Unique local geology**

The experience of mining the Illawarra Coal Measures on the south Coast of NSW is not transferable to the Southern Highlands

- In the Sutton Forest area, the Wongawilli coal seam (proposed to be mined) is overlain directly by the Hawkesbury Sandstone, which is a major regional aquifer.
- On the South Coast, the sediments at the top of the Illawarra Coal Measures and the Triassic Narrabeen Group of siltstone, claystone and sandstone are absent.
  - See Fig 2, in Ben Fitzsimmons and Rod Doyle, *Hume coal – An overview*, in Naj Aziz and Bob Kininmonth (eds.), Proceedings of the 17th Coal Operators' Conference, Mining Engineering, University of Wollongong, 8-10 February 2017, 90-98. **(Copy attached)**
- As the aquifer (Hawkesbury Sandstone) directly overlays the Wongawilli Seam, the water flows into the mine will be of crucial importance to the mine operation and safety.

#### **4. b. Lack of detailed geological information in the mine lease area**

Hume Coal has not demonstrated that it has fully mapped the surface and subsurface geology of the mine lease area, either in terms of the size of the resource to be mined or in the location of igneous intrusive rocks which pepper the mine lease area.

Hume Coal has not demonstrated that it has confidence in the size of the coal resource it intends to mine.

- We refer the Department to following quote from page 94 of the *Fitzimmons and Doyle* paper (referenced above)

*“Difficulties in obtaining land access has directly resulted in not being able to further improve the level of confidence in the Resource Assessment from Inferred to Indicated or to a Measured status.”*

Hume Coal has not been able to explore and drill on many properties in the lease area because the Land and Environment Court denied access based on definitions of “significant improvements” in the relevant legislation.

It is unacceptable that a mine plan be approved on the basis of only an “*inferred or indicated*” and not a “*measured resource*”.

- Inadequate knowledge of the available resource raises the very real risk that the mine can not be developed as proposed in the EIS.
- This uncertainty with the size of the “economic resource” available to be mined introduces another unacceptable risk with the mine project.

#### **4. c. Inadequate assessment of the surface and groundwater impacts**

Claims made by Hume Coal that the impacts on surface and groundwater from mining will be minimal cannot be substantiated by the modeling presented in the EIS

In May 2017, the *Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development* (IESC) provided advice to the NSW Department of Planning and the Australian Government Department of the Environment and Energy, advised on whether the proposed project assessment used:

- Relevant data and information, and
- Application of appropriate methods and interpretation of model outputs

This was in relation to impacts on:

- Groundwater
- Surface water
- Water quality
- Groundwater Dependent Ecosystems (GDEs)
- Subsidence

In particular, the report notes that the Hume Coal project has the following key potential impacts on water resources:

- Drawdown in landholders' bores, largely within the Hawkesbury Sandstone
- Drawdown of the water table resulting in loss of baseflow and subsequent changes to the flow regime and water quality in waterways
- Drawdown of the water table impacting groundwater dependent ecosystems (GDEs), including riverine GDEs, terrestrial vegetation and subsurface ecosystems
- Water quality impacts to Oldbury Creek, Medway Rivulet and the Wingecarribee River, and riparian vegetation in these waterways as a result of discharge from site stormwater basins (SBs)
- Water quality impacts to aquifers and groundwater fed surface waters as a result of storing rejects in underground voids

The ISEC report noted deficiencies in the modeling presented in the EIS and recommends methodical improvements and additional monitoring.

Particular criticism was directed at:

- only "partially" satisfactory water models used, and only "partially" satisfactory estimates of impacts on surface and groundwater
- lack of sensitivity analysis in the ground water model
- uncertainty in predicting the number of private landholder bores predicted to be impacted
- uncertainties associated with the contours of groundwater drawdown contours
- the necessity for Hume Coal to submit detailed groundwater drawdown maps given the importance of the Hawkesbury Sandstone aquifer on the water table for landholders and GDEs, before mine approvals can be given
- lack of information concerning rate of groundwater recovery after mine closure
  - "make-good" provisions in relation to baseline modeling of landowners bores
  - the need for on-going data collection and updating of groundwater models implies further uncertainty over model efficacy and results

- uncertainty in base flow reduction of surface water into the surface watercourses, in into the Wingecarribee River, which has the most third party users (being part of the Sydney Water Catchment)

Modeling the groundwater impacts of coal mining in the Hume Coal MLA was commissioned by “Coal Free Southern Highlands” in 2013. The study was undertaken by the independent consulting firm *Pells Consulting*; the results were released in the report:

- *“Pells, S.E. and Pells, P.J.N.P. 2013 Three dimensional groundwater model of Hume Coal Prospect, Southern Highlands NSW. Draft consultant’s report by Pells Consulting for Southern Highlands Coal Action Group. Ref P029.R1 3 October 2013.*
  - This study is currently being updated following the release of the Hume Coal EIS

The Pells’ study finds that the Hume project will have very substantial impacts on groundwater levels in the mine area and extend well outside the mine footprint affecting water bores as well as landscape and flora dependent on groundwater.

In addition, the report concludes (p.47):

- *“Fracturing of the Hawkesbury Sandstone above the workings is a secondary effect. Conversely nothing meaningful can be achieved in reducing mine inflows, and groundwater drawdown, by altering the mining method.”*

The study also concludes (p.48):

- *“It is reasonable to expect that most groundwater bores in the area will lose all or most of their current yields. This is fully consistent with observations of groundwater drawdown at the Berrima Colliery, which is just north of the modelled area.”*

These uncertainties in the water modeling and impact assessment in the EIS noted above fundamentally undermines Hume Coal’s claims that mining will result in minimal environmental impact and presents unacceptable environmental risks to the community from the project.

#### **4. d. Unproven mining method**

Hume Coal rejected traditional mining methods used in other underground coal mines in NSW and proposes a ‘first workings with slender pillar system’ approach. This is justified on the basis of the unique geology of the mine lease area and minimizing environmental impacts. (EIS Vol 1 Part C, p. 123).



The design involves the use of ‘a non-caving mining method leaving coal pillars in place’ and ‘installing bulkheads to seal each panel immediately after extraction and backfilling”.

The operational plan also includes returning ‘all coal rejects underground to partially backfill mined-out voids’ and allowing groundwater to fill the remaining void. (EIS Vol 1. P.16).

It is also anticipated that mining will use ‘remote controlled continuous miners’, presumably for safety reason, as the mine face will be subject to substantial groundwater in-flows making manned continuous machines too dangerous to operate.

Hume Coal claims that this mine design demonstrates “*Leading practice innovations*”, while arguing at the same time that the individual design elements (our emphasis) are based on proven techniques.

It should be noted that the *Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC)* states that the mine method needs to be proven (on page 11, para.11)

- “*In this case the proponent has proposed an innovative potentially low impact mining method, and significantly reduced the quantity of coal that will be extracted. However, this modification of a first workings partial extraction has not yet been used in the Sydney Basin and it therefore still needs to be proven.*”

Claims by Hume Coal that this mining method is acceptable should be independently tested.

**The Department of Planning should commission an independent study to assess whether this combination of mining methods is acceptable, and safe, in the situation of :**

- an aquifer draining directly in active mine workings
- partially filling voids with contaminated coal rejects (injected as a slurry)
- allowing the partially filled void to fill with fresh groundwater
- allowing the mixing of fresh groundwater with coal reject slurry
- sealing the bulkheads to contain the backed-up groundwater under pressure

#### **4.e. Forecast for steel, metallurgical coal demand and prices**

Hume Coal estimates that about 35% of the available coal resource will be extracted, due to the mining method proposed.

- this is substantially lower than at other underground mines in NSW
- this low resource recovery inevitable affects the economics of the mine as the substantial overhead capital construction costs are spread over a lower extracted ROM coal level
- a low recovery rate makes the viability of the project, and its claims of community benefit, particularly vulnerable to future demand and prices for metallurgical coal
- international prices for metallurgical coal (benchmark contract prices and spot prices) are relevant here because Hume Coal is required to sell to its parent POSCO at competitive prices, otherwise it could be accused of transfer pricing, in which case revenues to Australian authorities would be reduced, thus diminishing community benefit from the project.

Forecasts of demand and prices for metallurgical coal are published by the Australian Department of Industry, Innovation and Science in its publication *Resources and Energy Quarterly*.

- The latest edition of the Quarterly (March 2017) **(copy attached)** reports :
  - a modest growth in annual world steel production of 1.2%, as growth in India is offset by falls in China. (Figure. 3.1, p. 26)
  - a high degree of volatility in Australian benchmark contract prices over the past 10 years and declining prices over the next 5 years (Figure 5.2, p 43)
  - world demand for metallurgical coal is projected to remain “steady” over the medium term (p.44)
  - metallurgical coal imports are forecast to increase at an average rate of 0.2% over the medium term, although imports into South Korea are expected to rise due to Korea meeting increased demand for steel imports from ASEAN countries
  - increased competition in metallurgical coal markets, particularly in North Asia, due to rising exports from Russia and Mongolia into the region as the Chinese import demand continues to fall from its peak in 2012.

This weak demand and price forecast for internationally traded metallurgical coal imposes medium term financial risk for the project, potentially undermining the economic viability of the project.

The Department must weigh up the environmental risks from the project against the claimed benefits. The current weak international market for coal has caused mine closures in Australia. As noted above, the market is projected to remain weak. The Department must consider whether a new “greenfield” mine will actually survive these conditions over its projected life of over 20 years.

#### **Section 4. Attachments:**

Ben Fitzsimmons and Rod Doyle, *Hume coal – An overview*, in Naj Aziz and Bob Kininmonth (eds.), *Proceedings of the 17th Coal Operators' Conference, Mining Engineering, University of Wollongong, 8-10 February 2017*, 90-98.

Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development. *Advice to decision maker on coal mining project, IESC 2017-083: Hume Coal Project (EPBC 2015/7526) – New Development*. Canberra, March 2017

*Resources and Energy Quarterly. March 2017*. Department of Industry, Innovation and Science. Canberra, March 2017.

## **5. Heritage impacts, Visual impacts and Associated commercial risks to local businesses that depend on tourism for their livelihood**

### **5. a. Heritage impacts**

In 2016, the Berrima Residents Association commissioned the highly respected heritage consultant Ms Colleen Morris to undertake a study of the heritage significance of this area. The 169 page study, undertaken in conjunction with Christine Hay, was completed in May 2017, and is entitled

- *Cultural Landscape Assessment. Berrima, Sutton Forest, Exeter Area. May 2017. 169pp. (copy attached)*
- **This cultural landscape study forms part of this submission as the content and conclusions are supported by the Berrima Residents Association**

The adverse impacts on the heritage significance of the Berrima, Sutton Forest and Exeter Area are described in detail in the *Statement of Heritage Impacts* (SOHI) prepared by Colleen Morris in June 2017 for the Berrima Residents Association **(copy attached)**

- **the SOHI forms part of this submission as the content and conclusion are fully supported by the Berrima Residents Association**

Berrima's close proximity to the proposed mine means that necessarily Berrima will be affected by the development of a large underground export coal mine

- the proposed rail loop is actually 2 kms from the southern boundary of the Berrima Heritage Conservation Area (BHCA)
- the proposed railway bridge over the Old Hume Highway is just 1250m from the southern boundary of the BHCA

Berrima's national heritage significance is widely recognised.

Founded in 1831, Berrima is the only surviving settlement, virtually intact, from the colonial Georgian period in Australia. Other colonial towns like Campbelltown and Windsor in NSW, and Richmond and Evandale in Tasmania, continued to develop in the 19<sup>th</sup> and into the 20<sup>th</sup> century, while Berrima remained frozen in time.

The imposition of a major industrial enterprise on the landscape just a few kilometres from the village, and through which tourist must pass to visit Berrima, threatens this unique heritage.

Berrima's heritage is protected by the:

- *Berrima Heritage Conservation Area (BHCA)*,
  - covering the central village commercial and residential precincts, and the
- *Berrima Landscape Conservation Area*,
  - Covering the sparsely settled, rural and areas of native vegetation surrounding Berrima, which forms a rural "curtilage" or "buffer zone" around the village
- these two Conservation Areas are listed as items on the NSW State Heritage Inventory

The historic village of Berrima is an integral part of the Southern Highlands that is also affected by the Hume Coal project - the Berrima, Sutton Forest Exeter area.

The Study by Colleen Morris demonstrates that the "*Berrima, Sutton Forest and Exeter Area*" has state significance as a unique cultural landscape. The reader is referred to the "Statement of Significance" for the area - see Executive Summary of the Study (p.4-6)

The Hume Coal project will have significant adverse impacts on the heritage values of Berrima village, its protected rural "curtilage" and on the Sutton Forest and Exeter areas lying above the proposed underground workings.

