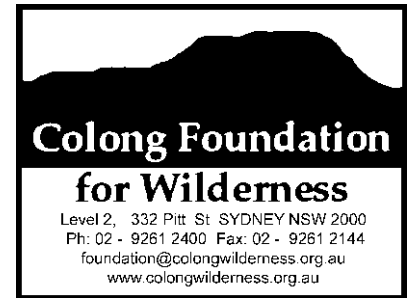


Tuesday July 8<sup>th</sup>, 2014



Mining and Industry Projects  
NSW Department of Planning & Infrastructure  
GPO Box 39  
Sydney NSW 2001

Dear Sir/Madam,

**Objection to Airly Colliery modification 3 – (extending 162/91 consent for a year) due to inappropriate consent conditions for a NPW Act reserve**

**Need to confirm adequate minimisation of subsidence impacts associated with Bord and Pillar Mining Methods**

The Colong Foundation agrees with the Greater Blue Mountains World Heritage Advisory Committee that the Mugii Murum-ban State Conservation Area should be added to the Greater Blue Mountains World Heritage Area once mining at Airly Colliery has been completed.

For this intention to be successfully achieved, any modification 3 consent must require maximum tilts and strains specified as specified on page “i” of the executive summary and on page 29 in section 6.1 of the environmental assessment. There must be no exceptions to vertical subsidence being a maximum of 125mm, a maximum tilt of 2.5 mm/m; and a maximum strain of 2.0 mm/m.

The Colong Foundation is confused by Centennial Coal’s remarks in its June 2014 environmental assessment that suggest mining subsidence be greater than the above undertakings.

On page 11 the June 2014 environmental assessment states that modification 3 would extend the life of the existing consent to 31 October 2015, this implies that there would be no change to any consent condition other than the expiry date.

Surely regulatory and determining authorities can determine appropriate consent conditions for a modification consent? The modification as proposed by Centennial would apparently include a mine method and design that allows ‘Full extraction in areas outside Environmental Protection Zones with

supercritical void widths' and 'maximum subsidence of 1.8 m' (page 11, Section 3.1 mining under the proposed modification).

Subsidence of 1.8m is totally unacceptable must be removed from any extension of development consent under Modification 3.

The Colong Foundation for Wilderness is a member of the Special Management Committee, established under the 1991 consent. This Committee received a presentation by Centennial Coal on September 14, 2010 regarding its intended mining operations at Airly Colliery.

Slide 12 of that Centennial Coal presentation gave the following undertakings: 'Different layout depending on depth:

- Quartering <120m depth;
- Partial extraction of pillars >120m depth;
- No mining <20m depth. No intersections <30m depth
- Barriers and compartments isolate extracted areas
- Remaining coal supports overburden
- Very low levels of surface subsidence' (Centennial Coal, Sept 2010)

The relevant slide from this presentation is attached to this submission as **Attachment A** and the minutes of 14 September 2010 are provided as **Attachment B**. These Special Monitoring Committee minutes state that mine would use a Partial extraction technique instead of 'full extraction' methods to minimise subsidence, prevent damage to aquifers and allow flexibility of mining to cater for varying underground conditions and surface features.'

The Colong Foundation assumes that these undertakings to the Special Monitoring Committee are further evidence that Centennial Coal must not cause a vertical subsidence of greater than 125mm, a maximum tilt of 2.5 mm/m; and a maximum strain of 2.0 mm/m.

Given these undertakings, the proposed extension of consent by one year for mining operations must specify subsidence criteria that are in the executive summary and page 29, with no exceptions.

The December 2013 EPBC referral adds further confusion. For example, documents another inappropriate proposal for a total subsidence of 0.5 metres under the historic oil shale ruins. Such variations are unacceptable. The subsidence criteria proposed in the executive summary of the June 2014 environmental assessment for Modification 3 must be the criteria used as a condition in the modification consent, not those in 162/91 consent.

### **Consent 162/91 is no longer appropriate**

The 162/91 consent is out of date and any modification of consent for continued mining operations at Airly must ensure minimal surface subsidence. Circumstances have changed, as the Mugii Murum-ban State Conservation Area was created on March 4, 2011.

The Colong Foundation does not accept that it is appropriate to continue mining for a one year under the old regulatory framework that permits subsidence of 1.8 metres, as if there has been no change in land use or formal company undertakings regarding minimal subsidence.

The development consent for this mine must be amended to reflect these circumstances.

We appreciate that Centennial Coal has not been able to meet its obligations regarding a new development application for the entire operation before expiry of the old consent. This oversight does not, however, justify rolling over an inappropriate consent conditions into the proposed modification consent.

In this interim period the existing consent should be modified. The condition that allows for 1.8 metres of vertical subsidence must not be migrated into the modification 3 consent.

### **New development application must be for the entire mine operation**

Further, the proposed new major project assessment, called the Airly Mine Extension Project (SSD 12\_5581), must consider environmental management within the existing mining lease area. Development consents should lapse on expiry and new one issued to allow mining operations to adapt to changed circumstances. Adaptive management should operate in these circumstances.

Airly Mine Extension Project environmental assessment must not be constrained to the new lease area, as has been proposed by Centennial Coal. The regulatory framework for development control regarding the expiry of old consents must require an environmental review and issue of a new consent for the entire mining operation.

The existence of mining lease 1331 does not preclude changes in the development control of activities under NSW planning legislation.

### **Oil Shale Ruins should be treated as an area of special significance**

The June 2014 environmental assessment, Centennial Coal ignores the oil shale heritage in its mining operation area. Centennial Coal has not indicated the location, character and extent of these important ruins on Figure 6 on page 31 of the June 2014 environmental assessment. These ruins are indeed sensitive cultural features and should have been indicated on Figure 6.

Centennial does not propose in its June 2014 environmental assessment to protect the oil shale ruins from pillar splitting or quartering, such as proposed in relation to the 'stone cottage'.

The allegation made by RPS Australia East Pty Ltd (April 1998) that the Airly Shale Mining Complex is only of local heritage value is ludicrous. Those who have examined these ruins are impressed at the level of preservation and unique character of the miner's dwellings on Mount Airly. I know of no better preserved site for such heritage in NSW, including Newnes and Glen Davis.

The Colong Foundation opposes the proposed mining operation as it does not adequately identify or protect these historical oil shale ruins. The Foundation is disappointed with the failure by Centennial to refer to, assess and protect the heritage values of these ruins in the proposed Modification 3 environmental assessment.

The Foundation believes that the proposed mining operations will have environmental impacts on the oil shale heritage. Centennial Coal must not reduce, split or quarter coal pillars under the Airly oil shale ruins. There should be no noticeable subsidence impacting on the oil shale ruins.

### **Management of product and rock waste stockpiles**

The company owns large tracts of cleared land at Airly. Centennial should remove cattle and revegetate its properties to manage its properties in a manner more consistent with the adjoining national parks and reserves.

The Foundation understands that Centennial has a plan to separate fine and coarse mine wastes. This plan may be part of a proposal to market coal product to the local power plant market. This plan may explain why large stockpiles of coal have accumulated at the mine.

The management plan needs to consider the landscaping of coal product and waste rock piles in relation to parks and popular tourist viewing points, such as the Glen Davis Road and even Pearsons Lookout. Visually prominent waste and product heaps must be appropriately screened.

The mess created at the head of the Wollangambe River catchment by Centennial's Clarence Colliery should not be repeated here at Airly Colliery in the Capertee River catchment.

The company must screen its operations and prevent visual blight in a popular tourist area, the Capertee Valley. Airly Colliery should be subjected to continuous rehabilitation and landscaping.

The coal waste piles should be top sealed with clay as soon as possible to prevent contamination of groundwater resources through heap leaching. Such leaching leads to more or less permanent source of downstream pollution. Capping of waste heaps should also be a priority at Centennial Coal's Clarence Colliery.

## **Impacts on the World Heritage Area – Water management**

Water discharged from this mine will have critical impacts when the effluent affects the World Heritage Area downstream. Omission of these impacts and failure to consider downstream impacts on the World Heritage Area in the modification 3 proposal is of concern.

There will be water quality impacts, they should be part of the modification assessment process and the potential to pollute the World Heritage Area are deemed a controlled action in relation to SSD 12\_5581. So the omission of this assessment is a serious concern.

The proposed operations under Modification 3 are very likely to discharge mine effluent into Airly Creek. Such discharges would impact on the Gardens of Stone National Park, in the Greater Blue Mountains Area. Airly creek flows directly into the adjoining World Heritage Area.

Water treatment of the effluent from this colliery to remove salts or dissolved metals should be required. Airly Creek is in a very good condition but has very small flows. Mine effluent discharges are likely to have a much greater effect on the previously pristine downstream ecology than if Airly Creek were a larger stream.

## **Conclusion**

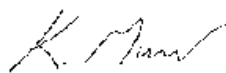
The Colong Foundation is very concerned that the proposed partial extraction of the coal pillars will see a greater risk of mine subsidence related damage in the Mugii Murum-ban State Conservation Area.