The Hume Coal EIS completely fails to address the heritage issues from the mine project because the EIS, conveniently,

- excludes any discussion of Berrima and the heritage impacts on the community
- confines assessments to the heritage impacts from the surface infrastructure, mainly at Mereworth
- ignores the impacts on the wider physical landscape; e.g. due to loss of groundwater and on 'groundwater dependent ecological communities'
- ignores the impacts on the cultural landscape of the area through the imposition of a large industrial enterprise on a historic rural landscape
- ignores the adverse impacts on tourism

## 5. b. Visual Impacts

The adverse impacts to views are described in detail in the *Statement of Heritage Impacts* (SOHI) prepared by Colleen Morris in June 2017 for the Berrima Residents Association (**copy attached**)

- **the SOHI forms part of this submission as the content and conclusion are fully supported by the Berrima Residents Association**

Berrima is located a just few kilometers NE of the proposed surface infrastructure for the mine, which includes:

- administration buildings
  - servicing 414 employees in construction, and
  - 300 full-time equivalent employees during operations;
- access roads;
- staff service buildings;
- overland conveyors;
- coal washery;
- coal stockpiles;
- coal reject handling facilities and stockpiles,
- surface groundwater facilities
- rail load-out facilities
- an extensive rail-loop and
- a separate rail maintenance yard
- noise abatement wall
- extensive perimeter planting

The sites proposed for the surface mine infrastructure, the rail tracks and the separate maintenance sidings are visible:

- from the Old Hume Highway (south of Berrima),
- from the Hume Highway, as it divides the main surface infrastructure (to the west) and the maintenance siding (to the east), and
- from Medway Road, between Medway and the Old Hume Highway.

Views from these locations will be adversely impacted by the Hume project. Hume Coal proposed noise wall and boundary planting will actually detract from the landscape, rather than enhance it, as claimed in the EIS.



**5. c. Associated commercial risks to local businesses that depend on tourism for their livelihood**

Over 200,000 people visit Berrima every year from within Australia and overseas, attracted by Berrima's unique heritage and natural setting.





The photo shown above, taken in June this year, illustrates the visitors who come into Berrima on a winter weekend.

Tourists are attracted by the experience of visiting an historic village from the colonial period set in a gently undulating rural landscape of farms and areas of native vegetation less than a 2 hour drive from anywhere in Sydney or Canberra.

Berrima has the largest number of historic houses listed on the State Heritage register in one place in NSW. Visitors wander the streets laid out in 1831 by Assistant Surveyor Robert Hoddle to see numerous dwellings and commercial building dating from the 1830s, as well as enjoying seeing Berrima's infamous Gaol opened in 1839; the two exceptionally important churches; the Alexander Pugin designed Catholic Church and the colonial architect William Blackett's first church, the Anglican *Holy Trinity Church*; the District Museum; the Berrima Courthouse Museum and State heritage listed National Trust (NSW) property Harper's Mansion.

Tourism is the lifeblood of the dozens of businesses in Berrima, which include retail shops, cafes, restaurants. The Surveyor-General Inn, in the centre of the village, is the oldest continually licensed hotel in Australia.

## **Section 5. Attachments:**

Colleen Morris. *Statement of Heritage Impact of Hume Coal Southern Highlands Proposal on the Berrima, Sutton Forest and Exeter Cultural Landscape*. June 2017. 43pp.

Colleen Morris (in association with Christine Hay). *Cultural Landscape Assessment. Berrima, Sutton Forest, Exeter Area*. May 2017. 169pp.



## **Berrima Rail Project**

### **Submission by the Berrima Residents Association - *Berrima Rail Project EIS* (Hume Coal EIS Vol. 3A, Appendix D) June 2017**

**The Berrima Residents Association** strongly objects to the rail project proposal by Hume Coal as set out in the Rail Project EIS currently on exhibition.

The Berrima Residents Association (BRA) was formed in 1983 to provide a village forum to discuss issues affecting the Berrima community and to represent residents to government in planning and associated administrative matters. Members meet monthly in the church hall; non-members are welcome to also attend these public meetings. An executive Committee is elected at the AGM. The Association is an incorporated body in NSW and is managed by a constitution registered with the NSW Department of Fair Trading.

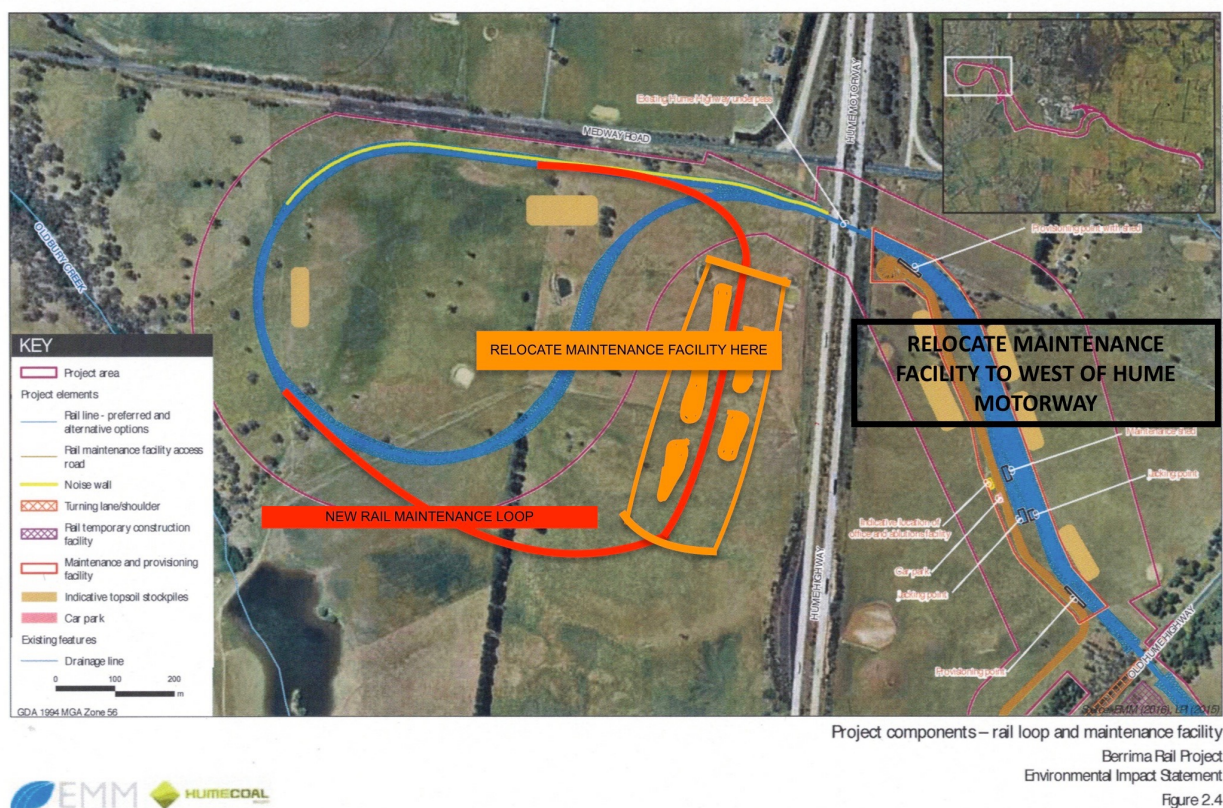
**A. The adverse impacts of the proposed rail maintenance siding and related infrastructure on land between the Old Hume Highway and the Hume Highway, i.e. on the east of the Hume Highway.**

**The Association proposes that this facility be relocated to the west of the Hume Highway (see diagram below), and this be made a condition of approval of the Rail EIS.**

The Association rejects the assessment that the rail “project will not have significant adverse visual impacts on the locality” (EIS Appendix M, p.22)

- the maintenance siding facility provides for the construction of:
  - two maintenance sidings
  - a shed for maintenance activities
  - a crib room, office, small ablutions building
  - provisioning points at each end of the double track sections for diesel locomotive refueling, water tanks, and sand storage
  - a shed at least the length of a one locomotive
  - new access road off the Old Hume Highway for fuel tanker, and other vehicles

- Minor maintenance tasks and refueling and oil refilling will take place 24 hours a day
- the adverse visual impacts are comprehensively assessed in the *Statement of Heritage Impacts (SOHI)*, by Colleen Morris (June 2017). A copy of the SOHI is included with the Association's submission.
  - The Association strongly supports the conclusions in the SOHI that the claims made in the EIS are invalid. The SOHI by Colleen Morris should be read in conjunction with this submission
- the proposed rail loop running parallel to Medway road will be visible from the Hume Motorway and mitigation measures, including boundary tree planting and the noise abatement wall, will dramatically alter the present pastoral landscape.
- The maintenance siding and associated sheds, and night lighting, will be highly visible from the Old Hume Highway and will be seen by visitors coming to Berrima on this road.
- The rural landscape surrounding Berrima is an integral part of Berrima heritage significance and the imposition of an industrial landscape on this site just 1.5km from Berrima will adversely its significance, diminish the visitor experience, which can be expected to reduce tourist numbers and adversely affect local businesses.
- **The Association asks that the maintenance siding, and associated structures, be relocated to land to the west of the Hume Highway and incorporated into the proposed rail loop.**
  - This proposal is illustrated in the attached diagram, which is based on Fig 2.4 in Vol. 3A, p. 16
  - The relocation of the maintenance siding to the west side of the Hume Highway would eliminate the adverse heritage and visual impacts of the installation if it were to remain on the east of the Hume Highway and adjacent to the Old Hume Highway.



## B. The construction of a grade separated crossing (railway bridge) over the Old Hume Highway

The Association proposes that a road bridge be constructed to take the Old Hume Highway over the rail line, instead of a rail bridge, and this be made a condition of approval of the Rail EIS.

- The EIS proposes the construction of a railway bridge over the Old Hume Highway.
  - the location of the bridge is 1250 metres from the southern boundary of the Berrima Heritage Conservation Area
  - all traffic travelling north toward Berrima would have to pass under the bridge
- No design details, length, height above ground, etc. on a rail bridge are included in the EIS.

- A bridge of the scale to allow fully loaded 800 m long coal trains to cross the Old Hume Highway will be highly visible on the flat landscape
- The high bridge can be expected to have significant adverse noise impacts, which might reasonably be expected to be heard in Berrima



Ms Mary Cawood,  
Berrima Residents Association  
Post Office,  
Berrima NSW  
Australia 2577

29 February 2016

Dear Ms Cawood,

**Re: Correspondence dated 4<sup>th</sup> December, 2015**

Firstly, Ms Cawood, I would like to acknowledge receipt of your letter in which you outline some concerns of local residents in relation to POSCO's proposed Hume Coal Project.

Secondly, I am replying to your letter on behalf POSCO's CEO, Dr Oh-Joon Kwon.

POSCO is a substantial investor in Australia's resource sector having investments in 9 projects across range of commodities, including coal and iron ore, to the value of approximately \$1.5 billion. Additionally, POSCO purchases a range of commodities from Australia annually to the value of \$7 billion.

POSCO is aware that the Australian and New South Wales governments have in place some of the most stringent regulatory environments in the world for evaluation and approval of mining projects. Hume Coal has recently commenced the statutory approval process for its project and expects the proposal will undergo rigorous evaluation in which a number of issues will be considered as part of the process.

In view of the fact that the issues raised by yourself are very specific locally, I recommend that you discuss these issues directly with the Hume Coal Project Team, in particular, the Project Director Mr Greig Duncan.

POSCO, via its wholly owned Hume Coal Project, looks forward to working with yourself and other residents of Berrima to resolve any outstanding issues as the project progress through the statutory approval process.

Yours faithfully,

A handwritten signature in black ink, appearing to read "S W Yoon", with a stylized flourish at the end.

Sungwon Yoon  
Managing Director  
POSCO Australia Pty Ltd

## **BERRIMA RESIDENTS ASSOCIATION Inc**

Post Office, Berrima NSW 2577 Tel: (02) 4877 1975

Email: [secretary@berrimaresidentsassociation.org](mailto:secretary@berrimaresidentsassociation.org)

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Dr. Oh-Joon Kwon  
CEO  
POSCO Head Office  
6262, Donghaean-Ro, Nam-Gu  
Pohang  
Gyeongsangbuk-Do. 790-785  
Korea

4 December 2015

Dear Dr. Kwon,

I am writing to you on behalf of our village, Berrima, in the Southern Highlands of New South Wales, Australia. Our village is quite small, with only 350 people. However, it is a very significant heritage village, dating back to the first few years of European settlement.