Wording of the June 2014 environmental assessment in relation to mine subsidence must not result in mining methods causing impacts on the natural environment, particularly internal cliffclines and pagodas, springs and groundwater, as well as on oil shale heritage sites.

Mine intensification by stealth is inappropriate and the ambiguities in the environmental assessment regarding subsidence must not be migrated into the development consent.

Images depicting some of the Mt Airly oil shale ruins are below.

Thank you for the opportunity to comment on this modification proposal.



Keith Muir

Director

The Colong Foundation for Wilderness









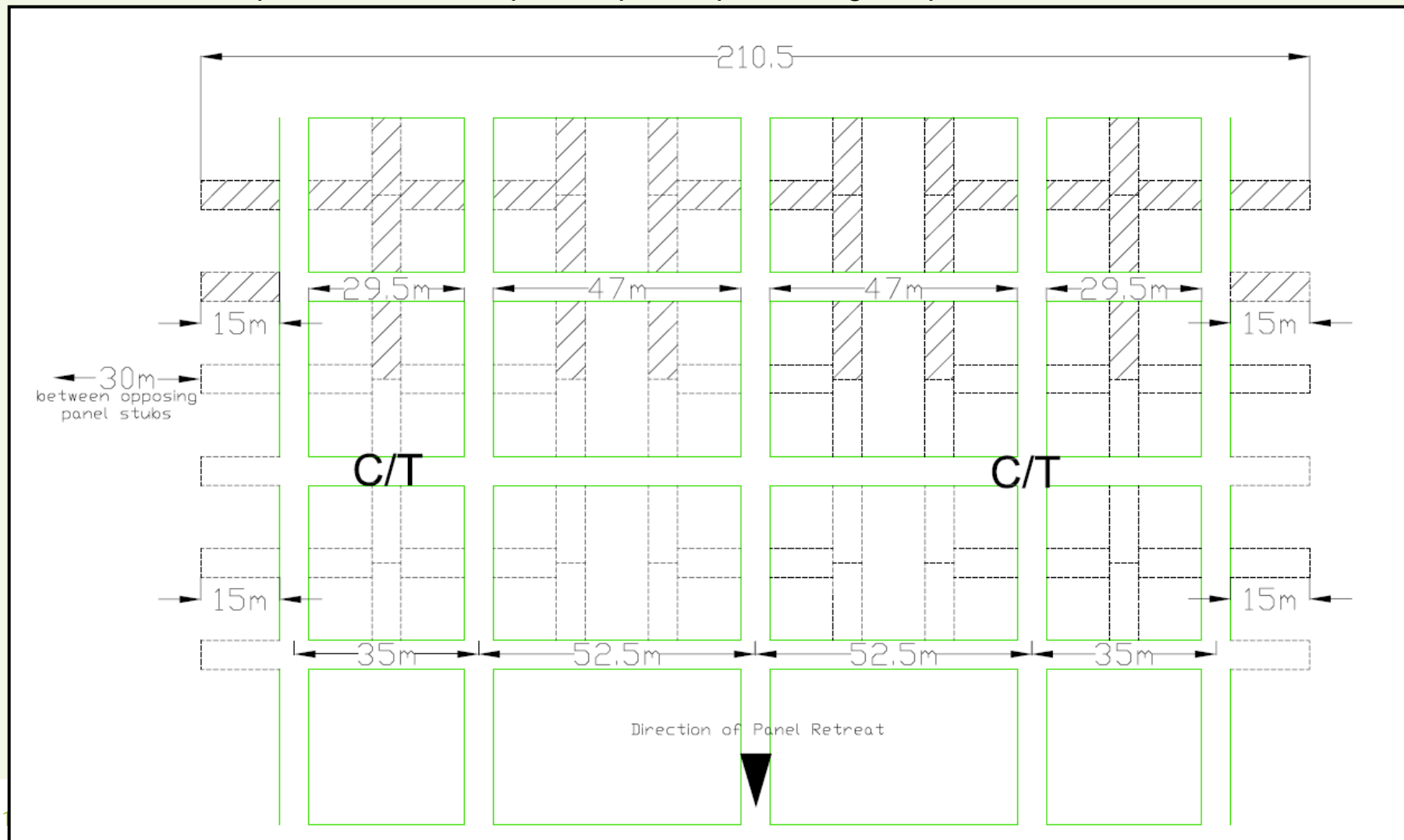
# Why Use Partial Extraction?

- Minimise subsidence – environmental protection and consent conditions
- Prevent damage to aquifers - environmental protection and minimise ingress of water to the mine
- Prevent high stresses due to 'abutment' load generated with full extraction – due to weak roof
- Mining method allows flexibility to cater for varying underground conditions, provide protection of surface features (natural and man made) and vary production rates



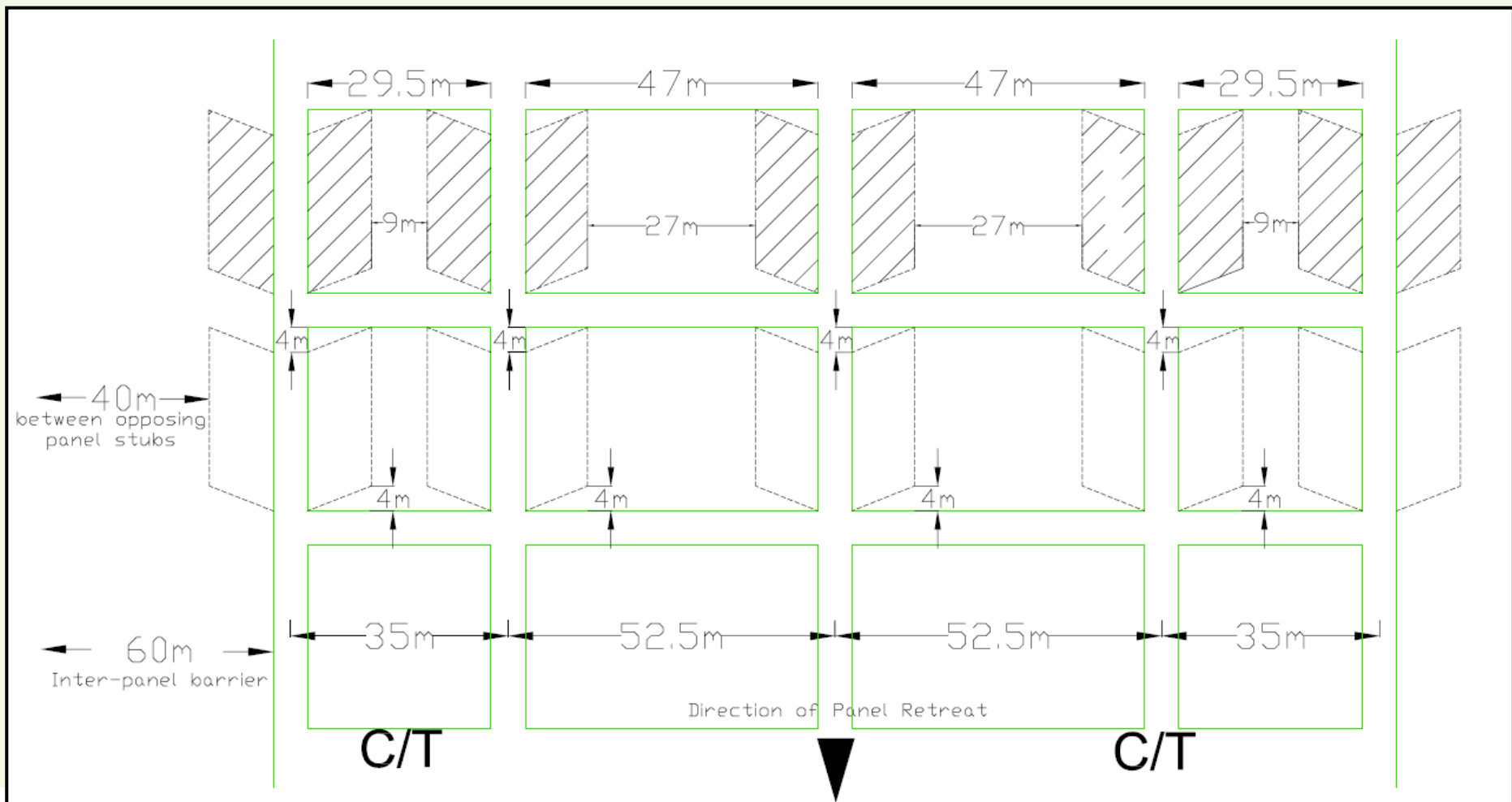
# Conceptual Partial Extraction Layouts

## Conceptual extraction plan – pillar quartering (depth of cover 30m – 120m)



# Conceptual Partial Extraction Layouts

Conceptual extraction plan – partial extraction (depth of > 120m)