The Berrima Residents Association was formed 32 years ago to protect our heritage village and its rural surrounds from inappropriate development. For this reason, a coal minehead, coal dump and polluted water storage just 3 kilometres from the village is of great concern to us.

We respectfully request that you cease work on your proposed coal mine in our beautiful rural landscape and natural habitat.

We are particularly worried about your plans to create a stockpile of coal almost one kilometer long and 6 storeys high. This is directly in the path of our prevailing winds. We are afraid that this wind will carry dangerous coal dust onto our village, including our primary school.

Your plans for water extraction and the large holding dams are also of great concern to us. Your intention to pump the rejects from the coal washing back into the void created by your mining will contaminate the purity of our ground water. This district has one of the best aquifers in Australia, which will become increasingly important with climate change.

The water table in the aquifer is likely to drop 150 metres, destroying valuable agricultural land. Your temporary gain will be at the expense of our long term loss.

Australia has many existing metallurgical coal mines which are being closed. Could you please consider purchasing one of these, for a lot less than it will cost to develop the new mine. An existing metallurgical coal mine will have a much higher rate of recovery of the coal (80% compared to the 35% with your proposed "pine feather technique").

Again, we respectfully ask you to stop this coal mine.

Yours sincerely,

Mary Cawood  
(President, Berrima Residents Association)

# **BERRIMA RESIDENTS ASSOCIATION Inc.**

P.O. Box 7061 Berrima NSW 2577

Email: [secretary@berrimaresidentsassociation.org](mailto:secretary@berrimaresidentsassociation.org)

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Mr Sungwon Yoon  
Managing Director  
POSCO Australia Pty Ltd  
Suite C, Level 49 Governor Phillip Tower  
1 Farrer Place  
SYDNEY NSW 2000

3 June 2016

Dear Mr Sungwon Yoon,

## **Hume Coal Project, Berrima**

I refer to your letter dated 29 February 2016 in reply to our letter expressing the Association's concern to your parent company in Korea with its wholly owned Hume Coal Project at Berrima in the Southern Highlands of NSW.

In recent months, many members of our Association have attended public meetings in the Highlands where Hume Coal has outlined its proposed plans to build an underground coal mine in the Sutton Forest/Exeter area. The proposed plan locates surface mine support infrastructure, including a coal washery, the coal storage facility and rail connections within a few kilometers of Berrima Village.

Spokespersons for Hume Coal have assured residents that the impact on our lives of the proposed mine will be minimal. However, the experience of residents at Medway from exposure to coal dust, subsidence from mine workings and pollution of the Wingecarribee River contradict Hume Coal's assurances. In addition, local studies on the impact of groundwater on the region's vegetation and rural businesses also suggest that the risks associated with a coalmine that proposes to extract only 35 percent of the available resource are unacceptable.

We understand that Hume Coal rejects the findings of the groundwater study and claims that the project will deliver substantial economic benefit, through local investment and jobs. A further issue is that the area proposed for mining has high built heritage and landscape values, which may be compromised by the proposed mine. Thriving local agricultural businesses and tourism are significant contributors to the local economy and may also be threatened by coal mining, thereby reducing the net economic benefit to the local area and the State. A further issue is the sustainability of Berrima's water supply.

We acknowledge the considerable investment POSCO has made in the project. In our view the issues raised by the mine plan are contestable and the information that Hume Coal has provided the community to date, at its public meetings and on its website, is not persuasive.

We appreciate that you would prefer to proceed to mining with the support of the community. Accordingly, to enable your company the opportunity to put its case to our community, we invite representatives of Hume Coal to participate in a public meeting in Berrima, at a mutually agreed time and date, where a panel of experts representing both sides of the issue can present the arguments in favour of, and opposed to, the Hume Coal Project, followed by time for questions from the audience.

I look forward to your positive response to this proposal.

Yours faithfully,  
(Dr.) Eric Savage BSc. (Hons.)(Applied Geology), Ph.D. UNSW., B.A. (Sydney)  
President

## **STATEMENT OF HERITAGE IMPACT**

**For**

**Berrima, Sutton Forest and Exeter Cultural Landscape**

**of**

**Hume Coal Proposal for an underground coal mine**

**and**

**Berrima–Rail line extension**

Prepared by

Colleen Morris M. Herit. Cons. M. ICOMOS

June 2017



## **1.0 Introduction**

The Berrima Residents Association commissioned the Berrima, Sutton Forest and Exeter Cultural Landscape Assessment study, which was funded by two community groups, the Battle for Berrima and Sustainable Southern Highlands Inc. The aims of the study were to:

- Prepare a cultural landscape assessment; describe the built, landscape and cultural heritage values of the Berrima, Sutton Forest and Exeter areas in the Southern Highlands of NSW. The study area includes some of the southern environs of Moss Vale.
- Assess the significance of the identified heritage items and landscape taken as a whole.
- Prepare a draft Statement of Heritage Impact: based on the cultural landscape assessment, provide a draft assessment of the potential impact of Hume Coal's proposed underground coal mine, as outlined in Hume Coal's preliminary documents, on the area's built heritage and cultural landscape values.

Following the preparation of the draft Statement of Heritage Impact, the Hume Coal Environmental Impact Statement (EIS) and the Berrima Rail Project Environmental Impact Statement was released. These two EIS raised sufficient concern for the consultant to update the draft Statement of Heritage Impact for the Berrima Residents Association on a voluntary basis.

This report draws on documents:

- Hume Coal Project, Environmental Impact Statement from the Hume Coal project that was submitted to the NSW Department of Planning and placed on Exhibition on 31 March 2017, and in particular Appendix T, Statement of Heritage Impact prepared for Hume Coal Pty Limited' by EMM, 23 February 2017
- Berrima Rail Project Environmental Impact Statement prepared by EMM for Hume Coal March 2017
- Cultural Landscape Assessment, Berrima, Sutton Forest, Exeter Area, Colleen Morris in association with Christine Hay, Final Report May 2017
- Hume Coal Preliminary Environmental Assessment prepared by EMM July 2015
- Wingecarribee Shire Council, LEP 2010
- Wingecarribee Shire Council, Rural Lands Development Control Plan, as at 13 May 2015
- Heritage Study of Wingecarribee Shire prepared by JRC Planning, 1991.
- IESC 2017-083 Hume Coal Project (EPBS 2105/7526)- New Development (IESC - Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development)

The Cultural Landscape Assessment, Berrima, Sutton Forest, Exeter Area should be appended to this Statement of Heritage Impact.

## 1.1 Authorship

Landscape heritage consultant Colleen Morris wrote this report. Colleen Morris has had over twenty years of experience in the assessment of cultural landscapes and conservation management, is a member of the Heritage Council State Heritage Register Committee and has experience as an expert witness in the NSW Land and Environment Court.

## 1.2 Background to the Issues

Hume Coal is a subsidiary of POSCO Australia, which is owned by the Korean company POSCO. Hume Coal acquired exploration authorisation 349 (A349) in 2010.

Hume Coal plans to mine coking and industrial coal from the Wongawilli seam 70m to 180m below ground. The proposal is to use untried methods to preserve the long-term stability of the landscape at ground level.

Hume Coal owns the property Mereworth, one of the early land grants of the area, which is heritage listed in its entirety as an item under Schedule 5 of the Wingecarribee LEP 2010, upon which it proposes to establish surface infrastructure for the project, stock-piling of the coal and a new rail loop.

Although mining has been part of the Southern Highlands history for over one hundred years, as the 1991 Heritage Study of Wingecarribee Shire noted 'mining does not lie easily with the public image of the Southern Highlands.' Historically in general the mining operations have been relatively small. The Medway Mine is several orders of magnitude smaller than the Hume proposal ; opening in 1867, it was not mechanised until 1968. Production at Medway has been in the order of 0.2 to 0.25 million tonnes/year compared to the proposed 3.5 million tonnes. The proposed mine is larger than any previously in the Southern Highlands and the location of the above surface infrastructure for this project will be more publicly visible than activities at the nearby Boral Medway Colliery (leased by Delta SBD Ltd in 2009), now 'mothballed'.

There is support for the project from some members of the community but overall there is opposition and Wingecarribee Shire Council is opposed to the project. A Battle for Berrima survey indicated the opposition to the project. From the contacted and surveyed households, 90.3 per cent of Berrima households and 86.1 per cent of Medway households supported a coal-free community.

Hume Coal has purchased a number of properties in the study area including Mereworth and Rosedale, heritage listed items under the Wingecarribee Shire Council LEP. Hume Coal's total landholding within and adjacent to the project area is approximately 1,765ha. The extent of the current project area is shown

in Figure 1. It should be noted that the A349 area extends much further than the current project area. This implies that an extension to the mining area could be sought in the future.

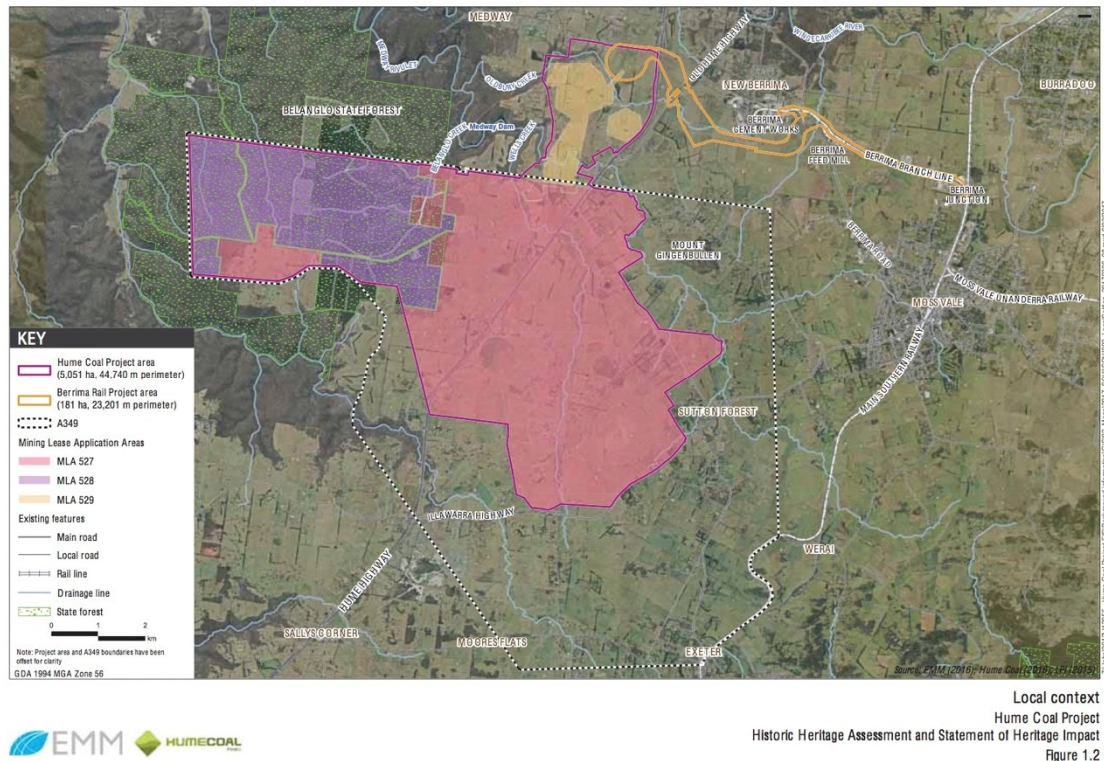


Figure 1: The local context map of the project taken from the Environmental Assessment prepared by EMM February 2017.

## 2.0 The Hume Coal Proposal

The proposal is to develop and operate an underground coalmine over approximately 22 years. Hume Coal has claimed that the mining methods will have negligible subsidence impacts.

The EIS states that **‘the key aspects of the project are summarised below.**

- Ongoing resource definition activities, along with geotechnical and engineering testing and other fieldwork to enable detailed design.
- Establishment of temporary construction offices and a temporary construction accommodation village.
- Development and operation of an underground coal mine, involving approximately two years of construction and 19 years of mining, followed by closure and rehabilitation occupying up to two years, leading to a total project life of 23 years. Some coal extraction will commence during the second year of construction and hence there will be some overlap between the construction and operational phases.