# Partial Extraction Features

- Different layout depending on depth
  - Quartering <120m depth
  - Partial extraction of pillars >120m depth
  - No mining <20m depth. No intersections <30m depth
- Barriers and compartments isolate extracted areas
- Remaining coal supports overburden
- Very low levels of surface subsidence
  - e.g. Clarence partial extraction <100mm
  - Full pillar extraction typically 0.5-1m
  - Longwall typically >1m

# **Airly Mine**

## **Special Monitoring Committee**

### **Minutes of Meeting**

### **14th September 2010**

#### **1. Meeting Opening and Introductions**

##### **Attendance:**

Councillor Grahame Danaher – *Chairperson*  
Gary Wallace - *Lithgow City Council (LCC)*  
Graham Pryor - *Centennial Coal, Airly Mine (CEY)*  
David King - *Centennial Coal, Airly Mine (CEY)*  
Nicole Van den Berg - *Centennial Coal, Airly Mine (CEY)*  
Greg Kininmonth- *Department of Industry & Investment (Minerals (DII))*  
Dave Noble - *DECCW - National Parks*  
Karen McLaughlin- *Colong Foundation for Wilderness and Blue Mountains Conservation Society (BMCS)*  
Collette Parr - *Capertee & District Progress Association (CPA) and local resident*  
Veronica Sanday – *Capertee Valley Environment Group Inc. (CVEG)*  
Donna Upton- *Capertee Valley Alliance Inc (CVA)*

#### **2. Apologies and Proxy Votes**

Haydn Washington - *Colo Committee*  
Keith Muir - *Colong Foundation for Wilderness* - Karen McLaughlin nominated as proxy.  
Rona Wallace - *Capertee & District Progress Association* – Collette Parr nominated as proxy

#### **3. Correspondence**

- Letter received from Rosie Doyle on 14/09/2010, to inform the SMC of the name change of the *Capertee Valley Protection Society* to the *Capertee Valley Environment Group Inc.* Veronica Nolan (Sanday) has been named as the CVEG representative for future SMC meetings.
- Legal advice received by LCC from Pikes Lawyers on 7/09/2010, regarding membership of the SMC and the replacement of the Capertee Valley Committee. Under legal opinion, the composition of the SMC cannot be varied unless the provisions of condition 31(a) of the Airly development consent are modified pursuant to Section 96 of the EPA Act.



#### **4. Confirmation of Previous Minutes**

Motion: “That the minutes of the previous meeting be confirmed”

Proposed: Karen McLaughlin Seconded: Dave Noble Motion carried

#### **5. SMC Membership**

Applications for membership on the SMC have been received from:

- Blue Mountains Conservation Society
- Capertee Valley Environmental Group
- Capertee Valley Alliance Inc

As a consequence of the decision taken at the previous SMC meeting, legal advice had been sought by LCC on the possible replacement of the Capertee Valley Committee and admission of other community groups.

The legal opinion states that the composition of the SMC may only be varied if the provisions of condition 31(a) of the Airly development consent are modified pursuant to Section 96 of the EPA Act. The SMC cannot, of its own volition, alter its own composition of membership.

Airly Mine advised that it is currently working towards the Development of a Part 3A approval for the renewal of the development consent and mining lease.

Committee Discussion:

1. As part of a new Part 3A approval for the mine it is possible that the SMC will be replaced by a Community Consultative Committee (CCC). CCC meetings incorporate community members from the local area to the mine. It gives the general public a person within the community that people can approach as a member. The current consent will lapse in a few years and this will possibly come into practice then.
2. The committee can co-opt representatives from other relevant bodies, authorities or persons where necessary in accordance with condition 31(d).
3. The SMC could move motions to have the community and/or environment groups that applied for membership to the SMC accepted as non-voting participants of the SMC. As such they would be able to attend meetings and receive information in relation to the SMC.

## ATTACHMENT B

Motion: “That the Capertee Valley Alliance Inc be involved with the SMC as a non-voting participant of the Committee.”

Proposed: Dave Noble Seconded: Nicole Van den Berg Motion carried

Motion: “That the Capertee Valley Environment Group Inc be involved with the SMC as a non-voting participant of the Committee.”

Proposed: Collette Parr Seconded: Karen McLaughlin Motion carried

Motion: “That the Blue Mountains Conservation Society be involved with the SMC as a non-voting participant of the Committee.”

Proposed: Collette Parr Seconded: Greg Kininmonth Motion carried

The Chairman announced that the SMC representative groups, both voting members and non-voting members, are to each nominate one representative for the purpose of meeting attendance. If that person cannot attend the SMC for any reason, a proxy representative may be nominated in writing and the correspondence of such is to be raised at the meeting and minuted within the minutes under apologies and proxy votes.

### **6. Business arising from the minutes of the previous meeting**

#### **Terms of Reference:**

An appendix has been attached to the Terms of Reference documenting conditions from Development Consent and Airly Mine leases where the SMC is referred to. This was tabled by Airly Mine.

**Tour of Airly Mine site** is available after the SMC meeting.

### **7. Adoption of Terms of Reference**

Motion; “That the terms of reference with the appendix be adopted.”

Proposed: Greg Kininmonth Seconded: Dave Noble Motion carried

The Terms of Reference document is to be distributed to SMC with the minutes of this meeting.

### **8. Airly Mine Presentation on Proposed Mining Methods**

A presentation was given by Airly Mine’s Senior Mining Engineer David King. The presentation covered:

- Background of Airly Mine from the project being acquired by Centennial Coal in 1997 through to construction and mining in 2010.
- Proposed mining method to be adopted at Airly mine involving ‘bord and pillar’ method and partial extraction.

## ATTACHMENT B

- Mining equipment used at the mine.
- Partial extraction technique instead of 'full extraction' methods to
  - minimise subsidence,
  - prevent damage to aquifers and
  - allow flexibility of mining to cater for varying underground conditions and surface features.
- Features of extraction.

Comment/ Question	Answer	Action
Can a plan covering ownership of the land over the lease be presented at the next meeting?	A plan showing land ownership will be presented at the next meeting on 15 <sup>th</sup> March 2011	Include plan in Airly mine presentation at next meeting - CEY
What are the timings of secondary extraction at the mine and also of the Development Consent renewal?	Both approval for secondary extraction and the re-approval of the development consent will be sought by 2014.	N/A

## 9. General Business

A presentation was given by Airly Mine's Environment and Community Coordinator, Nicole Van den Berg, providing an environment and community update covering the period since the last meeting. The presentation covered:

- Environmental monitoring sites at the mine
- Environmental water monitoring results from the past three months for Total Suspended Solids, pH, Electrical Conductivity, oil & grease. There have been no issues with any of these parameters since the last meeting
- Environmental air quality monitoring data from the past three months. The only issue was an unexplained elevated level of total insoluble solids at one of the monitoring points (DM1) in the June/July period. All other monitoring points including those closer to the mine site remained well below the level of 4g/m2/month and the reason for elevated levels is believed to not be related to mining activities.
- Community concerns. One complaint received from a neighbouring property in relation to noise from site in August 2010. Communication maintained with neighbours and changes were promptly made to the evasees of the temporary ventilation fans on site. Ongoing discussions are to be held with residents to keep them informed of progress of the installation of the permanent ventilation fans. Noise monitoring at a number of locations around the mine to be carried out in September to determine noise impacts on the surrounding area.
- Community relations. The site has been continuing with community interactions and sponsorship since the last meeting. For the information of the wider

## ATTACHMENT B

community, a Community Information Day is being hosted by Airly Mine at the Capertee Memorial Hall on Saturday 23rd October between 10am and 3pm. Mine representatives who will be available to speak with members of the community on the day will consist of the Mine Manager, Human Resources Manager, Health, Safety & Training Coordinator and the Environment & Community Coordinator.

- Comment made over the need for ongoing positive things that are being undertaken on site being tabled. It was considered that the SMC is a perfect forum to indicate the net positive effect the operation is having on the local area. This forum is an opportunity for the local representatives to be advised on positive things being undertaken on site.

Comment/ Question	Answer	Action
Can a copy of the presentations from today's SMC be provided with the minutes of the meeting?	An electronic copy of the presentation will be supplied with the minutes when they are distributed	Attach a copy of the presentation to e-mail containing the minutes - CEY
Collette Parr commented that if anyone has any issues with the mine, to please make contact with the mine directly as issues she has previously had, have been taken seriously and followed up proactively	Airly Mine encourage any community members to contact the mine directly if there are any issues. By contacting the mine directly the issues can be handled in a more timely manner	Nil
Community raised a requirement for details on what surface activities or infrastructure may exist in the future over the proposed State Conservation Area of Genowlan Mountain.	There is no proposal for ventilation shafts to be installed over any area of either Airly or Genowlan Mountains. All ventilation infrastructure is located at the pit top area. There are also no plans for the installation of the 'eastern portal' that was approved under the DA that was proposed for the eastern side of Genowlan mountain. Any ongoing activities over the proposed SCA would included environmental monitoring including Flora & Fauna monitoring and the installation of groundwater monitoring bores	CEY to give ongoing updates on activities to be carried out over the proposed SCA area at future meetings
Donna Upton thanked the	As above	Nil



## ATTACHMENT B

mine for relocating the spotlight that was directly in the line of site of Glen Davis Road at the time of the previous meeting		
Donna Upton raised a question concerning information she had heard in relation to 6% of mining royalties being returned to the local communities	CEY, LCC & DII commented that they were not aware of any such discussions or directives.	Nil

### **Date of next meeting**

Next meeting is scheduled to be held on Tuesday 15th March 2011 commencing at 10.30am at the Capertee Memorial Hall.