- Extraction of approximately 50 Mt of run-of-mine (ROM) coal from the Wongawilli Seam, at a rate of up to 3.5 million tonnes per annum (Mtpa). Low impact mining methods will be used resulting in negligible subsidence impacts.
- Following processing of ROM coal in the coal preparation plant (CPP), production of up to 3 Mtpa of metallurgical and thermal coal for sale to international and domestic markets.
- Construction and operation of associated mine infrastructure, mostly on cleared land, including:
  - one personnel and materials drift access and one conveyor drift access from the surface to the coal seam;
  - ventilation shafts, comprising one upcast ventilation shaft and fans, and up to two downcast shafts installed over the life of the mine, depending on ventilation requirements as the mine progresses;
  - a surface infrastructure area, including administration, bathhouse, washdown and workshop facilities, fuel and lubrication storage, warehouses, laydown areas, and other facilities. The surface infrastructure area will also include the CPP and ROM and product coal stockpiles, and coal reject handling infrastructure and a temporary (emergency) reject stockpile;
  - surface and groundwater management and treatment facilities, including storages, pipelines, pumps and associated infrastructure;
  - overland conveyors;
  - rail load-out facilities;
  - a small explosives magazine;
  - ancillary facilities, including fences, access roads, car parking areas, helipad and communications infrastructure; and
  - environmental management and monitoring equipment.
- Establishment of site access from Mereworth Road, and construction of minor internal roads.
- Relocation of some existing utilities.
- Coal reject emplacement underground in the mined-out voids.
- Peak workforces of approximately 414 full-time equivalent employees

during construction and approximately 300 full-time equivalent employees during operations.

- Decommissioning of mine infrastructure and rehabilitating the area once mining is complete, so that it can support land uses similar to current ones.

Three separate approvals will be required under the EP&A Act for the Hume Coal mine to operate. Hume Coal is therefore seeking:

- development consent for the mine and associated facilities (SSD 7172, the project the subject of this EIS) under Part 4, Division 4.1 of the EP&A Act;
- development consent for the construction and use of a new rail spur and loop (the Berrima Rail Project, the subject of a separate development application (SSD 7171). Separate development consent is being sought for the Hume Coal Project and the Berrima Rail Project because the rail infrastructure will be used by others in addition to Hume Coal. The Rail Project includes:

- construction and operation of a railway bridge over Berrima Road;
- construction and operation of a new rail connection into the Berrima Cement Works from the railway bridge, including realignment of various tracks inside the works to suit the new connection;
- decommissioning of the existing rail connection into the Berrima Cement Works including the Berrima Road level crossing;
- construction and operation of a new rail spur line from the Berrima Branch Line connection to the Hume Coal Project coal loading facility;
- construction of a grade separated crossing (railway bridge) over the Old Hume Highway;
- construction and operation of maintenance sidings, a passing loop and basic provisioning facilities on the western side of the Old Hume Highway, including an associated access road, carparking and buildings;
- construction and operation of the Hume Coal rail loop adjacent to Medway Road; and
- construction and operation of associated signalling, services (including water and sewerage), access tracks, power and other ancillary infrastructure.

Despite the Rail Project being a separate development application to the Hume Coal Project, it cannot be considered in isolation when assessing the heritage impacts of the combined proposals. The cumulative effects of the developments on the cultural landscape are substantial.

## 2.1 The consideration of the siting of the mine infrastructure.

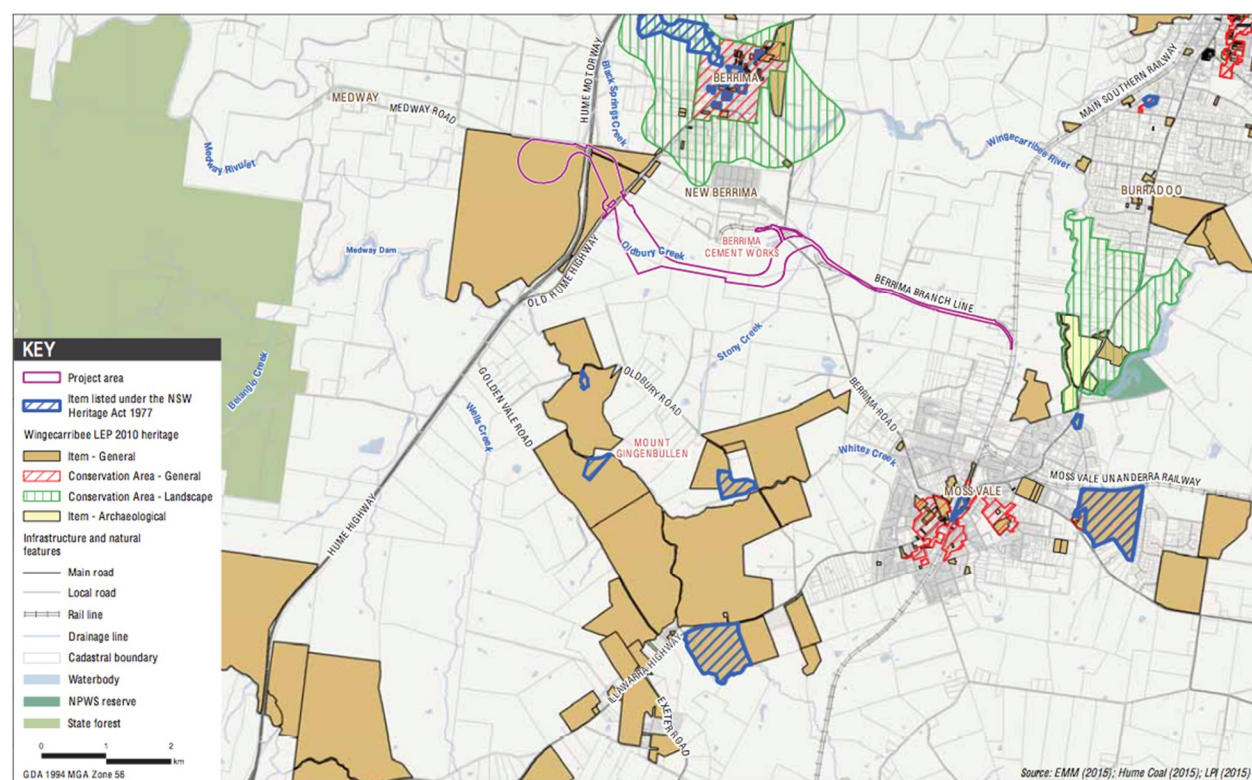
The Hume Coal Preliminary EIS presented four options that were considered before deciding on the concept chosen. I agree that of the parameters and options presented, the option chosen would likely provide the least intrusive outcome when heritage alone is not considered.





Indicative surface infrastructure layout

Figure 2: Surface infrastructure concept plan (Figure 1.4 from Hume Coal Project Historic Heritage Assessment and Statement of Heritage Impact). NB: The rail line extension and related infrastructure is not included on this plan.



Regional historical heritage context  
Berrima Rail Project  
Environmental impact statement

Figure 3: The area for the Rail Project. Figure 11.2 Berrima Rail Project EIS.

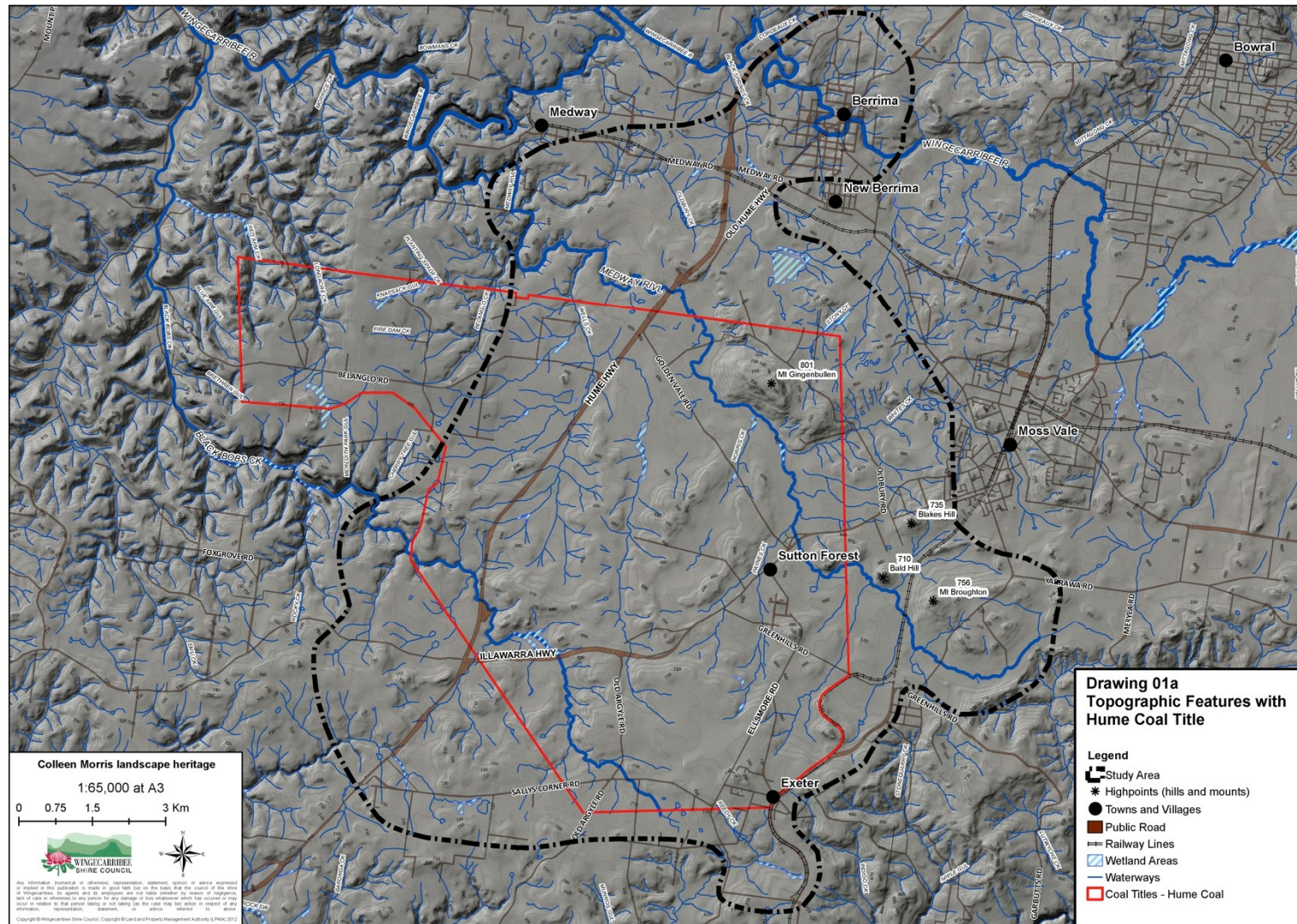
### **3.0 The Berrima, Sutton Forest and Exeter Cultural Landscape Assessment Study Area**

The following map, Drawing 01a, indicates the boundary of the study area in relation with the Hume Coal Title A349. The study area, which includes a substantial part of A349, includes 21 items that are listed as of State significance on the State Heritage Register of NSW. In 1998 the National Trust of Australia (NSW) approved the listing for the Exeter/Sutton Forest Landscape Conservation Area, the boundaries of which were reviewed in February 2017. The National Trust area contains 43 National Trust listed sites. Drawings 08 and 09 from the Berrima, Sutton Forest and Exeter Cultural Landscape Assessment show heritage-listed properties and conservation areas.

It should be noted that there are substantial omissions from Table 2.2 'Listed heritage items in the vicinity of the project area' in the Hume Coal Project Historic Heritage Assessment and Statement of Heritage Impact. A list of statutory heritage items in the Berrima, Sutton Forest and Exeter Cultural Landscape area follows the maps. heritage items in the Berrima, Sutton Forest and Exeter Cultural Landscape area

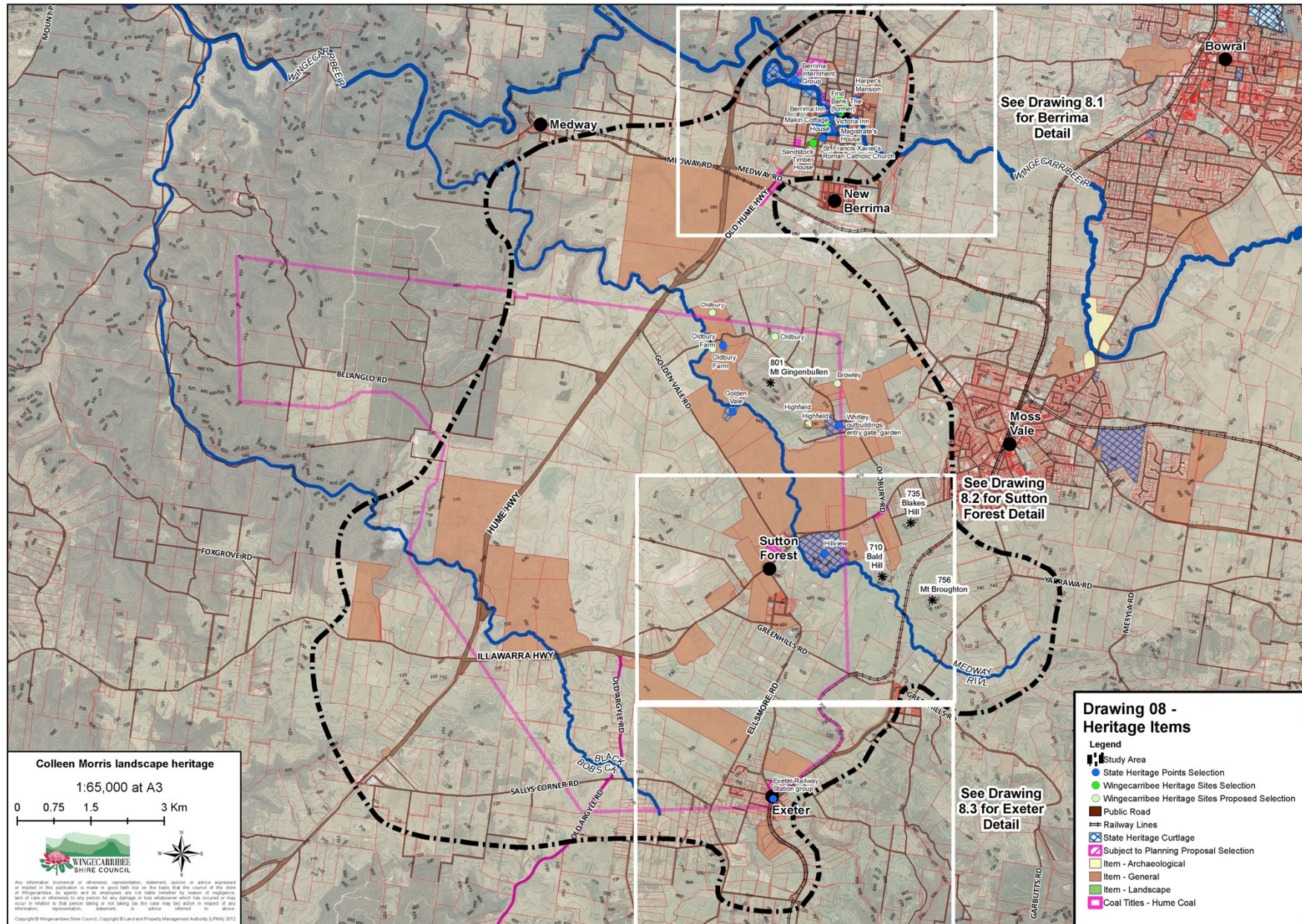
With respect to the Aboriginal history of the area (Hume Coal Appendix S Table 2.3 Point 3), during research for the Berrima, Sutton Forest and Exeter Cultural Landscape Assessment it was found that there is serious doubt as to the claim of a massacre site on Mt Gingenbullen. The claim is based on a publication in which the author selectively uses source material in a debatable manner. Unfortunately this claim detracts from the real value of the history of the site, which was a genuine Aboriginal burial mound, at Mt Gingenbullen.





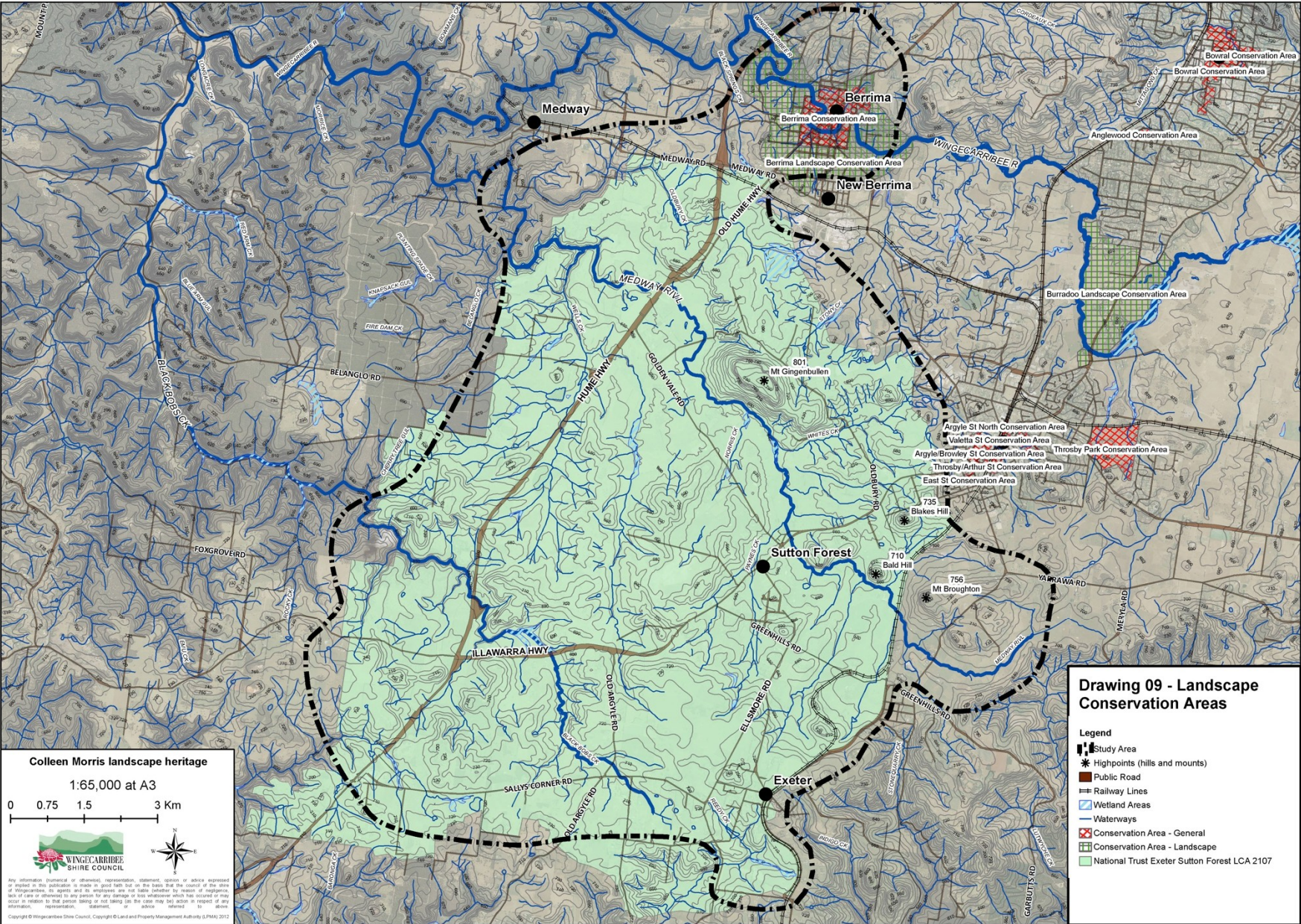


# Statement of Heritage Impact of Hume Coal Southern Highlands Proposal on the Berrima, Sutton Forest and Exeter Cultural Landscape





Statement of Heritage Impact of Hume Coal Southern Highlands Proposal on the Berrima, Sutton Forest and Exeter Cultural Landscape





<b>Wingecarribee Local Environmental Plan 2010</b>	Current version for 5 August 2016 to date (accessed 6 December 2016 at 03:47)								
<b>Schedule 5 Environmental heritage</b> (Clause 5.10)									
KEY to TERMS and ACRONYMS In table.	SHI = State heritage Inventory	SoS = Statement of significance	AoS = Assessment of Significance	State = listed on state heritage register.					
<b>Suburb</b>	<b>Item name</b>	<b>Address</b>	<b>Property description</b>	<b>Significance</b>	<b>Item No</b>	<b>SHI Item type</b>	<b>SHI group or collection</b>	<b>SHI category</b>	<b>Comments (relevant to landscape heritage study)</b>
Berrima	Berrima Internment Group	Argyle Street	Part Lots 7026-7028, DP 1026280; Lot 7316, DP 1178372; Part Lot 450, DP 751252; Lot 2, DP 833835	State					Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Berrima	Superintendent's House	Argyle Street	Lot 7304, DP 1146099	Local	I107				
Berrima	Berrima Correctional Centre (formerly	Corner Argyle and Wilshire Streets	Lot 7304, DP 1146099	State	I109				
					I110				

	Gaol)				I484				
Berrima	Stone Cottage	Corner Argyle and Wilshire Streets	Lot 7304, DP 1146099	Local	I236				
Berrima	Church of the Holy Trinity	5–13 Argyle Street	Lot 10, Sec 3, DP 758098; Lots 101–104, DP 1004483; Part Lot 2, Sec 3, DP 758098	State	I147				
Berrima	Sovereign Cottage	8 Argyle Street	Lot B, DP 181309	Local	I214				
Berrima	Cottage	10 Argyle Street	Lot A, DP 181309	Local	I143				
Berrima	Finlayson Memorial Presbyterian Church	12 Argyle Street (corner Oxley Street and Argyle Street)	Lot 2, Sec 35, DP 758098	Local	I146				
Berrima	Ardleigh Cottage	14 Argyle Street (corner Argyle and Oxley Streets)	Lot 16, Sec 37, DP 758098	Local	I211				
Berrima	Berrima Cemetery	Berrima Road	Lot 312, DP 751252; Lot 311, DP 999883	Local	I122				
Berrima	The First Bank	12 Jellore Street	Lot 1, DP 871727	State	I129				
Berrima	Munday Cottage (former Jellore	16 Jellore Street	Lot 6, Sec 2, DP 758098	State	I237				

	Cottage)								
Berrima	Berrima House	19 Jellore Street	Lot 3, Sec 5, DP 758098	State	I131				
Berrima	Former Victoria Inn	20–22 Jellore Street	Lot 104, DP 717120; Lot 3, Sec 2, DP 758098	State	I128				
Berrima	Riverview Cottage	23 Jellore Street	Lot 6, Sec 5, DP 758098	State	I130				
Berrima	Former Coach and Horses Inn	24 Jellore Street	Lot 1, DP 780565	State	I133				
Berrima	McMahons Inn (former Berrima Inn)	26 Jellore Street	Lot 1, DP 643496	State	I132				
Berrima	Nurse's Cottage	Market Place	Lot B, DP 378459	State	I228				
Berrima	White Horse Inn	3 Market Place	Lot A, DP 378459	State	I123				
Berrima	Magistrate's House	5–7 Market Place	Lot 51, DP 1021473	State	I125				
Berrima	Lennox Bridge stonework	Market Place Reserve	518–30	Local	I474				
Berrima	The Gunyah	Odessa Street	Lot 201, DP 751252	Local	I251				
Berrima	Slab cottage	7–9 Oldbury Street	Lot 1, DP 806686	Local	I230				
Berrima	“The Old Rose Cottage”	3444 Old Hume Highway	Lots 53-54, DP 751252	Local	I1382				Wingecarribee Council's 2015 list in 'Planning

									Proposal to add heritage ITEMS'
Berrima	Remembrance Driveway Trees	Old Hume Highway	Lot 1, DP 225190; Lot 1, DP 399452; Lot 1, DP	Local	I485				Taken from Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Berrima	Former Crown Inn	Old Hume Highway	402230	Local	I141				
Berrima	Former Levy's Store	Old Hume Highway	Lot 3, DP 1102396; Lot 7017, DP 93056	Local	I137				
Berrima	Former Taylor's Butcher Shop	Old Hume Highway (adjoins Pound Green)	Lot 3, DP 1102396; Lot 7017, DP 93056	Local	I216				
Berrima	Glebe Cottage	Old Hume Highway	Lot 1, DP 875157	Local	I177				
Berrima	"Mereworth" house and garden	Old Hume Highway	Lot 100, DP 839316; Lot 200, DP 839314	Local	I351				
Berrima	Market Place	Old Hume Highway Public Reserve	518-30	Local	I233	Landscape	Parks, Gardens and Trees	Urban Park	a social and recreational facility for visitors and for the local community from the earliest period of settlement

									through to the present. It is significant as surviving evidence of the earliest layout of Berrima. It is also important as a townscape element and the trees and open spaces contribute to the setting of the town as a whole
Berrima	St Francis Xavier Roman Catholic Church	Corner Old Hume Highway and Oldbury Street	Lots 1 and 2, Sec 44, DP 758098	State	I120				
Berrima	Sandstone and timber cottage	Corner Old Hume Highway and Raglan Street)	Lot 7, Sec 40, DP 758098	Local	I239				
Berrima	Bramber Cottage (former Post Office)	7 Old Hume Highway (corner Oxley Street)	Lot 20, DP 552150	Local	I218				
Berrima	Harper's Cottage	8 Old Hume Highway	Lot 1, DP 791464	Local	I134				
Berrima	Woodley Cottage (or Telegraph Office)	12–16 Old Hume Highway	Lot 1, DP 724201; Lot 1, DP 538751	Local	I208				
Berrima	Former Cobb	13 Old Hume	Lot 100, DP	Local	I210				

	and Co timber buildings	Highway (rear of General Store)	805720		I344				
Berrima	Former Bakery	17–19 Old Hume Highway (corner Wingecaribee Street)	Lot 1, DP 568701	Local	I142				
Berrima	Old Breens Inn (former Colonial Inn)	24 Old Hume Highway	Lot 4, Sec 15, DP 758098; Lot 1, DP 741287	Local	I140				
Berrima	Surveyor General Inn	26 Old Hume Highway	Lot 14, Sec 2, DP 758098	Local	I139				
Berrima	Berrima Post Office	30 Old Hume Highway	SP 75992	State	I138				
Berrima	Brick house	35 Old Hume Highway	Lots 3 and 4, Sec 33, DP 758098	Local	I232				
Berrima	Sandstock and timber house	35 Old Hume Highway	Lot 43, Sec 33, DP 758098	Local	I231				
Berrima	Berrima Glen Cottage (former Simon's Cottage)	Old Mandemar Road	Lot 346, DP 751252	Local	I127				
Berrima	Greenwood House (former Taylor's Farmhouse)	Old Mandemar Road	Lot 7, DP 788363	Local	I126				
Berrima	Bellevue House	Oxley Street	Lots 13 and 14,	Local	I118				