### **11. Meeting Closed**

Chairman Grahame Danaher thanked everyone for their attendance.  
The meeting closed at 1.15pm

Tour of Airly Mine site commenced at 1:45pm. Attendees of the site tour included: Greg Kininmonth, Dave Noble, Karen McLaughlin, Collette Parr, Veronica Sanday, Donna Upton, David King and Nicole Van den Berg.

Mining and Industry Projects  
NSW Department of Planning & Infrastructure  
GPO Box 39  
Sydney NSW 2001



**Objection to Airly Colliery modification 3 – (extending the 162/91 consent for a year) due to *inappropriate consent conditions***

**By the Colo Committee**

Dear Sir/Madam,

**Introduction**

The Colo Committee is an environment group that has been involved with Wollemi and the Gardens of Stone area since the 1970s. I write this submission as the Hon. Secretary of the Colo Committee, a position I have held since 1974. The Colo Committee prepared the original Gardens of Stone National Park nomination in 1985 (in conjunction with other conservation groups). The Colo Committee has been visiting the Genowlan and Airly mesas (now Mugii Murum-ban SCA) since 1980, studying both the biodiversity and geodiversity of this unique area.

I write as the Hon. Secretary of the Colo Committee, but I am also a plant ecologist and environmental scientist and first visited Genowlan and later Airly mesas around 1980. I am the ecologist who nominated both the Genowlan Point Heathland Endangered Ecological Community under the TSC Act and *Pultenaea sp. Genowlan Point* (which I co-discovered with Jan Allen of the Mt Tomah Botanic Gardens) under both the Threatened Species Conservation Act 1987 and the Federal Environment Protection and Biodiversity Conservation Act (nominated successfully as critically endangered). I have also studied the geodiversity of the Gardens of Stone Area, especially the 'pagoda' rock formations. With my co-author, geomorphologist Robert Wray, I wrote the major peer-reviewed scientific paper on the geomorphology and geoheritage of the pagodas (Washington and Wray, 2011), published in the NSW Proceedings of the Linnaean Society. I have been on field trips to Genowlan and Airly dozens of times, and know the area very well.

I have also until recently been a Board Member of the Greater Blue Mountains World Heritage Advisory Committee. In both this capacity, and in my capacity as a member of environmental NGOs, I have held meetings with Centennial Coal over many years. I am still officially a member of the Airly mine's community advisory committee (though I have not been able to attend recent meetings, I attended early meetings). During these meetings, I have discussed with Centennial Coal the proposal to mine under the SCA, and the means of assuring that this highly dissected plateau is not damaged by coal mining. I took the company's chief subsidence engineer walking into Genowlan Point, where we discussed specifically how the unique geodiversity, biodiversity and scenic beauty of Genowlan mountain must not be damaged by subsidence. The subsidence engineer *completely agreed*. Following negotiation between Centennial and environment groups such as the Colong foundation for Wilderness, the Blue Mountains Conservation Society and the Colo Committee, Centennial Coal supported the creation of a SCA, now called Mugii Murum-ban SCA. At that time conservation groups *praised Centennial Coal for its support and its iron-clad agreement that it would only take out half the coal*, leaving the other half to protect the unique biodiversity and geodiversity of Genowlan and Airly mesas. We are disappointed that Centennial Coal now *seeks to backtrack on its earlier agreement*, so that the current proposal seriously threatens the extremely high conservation significance of this SCA. For these reasons the Colo Committee strongly opposes this proposal in its current form, given it is a total abandonment of the earlier (environmentally responsible) position taken by Centennial. This proposal will significantly damage Mugii Murum-ban SCA, an area the Greater Blue Mountains World Heritage Advisory Committee would like to see added to the Greater Blue Mountains world Heritage Area once (responsible) mining has concluded.

### **Biodiversity, geodiversity and heritage significance**

Genowlan and Airly mesas are *simply superb*. They are the 'jewel in the Crown' of the highly significant uplands that surround the Capertee Valley. While the mesas are only around 3000 ha in size, they contain at least 8 rare or threatened plant species and several threatened animal species. They contain the largest known populations of (and are probably the site of evolution for) the rare plant *Epacris muelleri*. They contain an endangered

ecological community (Genowlan Point Heathland) and a critically endangered plant species (*Genowlan sp. Genowlan Point*) under the EPBC Act. They contain superb examples of both internationally recognised ‘platy’ pagodas (e.g. City in the Sky) and nationally significant smooth pagodas. They contain 80 metre sheer cliffs, slot canyons (e.g. Valley of the Kings, the Hidden Valley and the Grotto, and tributaries to the east). They contain on Mount Airly fascinating historic ruins of the shale oil industry (recognised and listed by the NSW Heritage Office). They also contain more recent ruins of diamond mining of an alluvial bed of a paleo-stream on Airly Turret (the larger basalt mount known as Airly turret to the east of Genowlan Mountain). Taken together, the conservation significance of these mesas maxes out *off the top of the scale*, hence why they were recognised in the creation of Mugii Murum-ban State Conservation Area. There is no doubt that the proposed subsidence of up to 1.8 metres will damage the geodiversity and biodiversity and historical significance of this wonderful area. Such impacts are not acceptable in a SCA. **Hence the current proposal must be refused in its current form.**



### **The danger of major subsidence damaging geodiversity and biodiversity**

The geodiversity significance of these highly dissected plateaus has been increasingly recognised over the years. While the Department of Mineral Resources at the 1993 Airly Commission of Inquiry unfortunately referred to the ‘pergolas’ instead of the ‘pagodas’, since that time recognition of the unique pagoda landform has made through government documents (e.g. Washington, 2001), through scientific papers (Washington and Wray, 2011) and at the Geodiversity Conference held at Port Macquarie in 2010 (see:



[http://www.resourcesandenergy.nsw.gov.au/\\_data/assets/pdf\\_file/0006/358584/GGHG\\_2010\\_Washington\\_Wray.pdf](http://www.resourcesandenergy.nsw.gov.au/_data/assets/pdf_file/0006/358584/GGHG_2010_Washington_Wray.pdf) ).

Centennial has previously only extracted *half the coal* under significant pagodas areas on Bungleboori creek to ensure these did not collapse. Indeed they boasted of ‘how responsible’ they had been in doing this. It was put to environment groups that if they could do it safely there, then they could do it safely under Genowlan and Airly – *taking only half the coal*. Under negotiations with Alex Brown and Mary-Anne Crawford of Centennial Coal regarding the creation of Mugii Murum-ban SCA, Keith Muir of the Colong Foundation for Wilderness and myself (Haydn Washington) of the Colo Committee, Centennial then informed us that they *planned only to take half the coal* under the area, leaving half the coal to support the highly significant surface of what is now the SCA. My recollection is that this was also stated to the Greater Blue Mountains World Heritage Advisory Committee. **Sadly, the current proposal totally backflips on that commitment.** The reason seems to be simply that the price of coal has slumped since then, and hence the company wishes to mine more coal to make a similar profit. This is *unacceptable under a State Conservation Area* and the Department of Planning and Infrastructure should stop the current proposal, or only approve it if it **goes back to the previous commitment** to take only half the coal under the *whole* of the SCA.

Page 11 of the June 2014 environmental assessment states that modification 3 would extend the life of the existing consent to 31 October 2015, implying no modification of inappropriate consent conditions. The proposed modification would include a mine method and design that allows ‘Full extraction in areas outside Environmental Protection Zones with supercritical void widths’ and ‘**maximum subsidence of 1.8 m**’ (page 11, Section 3.1 mining under the proposed modification). **Subsidence of 1.8m is totally unacceptable must be overturned by any extension of development consent under Modification 3.**

Figure 5 of the EA shows that the bulk of the SCA is not in the so-called ‘protection zones’ (see below). More than three quarters of the mesas will be subsided by 1.8 metres. Where this has occurred elsewhere in pagoda country with longwall mining, this has caused hundreds of cliff collapses and cracking of pagodas (e.g. Angus Place and Baal Bone Collieries).