			Sec 37, DP 758098						
Berrima	Berrima Public School and residence	Oxley Street	Lots 1–3, Sec 31, DP 758098; Lot 1, DP 782713	Local	I114				
Berrima	Parsley Cottage	14 Oxley Street	Lot 150, DP 1022425	Local	I117				
Berrima	Armfield Cottage	22 Oxley Street	Lot 12, Sec 37, DP 758098	Local	I115				
Berrima	“Oaklea” cottage	24 Oxley Street	Lot 11, Sec 37, DP 758098	Local	I250				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Berrima	Cottage	31 Oxley Street	Lot 5, Sec 35, DP 758098	Local	I116				
Berrima	The Old Rectory	Corner Quarry and Wingecarribee Streets	Lots 8–12, DP 80581	Local	I105				
Berrima	Makin Cottages	Stockade Street	Lot 4, DP 711365	State	I227				
Berrima	Hillside Cottage	Corner Wilkinson and Oxley Streets	Lots 6, 7 and 11, Sec 36, DP 758098	Local	I209				
Berrima	Harper's Mansion	9 Wilkinson Street	Lot 5, DP 258420	State	I113				
Berrima	Police Sergeant's	Wilshire Street	Lot 5, DP 823508	Local	I112				

	Residence								
Berrima	Bull's Head Drinking Fountain	Wilshire Street, on outside wall of Gaol	Lot 7304, DP 1146099	Local	I111				
Berrima	Berrima Court House	Corner Wilshire and Argyle Streets	Lot 18, Sec 35, DP 758098	Local	I108				
Berrima	Former Rectory	5 Wingecarribee Street	Lot 2, DP 600090	Local	I104				
Berrima	Former Warden's Cottage	10 Wingecarribee Street	Lot 1, DP 196369	Local	I220				
Berrima	Pickering Cottage	12 Wingecarribee Street	Lot 34, DP 1063847	Local	I219				
Berrima	Love In The Mist Cottage	15 Wingecarribee Street	Lot 161, DP 525573	Local	I222				
Berrima	German Dam	Wingecarribee River at end of Oxley Street		Local	I179				
Berrima	Lambie's Well	Adjacent to Wingecarribee River at end of Wilshire Street		Local	I234				
Exeter	"Cherrydell" house and garden (formerly	Bundanoon Road	Lot 2, DP 522290	Local	I372				
					I591				

	part of “Invergowrie”)								
Exeter	“Invergowrie” house and garden	Bundanoon Road	Lot 1, DP 522290; Lot 2, Sec 7, DP 58913	Local	I372				
					I591				
Exeter	“Redcourt” house	Bundanoon Road	Lots 6 and 7, DP 3371	Local	I594				
Exeter	Exeter School of Arts Hall	Exeter Road	Pt Lot 4, Sec C, DP 3170	Local	I593				
					I1341				
Exeter	St Aiden’s Church and Memorial Hall	Exeter Road	Lots 9 and 10, Sec 5, DP 3373; Lot 1, DP 952304	Local	I375				
					I376				
Exeter	Badgery Memorial, Exeter Park	16 Exeter Road	Lot 2, DP 1171097	Local	I1229				PROPOSED Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Exeter	Exeter Public School - 1907 classroom, former residence and trees.	School Lane	Lots 1-2, DP 795381	Local	I1346				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Exeter	Exeter Park	16 Exeter Road	Lots 1-2, DP 1171097	Local	I1233				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'

Exeter	War Memorial Gates, Exeter Park	16 Exeter Road		Local	I1238				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Exeter	“Vine Lodge” house, grounds and outbuildings	Exeter Road	Lot 1, DP 596495	Local	I354				
					I204				
					I355				
Exeter	Exeter Railway Station, signal box and cottage	Main Southern Line	Lots 1 and 2, DP 852888	State	I607				
					I610				
Exeter	Romsey Cottage and garden	Ringwood Road	Lot 131, DP 790655	Local	I592				
Moss Vale	“Cardrona” (former Eagleroo) grounds	Corner Argyle Street and Kater Road	Lots 1 and 2, DP 1081472	Local	I352				“
Moss Vale	“Peppers” (former Mt Broughton) house, grounds and outbuildings	Kater Road	Lot 1, DP 236285	Local	I488 I486 I487 I489				
Moss Vale	“Bonheur” house, grounds and outbuildings	Oldbury Road	Lot 5, DP 979138	Local	I049				
Moss Vale	“Browley” house, grounds and outbuildings	Oldbury Road	Lot 4, DP 215782; Lot 10, DP 10658; Lots 1 and 2,	Local	I056				

			DP 1123580; Lot 1, DP 74651; Lot 1, DP 1095023						
Moss Vale	“Highfield” house, grounds and outbuildings	Oldbury Road	Lot 1, DP 58837; Lot 1, DP 59375; Lot 1, DP 59165;	Local	I246 I247 I054				
Moss Vale	“Oldbury” house, grounds and outbuildings	Oldbury Road	Lot 1, DP 98673; Lot 3, DP 1046976; Lot 1, DP 559345; Lot 30, DP 654489; Lots 191 and 192, DP 1010278	State	I353 I057 I164				
Moss Vale	“Whitley” house, grounds and outbuildings	Oldbury Road	Lot 2, DP 123550	State	I361				landmark due to its position on Judge’s Hill contiguous with Mt Gingenbullen, outstanding garden setting with a commanding view of the surrounding countryside.
Sutton Forest	“Eccleston Park” house and outbuildings	Canyonleigh Road	Lots 7 and 9, DP 805624	Local	I017				
Sutton Forest	Charlie Grey’s Cottage	Conflict Street	Lots 9 and 10, Sec 3, DP 758938	Local	I014				

Sutton Forest	“Boscobel” house, grounds and outbuildings	Exeter Road	Lots 1 and 2, Sec 9, DP 758938; Lots 1–19, Sec 8, DP 758938; Lot 1, DP 1094302; Lot 1, DP 63523	Local	I013				
Sutton Forest	Everything Store, former Butcher Shop (A Little Piece of Scotland) and General Store	Corner Exeter Road and Illawarra Highway	Lot 1, DP 722533; Lot 1, DP 984053	Local	I490				
Sutton Forest	“Bunya Hill” house, grounds and outbuildings	Golden Vale Road	Lot 1, DP 995642; Lot 1, DP 130301	Local	I018				
Sutton Forest	“Golden Vale” house, grounds and outbuildings	Golden Vale Road	Lot 1, DP 1118652	State	I003	Landscape	Farming and Grazing	Home stead Complex	Granted 1842, 16.190 ha (40000 acres), approx 200 acres remain, landmark in Mt Gingenbullen landscape setting, associated with early settlement, it was sited between Oldbury and Newbury farms
					I005				
					I001				
					I002				
Sutton Forest	“Montrose” house and grounds	Greenhills Road	Lot 2, DP 620221	Local	I006				

Sutton Forest	Black Bob's Bridge	Black Bob's Creek, Hume Highway	Lot 5, DP 614690	Local	I019				
Sutton Forest	"Black Horse" farm house, grounds and outbuildings (former Black Horse Inn)	Hume Highway	Lot 105, DP 1087612	Local	I020				
Sutton Forest	"Comfort Hill" house, grounds and outbuildings	Hume Highway	Lot 1, DP 744544	Local	I357				
					I356				
					I021				
Sutton Forest	"Eling Forest Winery" house, grounds and outbuildings	Hume Highway	Lot 2, DP 806934	Local	I004				
					I009				
					I010				
Sutton Forest	Remembrance Drive Plantings	Illawarra Highway	Lots A and B, DP 415370	Local	I1691				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
Sutton Forest	Sutton Forest Public School - 1879 classroom and toilets, and 1912 classroom.	7366 Illawarra Highway	Lot 1, DP 794882	Local	I030				Taken from Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'

Sutton Forest	All Saints Anglican Church, hall and cemetery	Illawarra Highway	Lots 1 and 2, DP 999587	Local	I026				
					I022				
					I025				
					I350				
Sutton Forest	“Clover Hill” house, grounds and outbuildings	Illawarra Highway	Lot 1, DP 56241	Local	I203				
Sutton Forest	Cottage	Illawarra Highway	Lots 8 and 9, DP 32	Local	I028				
Sutton Forest	“Hillview” house, grounds and outbuildings	Illawarra Highway	Lot 12, DP 260417	State	I008				Vice Regal country residence for Governors of NSW between 1882 and 1957. Sixteen Governors used it over a period of 75 years, Grounds: Charles Moore, The residence at the highest point of the 60.4 hectare rural property.
					I007				
					I358				
					I359				
Sutton Forest	“Rosedale” house and grounds	Illawarra Highway	Lot 2, DP 250747; Lot 6, DP 250743; Lots 7 and 8, DP 11147	Local	I031				
Sutton Forest	“Rotherwood”	Illawarra	Lot 1, DP	Local	I033				



	house, grounds and outbuildings	Highway	1068950		I032				
Sutton Forest	“Spring Grove Farm” house, grounds and outbuildings	Illawarra Highway	Lot 2, DP 250746; Lot 2, DP 1127380	Local	I492				
Sutton Forest	St Patrick’s Roman Catholic Church and cemetery	Illawarra Highway	Lot 1, DP 513739	Local	I034				
					I349				
					I023				
Sutton Forest	“Sutton Farm” house, grounds and outbuildings (former Red Cow Inn)	Illawarra Highway	Lot 1, DP 783660	Local	I035				
Sutton Forest	Sutton Forest Inn (former Royal Hotel)	Illawarra Highway	Lot 1, DP 64663	Local	I1187				
Sutton Forest	“The Harp” (former “Bindagundra” house, grounds and outbuildings)	Illawarra Highway	Lot 1, DP 1028147	Local	I027				
Sutton Forest	“The Pines” slab cottage	Illawarra Highway	Lot 1, DP 160149	Local	I029				
Sutton Forest	Former Post Office	Corner Illawarra Highway and Exeter Road	Lot 1, DP 334187; Lot 83, DP 665633	Local	I016				
Sutton Forest	“Summerlees”	219 Illawarra	Lot 1, DP	Local	I362				

	house and grounds	Highway	58843		I037				
Sutton Forest	“Newbury Farm” house, grounds and outbuildings	7300 Illawarra Highway	Lot 1, DP 301672; Lot 1, DP 176414; Lot 32, DP 665400	Local	I202				Three large grants of land were made in the area surveyed by James Meehan as part of the initial settlement of Sutton Forest. One was made to John Nicholson (700 acres to be called Newbury),
					I036				
Sutton Forest	Old Argle Road	Old Argyle Road (from Illawarra Highway, Sutton Forest, to Paddys River Penrose)		Local	1030				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'
<b>Part 2 Heritage conservation areas</b>									

Suburb	Item name								
Berrima	Berrima Conservation Area	C148							
Berrima	Berrima Landscape Conservation Area	C1843							
<b>Part 3 Archaeological sites</b>									
Suburb	Item name	Address	Property description	Significance	Item No				
Berrima	Berrima Internment Group	Argyle Street	Part Lots 7026-7028, DP 1026280; Lot 7316, DP 1178372; Part Lot 450, DP 751252; Lot 2, DP 833835	State	A1882				Wingecarribee Council's 2015 list in 'Planning Proposal to add heritage ITEMS'