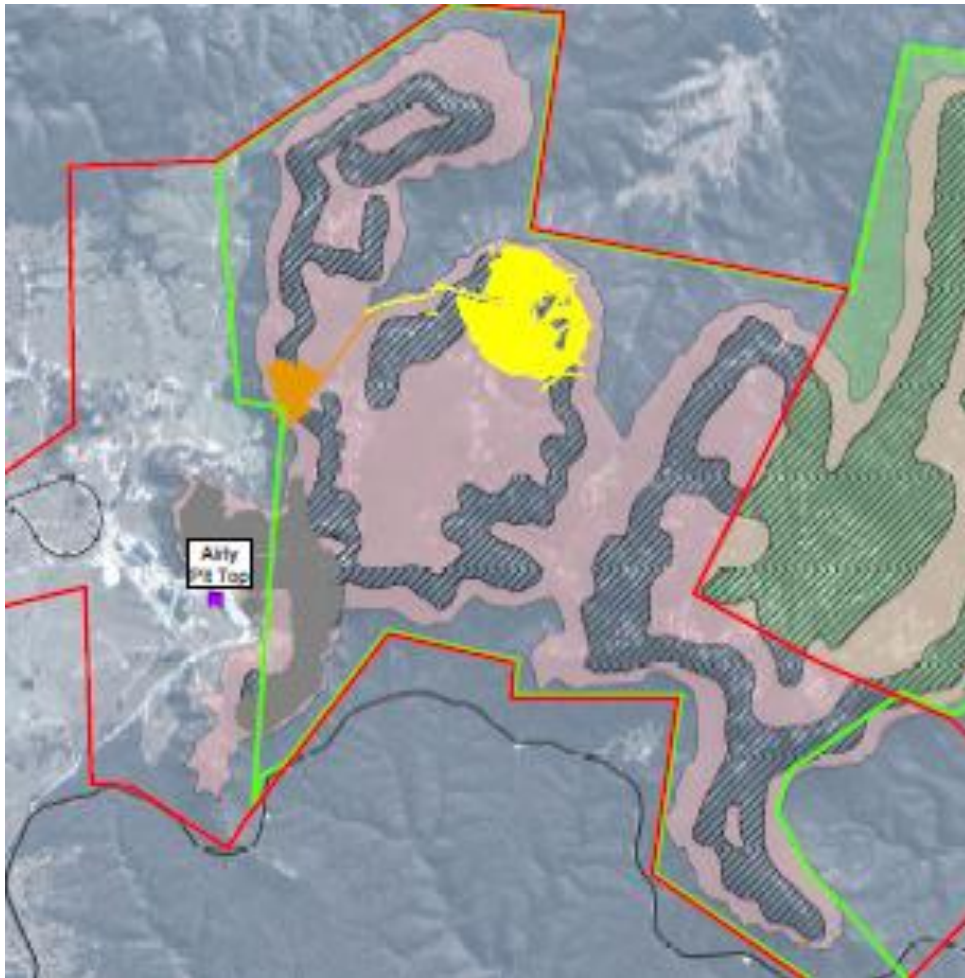
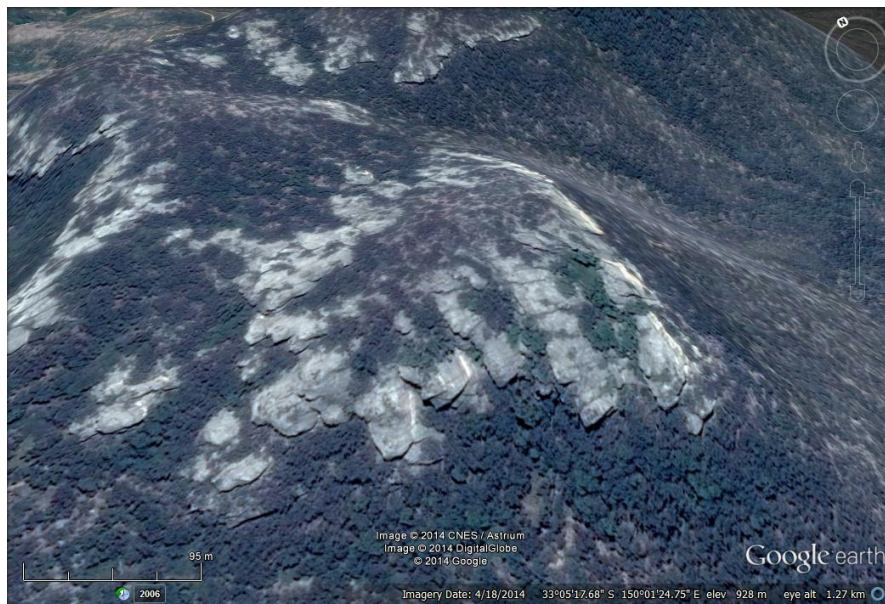
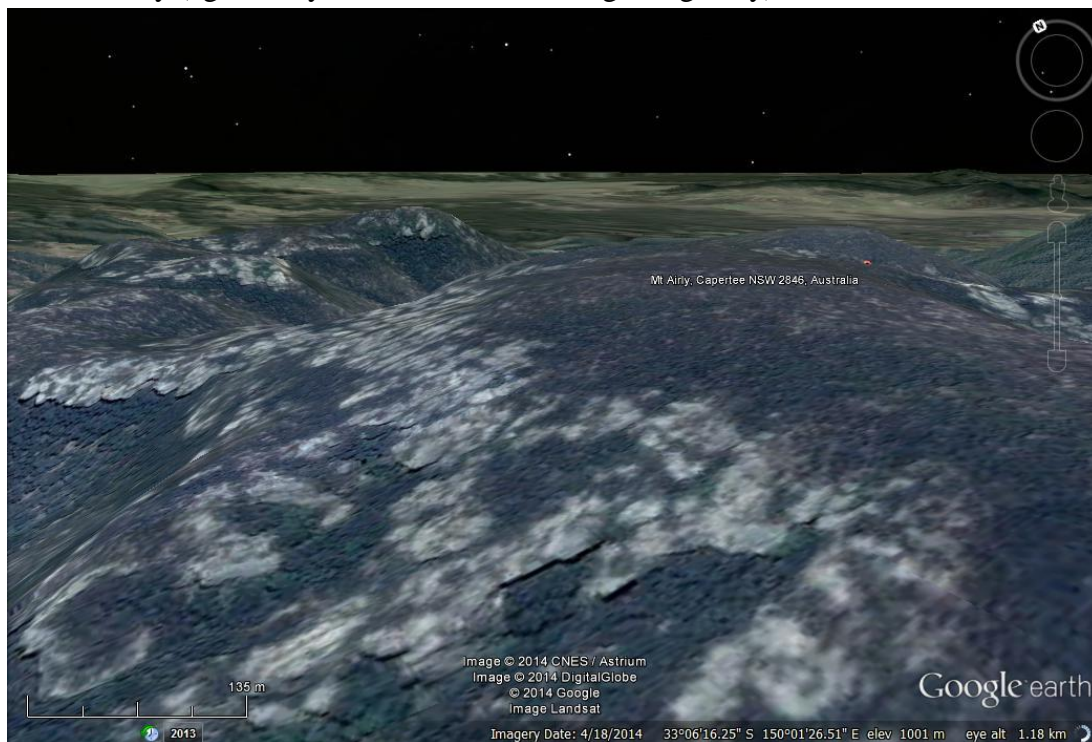


Figure 5 (above) is deliberately kept vague and at low resolution in the proposal document to hide the enormity of the areas that will be subsided by a staggering 1.8 metres. However, since the Colo Committee knows the area very well, we point out that they will threaten with collapse and cracking. Below shows a series of Google Earth snapshots. The Colo Committee has many slides of most of these areas but does not have digital scans of these, now in the short 2 week timespan have we been able to scan these. Hence I use snaps from Google Earth. It should be pointed out that Google Earth always makes topography look flatter than it actually is. The slopes shown are thus actually steeper. Some key areas in the 1.8 metre subsidence (= collapse and cracking) zone are:

- the smooth pagodas shown below near mount Torbane (visible from Mudgee highway),

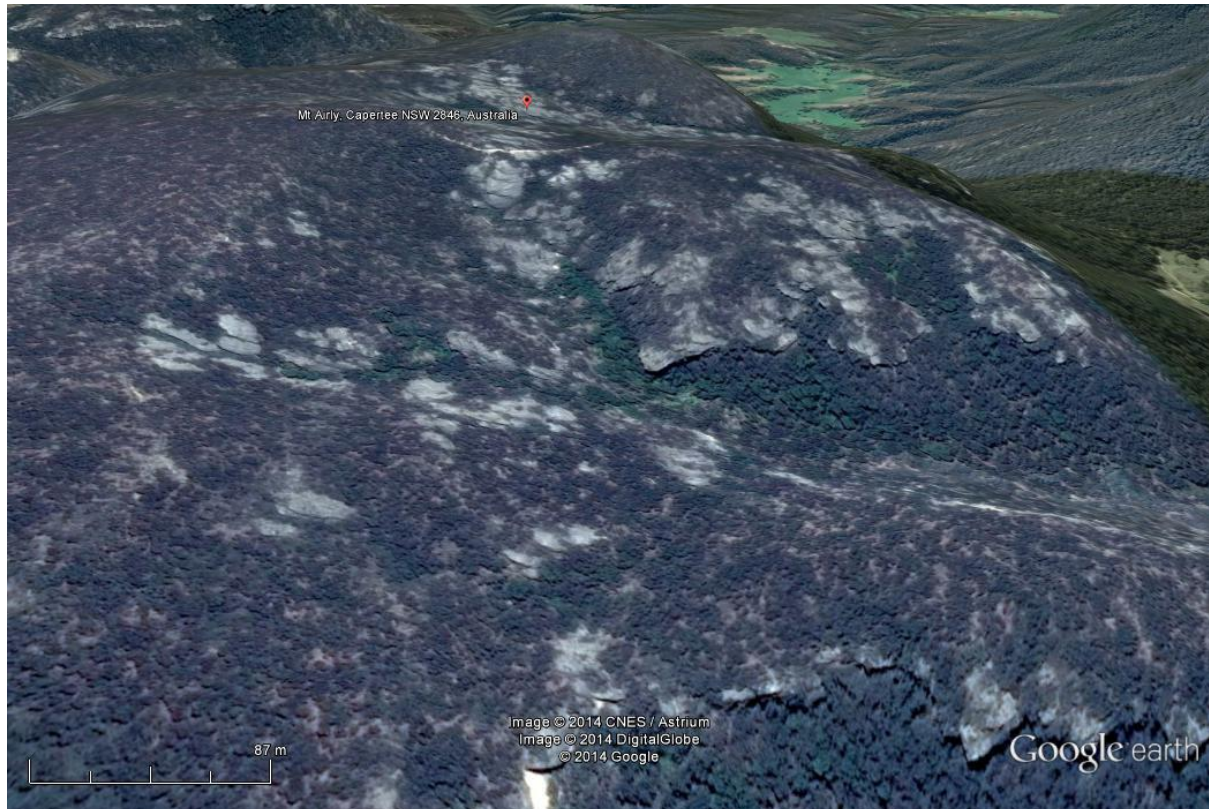


- the vast majority of the superb steeply-sloped pagoda band on the west of Mount Airly (again very visible from the Mudgee highway),

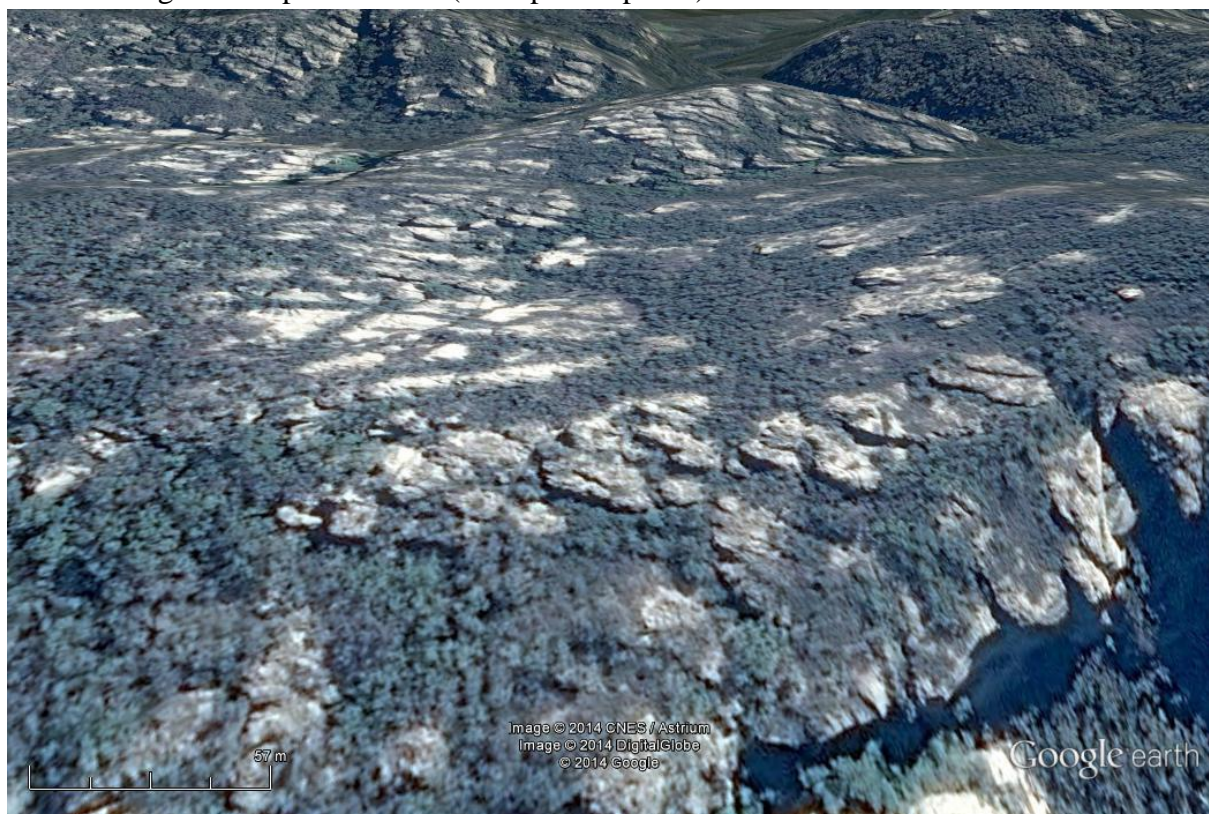




- very steep internal cliff-lines on the east side of Mt Airly (note the tall cliff with shadow is in the 1.8 metre subsidence zone and will almost certainly collapse)

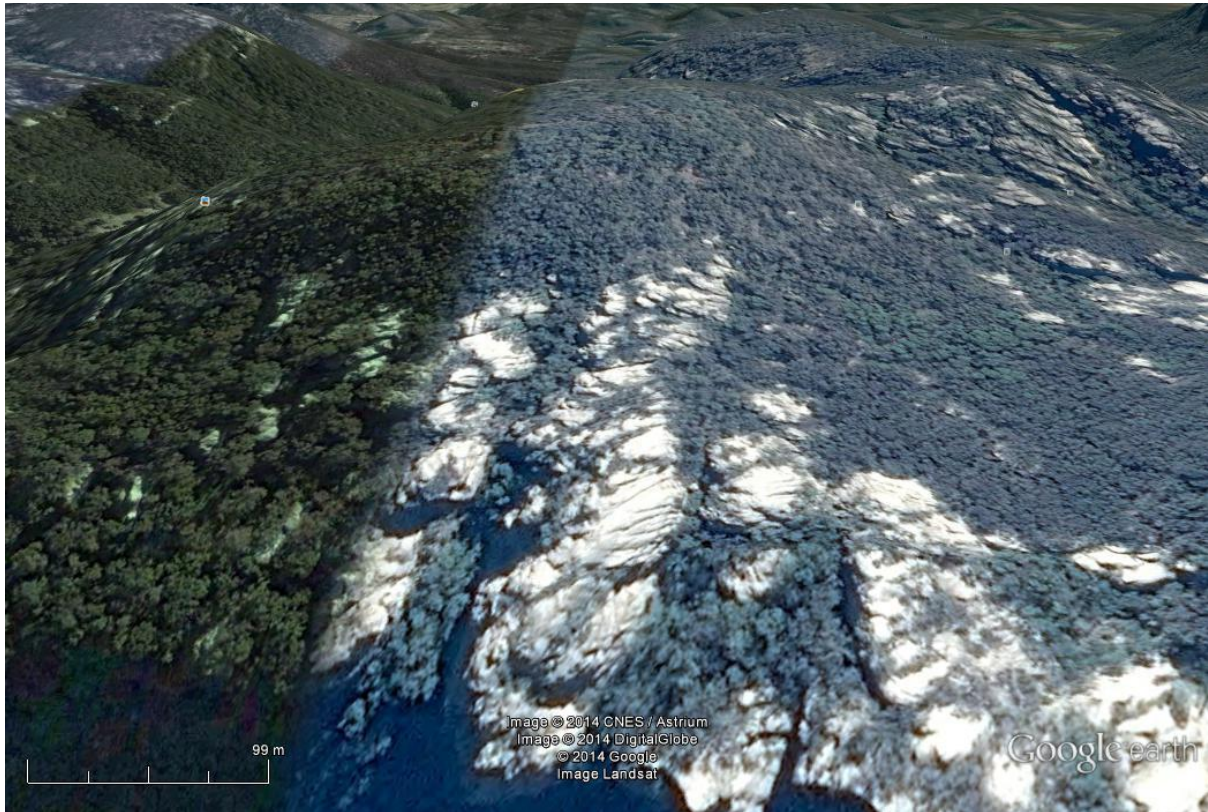


- pagodas east of Genowlan Mountain trig, note cliffs and caves shown in shadow in Google Earth photo below (front part of photo)