### 3.1 Summary Statement of Significance for the Berrima, Sutton Forest and Exeter Cultural Landscape

*The cultural landscape of Berrima, Sutton Forest and Exeter is of historic significance at a State level as a place of early exploration beyond the limits of the Cumberland Plain in 1798, and of early settlement and pastoralism from 1819 onwards, the evidence of which is legible today.*

*There is a direct relationship between early settlement and the area's natural significance demonstrated by the close connection of the settlement pattern with the terrain of the Wingecarribee River, particularly with the siting of Berrima as the intended country town, and the containment of many early large land holdings within the valleys of its tributary the Medway Rivulet, the focus of which is Mt Gingenbullen with its landmark character. The rural landscapes in the vicinity of Mt Gingenbullen are significant as cultural landscapes, which reflect historic associations and aesthetic qualities that reach back to the first Aboriginal people who lived in the area– the process of European settlement and dispossession documented through Louisa Atkinson's accounts of Aboriginal life on their occupied land.*

*The rich and varied cultural landscape, shaped by associations with early land grants and settlement of the region and its remnant stands of endangered woodlands, is of aesthetic significance at a State level. The evidence of these associations through early grant boundaries and roads, town layouts, remnant woodland, cleared grazing lands and the placement of homesteads, makes a substantial contribution to the overarching spatial arrangements and visual qualities of the cultural landscape. The attachment to the area by the early explorers and settlers, and the valuing of it, particularly for farming and grazing, is still associated with the area. Whilst the scene has changed in detail, the 1798 description of the 'finest prospect' from the top of Mt Gingenbullen can still be appreciated. The early impressions of a rich and beautiful pastoral landscape remain, with mature avenue plantings and gardens signaling the location of country homesteads and their outbuildings.*

*Important early convict built roads and the underlying early European responses to the landscape are remarkably intact with new patterns from the twentieth century subtly accommodated within the pre-existing landscape. The area is significant for its association with convictism, a convict workforce playing a crucial part in quarrying, the construction of early buildings and roads and as part of the workforce on early estates. These include the Old Argyle Road and the new line of the South Road from the 1830s (Old Hume Highway) surveyed by Major Mitchell, and the remains of its David Lennox bridge.*

*Berrima is of exceptional significance as one of the few substantially intact villages, dating from the Georgian period, that demonstrate the characteristics of 19<sup>th</sup> century town development from the period of convict settlement to the end of the Victorian era. Fine buildings of convict-quarried sandstone, especially the courthouse and gaol, churches and residences contribute to its aesthetic importance. Berrima's original town layout and town limits are remarkably intact and legible, the value of which is reinforced by the high landscape quality, in terms of both mature exotic gardens and streetscape features and its remarkable sense of enclosure with indigenous vegetation in undeveloped surrounds, these components, along with the stock of early buildings combine to provide a sense of timelessness that is Berrima's character and appeal.*

*The area has strong links with prominent colonial settlers, individuals and families and, from the latter years of the 19<sup>th</sup> century, a special association with important wealthy Sydney families. For many of these owners farming and grazing were core occupations and equestrian activities, gardening and the landscape have been deep interests. The use of Hillview, Sutton Forest as the governors' summer residence 1882-1957 and the influence of that use still permeate and render the area unique. The physical evidence in the concentration of so many 19<sup>th</sup> century buildings ranging from Oldbury, Kenmore Cottage and Newbury, the Berrima Gaol and Courthouse, the Surveyor General Inn, Harper's Mansion, St Francis Xavier's Church and the humble cottages of Berrima, modest farmhouses such as Bonheur on Oldbury Road through to grander houses and gardens including Golden Vale,*

*Comfort Hill, Summerlees, Whitley and Rotherwood at Sutton Forest imbues the area with a high degree of historical importance. Important 20<sup>th</sup> century houses such as Invergowrie, Rosedale and Mereworth and gardens designed by Paul Sorensen and Claude Crowe added a layer to the already rich cultural landscape. A number of archaeological sites have the potential to contribute to our understanding of the history of the area.*

*There is a strong feeling of continuity, a sense of stewardship of the landscape and also participation in history among the local community and organisations including the Berrima and District Historical Society, the Australian Garden History Society and the National Trust of Australia (NSW). The three historic villages of Berrima, Exeter and Sutton Forest, their churches and cemeteries, the fine gardens and the surrounding rural landscapes - all these combine to create a cultural landscape which is rare in the State of New South Wales and which is highly valued for its historic significance and scenic qualities by visitors from all over Australia.*

#### **4.0 Key Heritage Questions**

- 4.1 The key heritage question is to what extent will the proposal impact on the Cultural Significance of the Berrima, Sutton Forest and Exeter Landscape?
- 4.2 How will it impact the cultural values that enhance the community's way of life and impact on the aesthetic significance of an area that draws thousands of visitors?

#### **5.0 Impact on Landscape Character**

- 5.1 Water underpins the vitality of this landscape, which in turn, contributes to its landscape character. One of the most concerning aspects of the proposal is the extent of the ground water drawdown, the uncertainty about the impact on the aquifer, and ultimately the impact on the character of the cultural landscape. The Report by the Independent Expert Scientific Committee on Coal Seam Gas and large Coal Mining Development IESC 2017-083 Hume Coal Project (EPBS 2015/7526, 8 May 2017) advises that the Hume Coal Modelling presented in the EIS is inadequate to predict impacts on ground and surface water.
- 5.2 The water drawdown will primarily impact the White's Creek Water catchment and the Wingecarribee catchment but may also impinge on the Paddy's River and Shoalhaven River catchments. The potential for a radical change in water flow through the landscape is unknown and an event such as one of the creeks or rivers drying up would have a substantial negative impact on the landscape both in practical and aesthetic terms. Advice from the IESC is that Hume Coal's assertions that the impacts are only minimal cannot be accepted with confidence.
- 5.3 Modelling by Pells Consulting indicates that there could be significant lowering of groundwater levels over a broad area, possibly in excess of 100m. While a decrease in groundwater does not have an immediate heritage impact, it could over time change the viability of the land for agricultural and pastoral use and this, in turn, will have an effect on the character of the cultural landscape. In drought years when mature trees depend on groundwater, there is no certainty that resource will be sufficient to sustain the long-term health of the landscape.

The advice to decision maker on coal mining project IESC 2017-083 Hume Coal Project (EPBS 2105/7526)- New Development (IESC - Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development) notes the key potential impacts on water resources:

- *Drawdown in landholders' bores, largely within the Hawkesbury Sandstone.*

- *Drawdown of the water table resulting in loss of baseflow and subsequent changes to the flow regime and water quality in waterways.*
- *Drawdown of the water table impacting groundwater dependent ecosystems (GDEs), including riverine GDEs, terrestrial vegetation and subsurface ecosystems.*
- *Water quality impacts to Oldbury Creek, Medway Rivulet and the Wingecarribee River, and riparian vegetation in these waterways as a result of discharge from site stormwater basins (SBs).*
- *Water quality impacts to aquifers and groundwater fed surface waters as a result of storing rejects in underground voids.*

What is apparent from the IESC advice is that the risks that the project will have significant impacts on water related resources is real because the modelling presented in the EIS is inadequate. The risks associated with the pollution of ground water from putting coal washing rejects back into mine voids must be adequately assessed for its impact on the whole cultural landscape.

- 5.4 The construction of above ground infrastructure will directly impact the northern and north-western part of the Berrima, Sutton Forest and Exeter cultural landscape. The visual and spatial quality of the landscape will be significantly altered. A substantial area will be transformed from a pastoral landscape into an industrial landscape with buildings, stockpiling of coal, coal-loading, and a railway extension. Here the cultural landscape will be irrevocably changed. Although there was a railway extension through this area previously, the new railway loop will be much larger and a more dominant feature in the relatively open landscape in comparison to the single line that terminated at Medway. What is proposed is for a railway line to pass over the old Hume Highway and for railway sheds and associated workings to be introduced in the land between the old Hume Highway and the freeway.
- 5.5 Under the Wingecarribee LEP 2010 zoning much of the Berrima, Sutton Forest and Exeter Landscape is what Wingecarribee Shire Council has defined as E3 zoned land. The underlying management principles for the E3 zoning is to preserve the rural landscape character of the area and the significant cultural values embodied in the landscape:

*The primary purpose of the E3 zoned land is to protect, manage and restore areas of the Shire with special ecological, scientific, cultural or aesthetic values. Development is permitted, provided it does not have an adverse effect on those values.<sup>1</sup>*

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<sup>1</sup> Wingecarribee LEP 2010 see also Wingecarribee Shire Council 'Rural Lands DCP' p.14. <http://www.wsc.nsw.gov.au/uploads/2674/rural-lands-development-control-plan.pdf>



The Hume Coal Project contravenes the objectives of the Wingecarribee LEP 2010:

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse impact on those values.
- To encourage the retention of the remaining evidence of significant historic and social values expressed in existing landscape and landuse patterns.
- To minimise the proliferation of buildings and other structures in those sensitive landscapes areas.
- To provide for a restricted range of development and land use activities that provide for rural settlement, sustainable agriculture, other types of economic and employment activity, recreation and community amenity in identified drinking water catchment areas.
- To protect significant agricultural resources (soil, water and vegetation) in recognition of their value to Wingecarribee's longer term economic sustainability.

#### **6.0 Views and Vistas:**

**Including how does the work impact on views to, and from, adjacent heritage items?**

- 6.1 Although the proposal outlines the attempts to site above ground infrastructure with the objective of minimising impact, the structures will be large and will impact views both public and private. It is misleading to assume that because travellers on the Motorway are moving at speeds of up to 110km/hour the impact on views will be low as even glimpsed views that have negative connotations impact on the perceived aesthetic qualities of a landscape.
- 6.2 Views from Medway Road, Old Hume Highway, the Hume Highway (motorway), Mereworth Road, Oldbury Road near Oldbury Estate and properties off Golden Vale Road eg: Roscoe Park will be impacted. As one approaches the Hume Motorway from Golden Vale Road the current view is to the rural landscape of Evandale and this will be greatly altered.
- 6.3 Although new trees have been planted along the boundaries of Hume Coal owned properties, there are three points to consider when assessing the impact of plantings:
- a) The plantings recently undertaken will actually block current public views across the rural landscape. Wingecarribee Shire Council commissioned the dem consultants 'Wingecarribee Views and Vistas Study' (2009). The 2009 study only dealt with recognised tourist roads,

thus omitting some roads that will be impacted by this proposal. New boundary planting is being undertaken along the Old Hume Highway in an area that the study noted as having scenic views. The Rural Lands DCP states:

- *that identified significant views and vistas are maintained throughout the rural areas of the Shire.*

Thus the work to mitigate the impact on views is not in accord with the Rural Lands DCP. The new barrier plantings to screen rail track, train movements and surface infrastructure will destroy the rural views across the Mereworth property from the Old Hume Highway and from Medway Road.

b) Unlike the infrastructure at Tahmoor Colliery, for example, which is located on fairly flat land with no overlooking highpoints, this proposal is located in undulating land overlooked by a number of viewing points across the landscape from hills and highpoints and the Hume Motorway. Views across what is now a rural landscape will be negatively impacted.

c) Plantings around infrastructure may take a considerable number of years to mature sufficiently to ameliorate the negative impact of the proposed structures on views. It should be noted that the impact of Berrima Cement Works was ameliorated through landscaping and tree planting although it can still be seen. However, even during the 1960s when the Cement Works was 25-30 years old, it was still visually very prominent. The Hume Coal proposal is planned to run for 22 years. It is possible that tree planting will only become truly effective towards the end of the project.

- 6.4 The EMM HIS argues that the visual impact on public views across the Mereworth landscape will be low to moderate. This assessment is disingenuous when the proposed layout of both the surface infrastructure of the mine and the railway project is considered. Within the Hume Coal EIS a limited set of viewpoints were included and views from Oldbury Road were not considered. Views from private properties toward the surface infrastructure of the mine were not considered.

The EMM HIS discusses the impact on views from Mereworth house and garden. These will, of course, be adversely impacted.



Figure 6.1 A view from the public road, Oldbury Road, toward the Hume Coal area. Views from this area near the heritage-listed property Oldbury are important as they display the relative intactness of the significant cultural landscape. (See also Figure 3.7 'Cultural Landscape Assessment Berrima, Sutton Forest, Exeter' May 2007) Views over Evandale where surface infrastructure will also be sited are also seen from Oldbury Road and from the junction of Golden Vale Road and the Hume Highway.