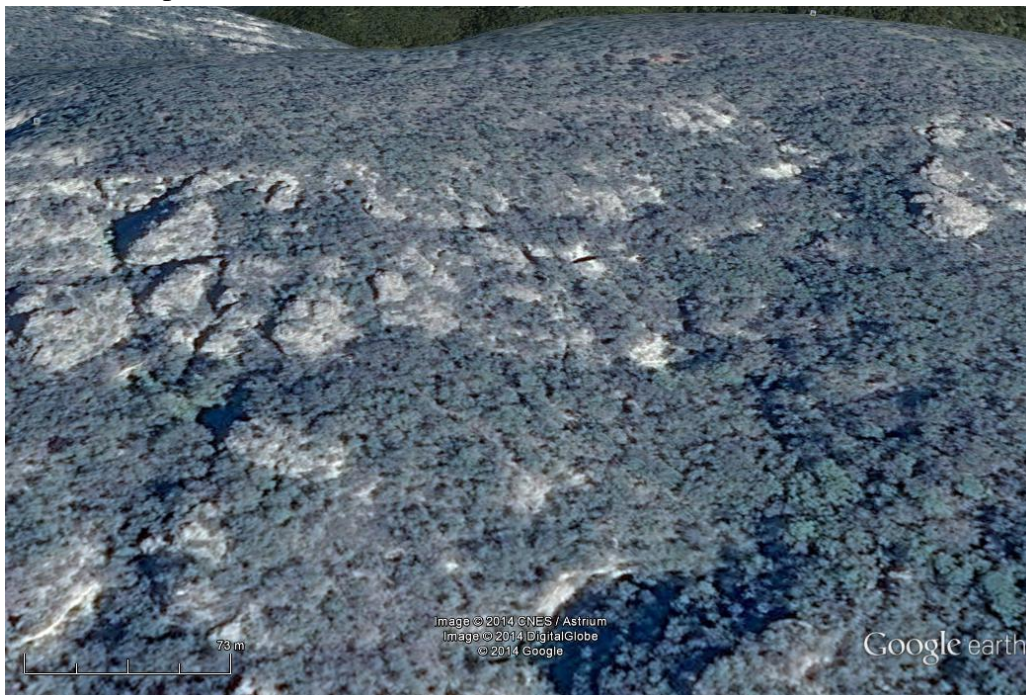




- pagodas west of 'Pappy's Pass' (where the road from Col Ribaux's property emerges on the south of the plateau). Note the deep canyon marked with trees in centre-photo that passes through the pagoda complex and will likely be shattered and collapse.

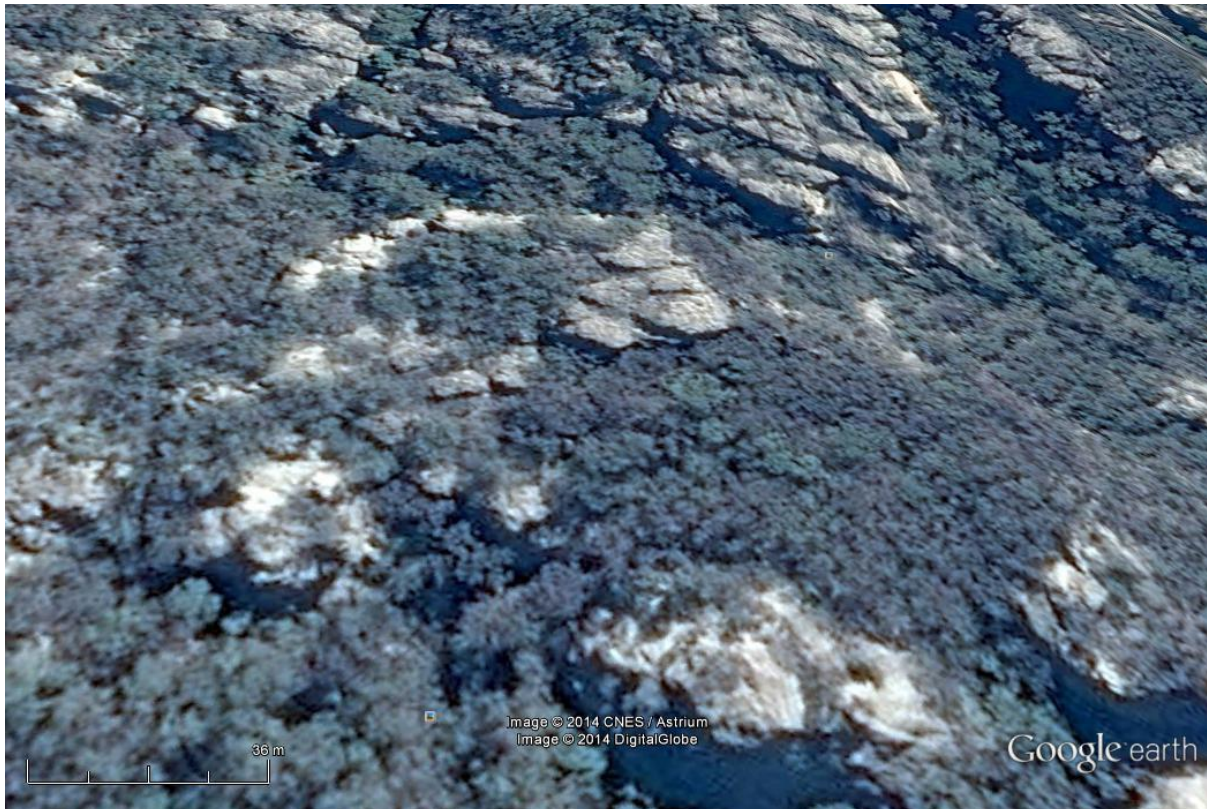


- pagodas on the south-east side of Point Hatteras which drop around 50 metres into a creek on the left of photo (extremely likely to collapse). Note also the tall pagodas undercut by caves and slot canyons on the left of photo. These are almost certain to collapse with 1.8 metre subsidence.





- pagodas to the north-west of the Grotto (centre photo) with cliffs and probably overhangs that will collapse.



1.8 metre subsidence will inevitably cause collapse and cracking of superb *internationally recognised* platy pagodas (Washington and Wray, 2011) and nationally significant smooth pagodas (Washington and Wray, 2014). They are likely to cause cliff collapses. It should be remembered that subsidence of around 1.5 metres in Baal Bone Colliery caused 124 cliff collapses in 2 years, as reported at the 1993 Airly Commission of Inquiry by the Department of Mineral Resources (Simpon, 1993; Washington, 2001). This is **simply not acceptable in a State Conservation Area**. Mining under a SCA is acceptable if it *does not damage the surface*, however Centennial coal has reneged on its previous agreement and the current proposal will significant damage the vast majority (over 75% of the mesas) of the SCA.

While not in the current proposal area, we note that their protection zones do not appear to protect the huge pagoda complex area on the southern edge of Genowlan Point, including the major caves involved, one of which is an Aboriginal site with a boomerang stencil. Any modification 3 consent must require maximum tilts and strains specified as specified on page “I” of the executive summary and on page 29 in section 6.1. **There must be no exceptions to vertical subsidence being a maximum of 125mm, a maximum tilt of 2.5 mm/m; and a maximum strain of 2.0 mm/m.**

The proposed extension of consent by one year for mining operations must specify subsidence criteria that are in the executive summary and page 29, ***with no exceptions***.



The December 2013 EPBC referral, for example, documents an inappropriate proposal for a total subsidence of 0.5 metres under the historic oil shale ruins. Such variations are unacceptable. The subsidence criteria proposed in the executive summary of the June 2014 environmental assessment for Modification 3 must be the criteria used in the modification consent, not those in 162/91 consent.

### **Consent 162/91 is *no longer appropriate***

The 162/91 consent is out of date and any modification of consent for continued mining operations at Airly must ensure *minimal surface subsidence*. This is the only possible strategy to protect a State Conservation Area that is actually of World Heritage significance. The Colo Committee does not accept that it is appropriate to continue mining for a one year under the old regulatory framework that permits subsidence of 1.8 metres and the destruction this will cause. The development consent for this mine should lapse - a new development application is required for the entire operation.

In this interim period, there should be no further consideration of 1.8 metres of vertical subsidence and this criterion must not be migrated into the modification 3 consent. Further, the proposed new major project assessment, called the Airly Mine Extension Project (SSD 12\_5581), must consider environmental management within the existing mining lease. Airly Mine Extension Project environmental assessment must not be constrained to the new lease area, as has been proposed by Centennial Coal. **The regulatory framework for development control regarding the expiry of old consents must require an environmental review and issue of a new consent for the entire mining operation.** The existence of mining lease 1331 is irrelevant to the development control of activities under NSW planning legislation.

### **Oil Shale Ruins should be treated as an *area of special significance***



In the July 2014 environmental assessment, Centennial Coal ignores the oil shale heritage in its mining operation area. Centennial Coal has not indicated these important ruins (recognised and listed by the NSW Heritage Office) on Figure 6 on page 31 of the June 2014 environmental assessment. These ruins are sensitive cultural features of great historic significance and should have been indicated on Figure 6.