- 6.5 The mine infrastructure and the related rail line will need to be lit at night and will impact night views, which will be a negative impact on the rural cultural landscape. Noise attenuation walls will also have a significant impact along Medway Road where residents now enjoy sweeping views across the landscape. The argument that that through tree planting and the introduction of a 4 metre high unbroken noise wall in a sympathetic finish for 950m along the length of Medway Road will render the impact on unencumbered rural views across the landscape to one of moderate impact, rather than high impact, could be considered insensitive to the local residents.<sup>2</sup>
- 6.6 A maintenance shed 6-8m high and of unstated length is proposed between the Old Hume Highway and the Hume Highway- this will have a visual impact. That the Berrima Rail Project Visual Impact Assessment Report concluded that 'the project will not have significant adverse visual

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<sup>2</sup> Viewpoints 1 and 2 in Berrima Rail Project Visual Impact Assessment Report, Appendix M, p.22

impacts on the locality' is misleading. Views of the Rail Project and its infrastructure will be visible from the Old Hume Highway, from the Hume Motorway and views from Medway Road will be dramatically altered. The mitigation measures will destroy the rural views across the landscape toward Mereworth from the Old Hume Highway and from Medway Road.



Figure 6.2: Looking across toward Mereworth from the Old Hume Highway.

- 6.7 The Hume Coal EIS promotes the argument that as the Cement Works is already a prominent structure in the landscape and has a visual impact, it is acceptable to add more large and visually intrusive structures. Because there is one intrusive element in an otherwise scenic rural landscape does not justify adding worse to bad. It also cites examples of other large structures in the designated Moss Vale industrial zone– this is a totally unacceptable approach to managing intrusion in a landscape recognised for its heritage values.

## **7.0 Impact on the Streetscape**

- 7.1 The introduction of approximately 300 full-time equivalent workers and associated vehicles will potentially have an impact on traffic through Berrima. Heavy vehicles could have an impact and if the project is approved, it should be conditioned that heavy vehicle traffic is confined to the Hume Motorway.

- 7.2 There is a potential for a perceived need to upgrade secondary roads. This will impact the rural character of the cultural landscape. Of particular concern is the potential impact on Golden Vale Road, which may become a cross-country thoroughfare for workers to access the administration area. Other roads that may be impacted by similar traffic are Old Argyle Road and Exeter Road.
- 7.3 The proposal will impact Medway and Mereworth Roads and change the character of the streetscape as travellers leave the Hume Freeway to access Berrima.
- 7.4 The Remembrance Driveway plantations have been listed as an item of local significance. The Railway Project will have a significant impact on the way these plantings are seen and appreciated.

## **8.0 Impact on Heritage Items**

- 8.1 Much of the above ground infrastructure, and coal-loading operations will take place on Mereworth, a heritage listed property known for its prominent homestead estate garden, set in a productive rural landscape setting within an early land 'promise' later converted to a grant, which is of historic significance. At the time of the sale of the property the garden was considered to be one of designer Paul Sorensen's most accomplished works of landscape design.

The significance of heritage items goes beyond their built form. The context of a heritage item is an important aspect of its significance. Likewise external and internal views to and from an item contribute to its significance. While it is proposed the house and garden will be retained and conserved, the mine proposal will have a substantial and, in my opinion, an irrevocable negative impact on the setting of Mereworth house and garden.

The EMM HIS (p. E.2) dismisses the Mereworth grant as a whole and states that 'the significant elements on the property are the house and surrounding garden.' This is despite the extensive research into possible archaeological sites of former buildings and activities on the property as a whole. This demonstrates a contradiction within the EMM HIS of the importance of the landscape context as a whole ie: the entire locally listed item, thus conflicting with the argument that the final homestead and formal landscape design is the only item of significance.

- 8.2 Aesthetic value refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals. It can be expressed, in effect, as to how we *feel* about a landscape. The aesthetic qualities of this



cultural landscape will be negatively impacted by the introduction of a new rail corridor, by the noise from rail movements, surface vehicles, coal conveyors and the loading of rail cars. Dust pollution will also impact how people appreciate the landscape.

- 8.3 An aspect of the aesthetic significance of Berrima is its intactness and sense of timelessness. This will be impacted. As the consultants for the Wingecarribee Shire Heritage Study observed, mining does not lie easily with the public image of the Southern Highlands.
- 8.4 As tourists approach Berrima from the south along the freeway, the above ground coal mine operations will be visible. As they exit the freeway to the south of Berrima, the above ground operations will be seen. This is not the experience one would anticipate when visiting one of the most intact Georgian era towns in Australia. In my opinion it will have a significant negative impact on how the visitor will feel about the town and its surrounding rural landscape setting.
- 8.5 Oldbury Estate is of State significance and is listed on the State Heritage Register. The above ground infrastructure may potentially be seen from higher areas of the property and it will be visible from Oldbury Road as one descends the hill to Oldbury.
- 8.6 The attachment to the area by the early explorers and settlers, and valuing of it, particularly for grazing, is still associated with the area. Whilst the scene has changed in detail, the 1798 description of the 'finest prospect' from the top of Mt Gingenbullen can still be appreciated. The early impressions of a rich and beautiful pastoral landscape remain, with mature avenue plantings and gardens signaling the location of country homesteads and their outbuildings. This aspect of the area's significance, which is of great importance to the local community and contributes to the heritage tourism of the area, will be severely impacted.
- 8.7 A number of heritage properties will potentially be impacted by being mined beneath them. The EMM HIS tacitly accepts that the proposed low impact mining system will lead to 'negligible or imperceptible' subsidence impacts. In my opinion, a technique largely untested in local conditions cannot be considered risk free.
- 9.0 Impact on the Conservation of the Cultural Significance of Berrima village and surrounds and the Sutton Forest and Exeter Cultural Landscape**
- 9.1 The mine proposal is for a large-scale industrial enterprise with surface infrastructure on a local heritage item that sits within an important cultural landscape. This proposal threatens the experience of tourists and visitors who come to the Highlands for its heritage and visual enjoyment, upon which the local economy depends. The income generated through heritage tourism makes a large contribution to the conservation of the



historic properties of the area. Light, noise and coal dust pollution and visual impacts will all negatively impact visitor experience and residents' quality of life.

- 9.2 The tangible evidence of the early settlement pattern in the landscape will be disrupted by the proposal. One of the significant aspects of the area is its strong sense of history, its identifiable early settlement patterns and the concentration historic sites in a highly scenic rural landscape. Although providing a list of items in the vicinity, the Hume Coal HIS excludes any heritage items beyond the footprint of the mine proposal, including those in the mine exploration lease area, from its assessment. This gives an unrealistic impression of the number of heritage-listed places that will be impacted.

The EMM HIS concedes that the cultural landscapes identified as significant by both the National Trust and the 1991 Heritage Study 'still exist today.' The EMM HIS reinforces the intactness of the historic landscape in the project area apart from the introduction of the Motorway, thereby reinforcing its significance:

*The earliest available aerial photography dates from 1949 and shows the project area has undergone little development after it was initially cleared...*

*The land surrounding homesteads has largely been subject to repeated ploughing and used for agriculture for the last 150 years. Now much of the land continues to be used for grazing cattle, cultivation of animal fodder and vineyards.<sup>3</sup>*

*Archival research, a review of current aerial photography and field survey support the assertion that the landscape crossing Sutton Forest and Exeter is recognisable and largely intact. Other than the upgrade of the Hume Highway and the introduction of the Hume Motorway at the northern end, the landscapes in this area appear to have undergone little abrupt and significant change. Clearly, change has occurred but at a gradual enough rate that it has been largely unnoticeable to each generation.<sup>4</sup>*

*...Nevertheless, the present landscape is an important aspect of the identity of the Southern Highlands today.<sup>5</sup>*

Despite assessing that the cultural landscape is remarkably intact (my emphasis) and being an important part of the identity of the Southern Highlands, the EMM HIS then asserts that the impact of introducing very large scale mining infrastructure within this intact cultural landscape will

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<sup>3</sup> 'Hume Coal Project EIS Appendix T- Statement of Heritage Impact', p.78

<sup>4</sup> Ibid. p.89.

<sup>5</sup> Hume Coal Project EIS Appendix T- Statement of Heritage Impact' p.89.

be minimal. The method used to come to this conclusion is based on a percentage of landscapes in the proposed infrastructure area and is seriously flawed as it does not into consideration the impacts on the qualitative aspects of the area including the perception of the area as an important rural landscape and the impacts on the 'identity of the Southern Highlands'. It is unclear whether the Rail Project area is included in the percentage estimates, thus raising further questions about its veracity. In my opinion the Hume Coal HIS conclusion that the cultural landscape 'will be minimally impacted' is erroneous.

- 9.3 The description of the location of the mine in the EMM EIS is consistently myopic when it comes to acknowledging its close proximity to Berrima. The reader is led to believe that the industrial area confined to the edge of Moss Vale is one of the most dominating elements of the character of this landscape. Few visitors or tourists travel that route between Moss Vale and Berrima. The proposed railway extension and mine will be only a few kilometres from Berrima and cuts across land proposed to be included in an extension of the Berrima Landscape Conservation Area under the Wingecarribee Local Planning Strategy. Berrima is only 4km to the northeast from the proposed mine surface infrastructure, a fact which the EIS fails to adequately acknowledge.
- 9.4 The EMM HIS is deficient in its assessment of the impact on Berrima, which is one of the best-conserved towns from the colonial period in Australia. Berrima is a significant heritage village that attracts over 200,000 visitors a year. A Landscape Conservation Area, the expansion of which has been proposed, surrounds Berrima. This rural landscape setting is integral to its attraction as a tourist destination.
- 9.5 Berrima has a significant collection of State Heritage Register listed properties concentrated in a small area. Berrima includes 85 items listed on the State Heritage Inventory (SHI), 16 items of which are listed on the SHR. The EMM HIS is misleading in the quantity of listed heritage items and deficient in its approach to assessing to what extent the appreciation of this heritage resource will be impacted.
- 9.6 In my opinion the construction of the mine and rail extension will deter visitation to Berrima, particularly from visitors approaching from the south along the Hume Motorway. Apart from the remnants at Joadja, this is not an area known for its industrial heritage related tourism. The attraction for both residents and visitors stems from its colonial history. A new large-scale coal mine on its southern doorstep will not sit well with the cultural heritage tourism that Berrima relies upon.
- 9.7 The increased industrial activity in the area could be expected to encourage new industrial growth in an area noted for horse breeding and equestrian training, grazing and beef cattle breeding, and the food clusters that are associated with cultural tourism. This would impact on

the desirability of the area for its traditional uses and may precipitate a shift in land use in the historic cultural landscape to large-scale industrial. The impact on the large wedding industry in the area, which has a relationship with the cultural significance of the villages and landscapes, is unknown.

- 9.8 A new industrial landscape imposed on this significant cultural landscape would change the character which is highly prized by the community as reflected in the planning objectives for the area in the LEP and opposition to the mine by Wingecarribee Council, and the 'vision' of the Wingecarribee Shire as reflected in Council's long term strategic document 'Wingecarribee 2031' and Local Planning Strategy, recently endorsed by Council in 2016.

**10. Comments on the Statement of Heritage Impact prepared for Hume Coal Pty Limited' by EMM, 23 February 2017**

- 10.1 In the preparation of a Statement of Heritage Impact for a cultural landscape previously identified as significant it would be usually expected that the advice of a consultant skilled in the conservation of heritage landscapes be sought. This does not seem to have been undertaken for the Hume Coal SHI.
- 10.2 The EMM SHI redresses the history of mining in the area, an aspect of history, which the consultants saw as deficient in some histories of the area. However in doing so they have presented an equally unbalanced history to those they have criticised by overemphasising the small-scale mining at Medway, shale mining that ceased over a century ago and quarrying at Mount Gingenbullen that opened in 1927 but was short lived, the quarry and line falling into disuse until the line was finally dismantled in 1942. Only small-scale shale quarries for clay and cement manufacture are still operating– coal production at Medway ceased in 2013 for environmental reasons.
- 10.3 In page E2 Paragraph 3 the HIS states that a 'historic heritage management plan' will be prepared for Mereworth. This is unacceptable in the context of what is proposed for the Mereworth property. The EIS should explain in detail as to how the heritage issues with respect to the introduction of the above ground infrastructure will be managed and provide clear parameters for the conservation of Mereworth.

## **Conclusion**

The cumulative impacts of the mine proposal and rail project are highly adverse and the project presents unacceptable risks to the heritage values of the area.

In my opinion the proposal will impact on the cultural significance of the rare and substantially intact Berrima, Sutton Forest and Exeter cultural landscape to an unacceptable extent. It will impact on the aesthetic significance of the cultural landscape which to quote the EMM HIS 'is an important aspect of the identity of the Southern Highlands today.'

In my opinion this is not an acceptable place to build a mine and associated above ground infrastructure or the associated Rail Project.



Colleen Morris  
14 June 2017