Centennial does not propose in its June 2014 environmental assessment to protect the oil shale ruins from pillar splitting or quartering, such as proposed in relation to the 'stone cottage'. The allegation made by RPS Australia East Pty Ltd (April 1998) that the Airly Shale Mining Complex is 'only of local heritage value' is bizarre and contrary to the view of all who have visited the area. Those who have examined these ruins are universally impressed at the level of preservation and unique character of the miner's cave dwellings on Mount Airly. We know of no better preserved site for such heritage in NSW, including Newnes and Glen Davis. This is why they were listed by the NSW Heritage Office due to their historic significance. The historical significance of these old shale miner ruins was recognised at the 1993 Airly Commission of Inquiry (Simpson, 1993) which we attended for the full 6 days.

The Colo Committee *opposes any proposed mining operation that does not adequately identify or protect these historical oil shale ruins*. We are greatly disappointed with the failure by Centennial to refer to and assess the heritage values of these ruins in the proposed Modification 3 environmental assessment. *They well know their true significance*.

We believe that the proposed mining operations will (if approved) have environmental impacts on the oil shale heritage, which is of singular significance. **Centennial Coal must not be split or quartered under the Airly oil shale ruins.**

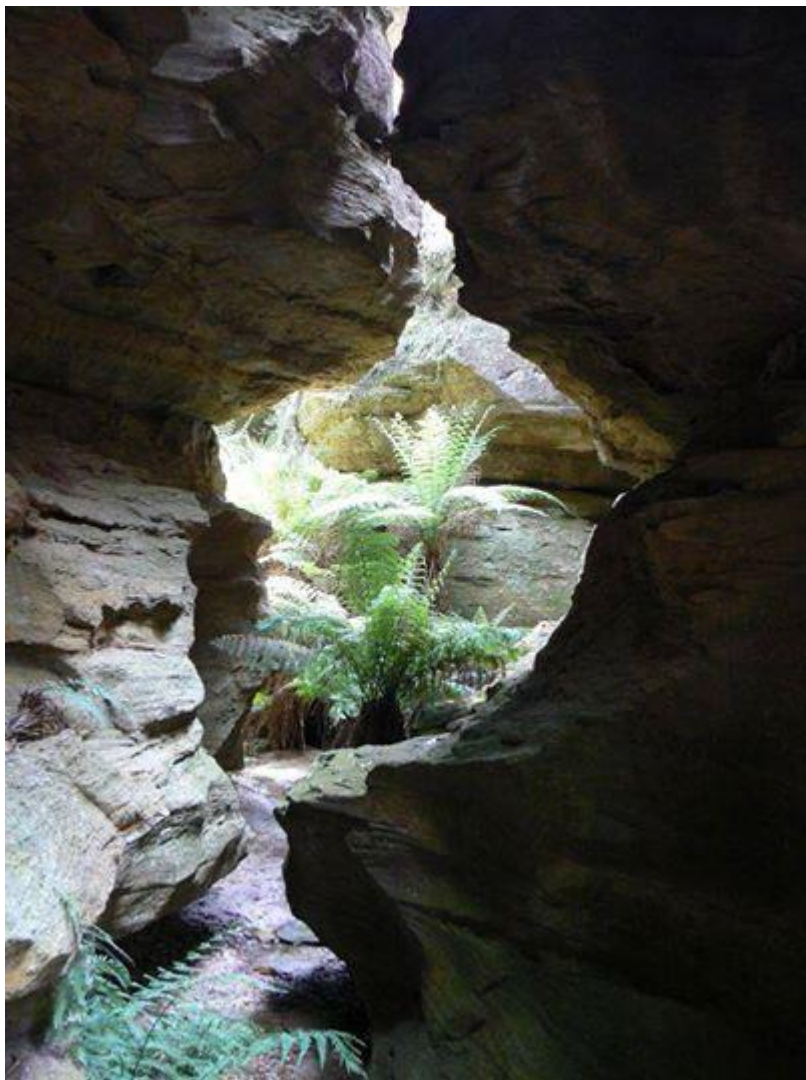
### **Water management and management of product and rock waste piles**

We understand that Centennial has a plan to separate fine and coarse mine wastes may subsequently lead to a proposal to market a by-product of coal fines to the local power plant market. The plan may explain why large stockpiles of coal have accumulated at the mine. The management plan needs to consider the landscaping of coal product and waste rock piles in relation to parks and popular tourist viewing points, such as Pearsons Lookout. Visually prominent waste and product heaps must be appropriately screened. The mess created at the head of the Wollangambe River catchment by Centennial's Clarence Colliery **should not be repeated here at Airly Colliery** in the Capertee River catchment. The company must screen its operations and prevent visual blight in a popular tourist area - the famous Capertee Valley.

Airly Colliery should be subjected to continuous rehabilitation and landscaping. The company owns large tracts of cleared land at Airly. Centennial should remove cattle and revegetate its properties to manage its properties in a manner more consistent with the adjoining national parks and reserves. The coal waste piles should be top sealed with clay as soon as possible to prevent contamination of groundwater resources through heap leaching.

Such leaching leads to more or less permanent source of downstream pollution, and can produce both acid mine drainage and heavy metal and organic pollutants.

A final point regarding water is the importance of protecting the *hydrology of the Grotto*, a slot canyon on Genowlan that in dry summers has virtually the only permanent pools of water. Much of the catchment just outside the Grotto is proposed to have full subsidence of 1.8 metres. The other Ribaux brother to Col (Bob?) who was involved with the diamond mine, at the Airly Commission of Inquiry in 1993 reported that when mining he had found ironstone bands with water flowing towards the Grotto. He expressed concern then that subsidence could shatter such bands and thus reduce (or even stop) the flow of water to the Grotto. The Grotto of course is a famous tourist feature that people come from far and around to visit. Its tourist value would be vastly diminished if the water stopped flowing. It would also remove one of the few permanent water supplies for wildlife on the mesa.



The Grotto, Genowlan mesa



## Impacts on the World Heritage Area



Pagodas and view south of Pt Hatteras

The Greater Blue Mountains World Heritage Advisory Committee believes that the Mugii Murum-ban SCA **should be added to the Greater Blue Mountains World Heritage Area once mining has been completed** (I know this well as I was a member of the AC until recently). Water impacts are critical as they affect the World Heritage Area downstream. Omission of these impacts and failure to consider downstream impacts on the World Heritage Area in the modification 3 proposal is of concern. There will be water quality impacts, they should be part of the modification assessment process and the potential to pollute the World Heritage Area *should be deemed to be a controlled action*.

The proposed operations under Modification 3 are very likely to discharge pollution into Airly Creek. Such discharges would impact on the Gardens of Stone National Park, and thus the Greater Blue Mountains Area. Airly creek flows directly into the adjoining World Heritage Area.

Water treatment of the effluent from this colliery to remove salts or dissolved metals should be considered. Airly Creek is in a very good condition but has small flows. Mine effluent

discharges are likely to have a much greater effect on the previously pristine downstream ecology.

This proposal has potential to seriously damage this SCA, which is proposed for addition to the World Heritage Area when responsible mining (that doesn't damage the geodiversity of biodiversity) ceases. This proposal is thus inappropriate in that it will damage a superlative area that would otherwise be recognised and included in the Greater Blue Mountains World Heritage Area.

### **Impacts of potential changes in mining operations**

The Colo Committee remains concerned that the proposed partial (and full) extraction of the coal pillars will see a much greater risk of mine subsidence related damage in the Mugii Murum-ban State Conservation Area. Proposing glibly that the majority of the SCA should be dropped by 1.8 metres is ***not acceptable*** and makes a mockery both of the meaning of a State Conservation Area, but also of responsible planning and mining laws.

The use of 'weasel words' in the June 2014 environmental assessment in relation to mine subsidence must not result in changes to mining methods that greatly increases impacts on the natural environment, particularly internal cliff-lines and pagodas, as well as on oil shale heritage sites. **Centennial Coal previously agreed to mine responsibly under Airly and Genowlan, which is why a State Conservation Area was created.** Now it seeks to go back on that responsible commitment (for which it was praised by environment groups at the time). Mine intensification ***by stealth*** is inappropriate and the ambiguities in the environmental assessment regarding subsidence must not be migrated into the development consent. Accordingly, the Colo Committee urges the Department to ***refuse the application in its current form.***

Thank you for the opportunity to comment on this referral.

Yours faithfully,

A handwritten signature in black ink that reads "Haydn Washington". The signature is written in a cursive style with a long, sweeping underline.

Dr Haydn Washington  
Hon. Secretary, the Colo Committee  
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## References

Simpson, W. (1993) 'Underground coal mine proposed by Novacoal Australia Pty Ltd, Mounts Airly and Genowlan Area, Capertee Valley, City of Greater Lithgow' Report to the Hon. R. Webster, Minister for Planning by William Simpson, Acting Chairman, Commission of Inquiry

Washington, H. (2001) *Focus on Geodiversity: Sites, Values and Management for the Hawkesbury-Nepean*. Dept. Land and Water Conservation, Sydney

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Washington, H and Wray, R. (2014) 'The Geodiversity and Geoheritage values at the International and National Level of the Greater Blue Mountains World Heritage Area (and areas recommended to be added to it by the Greater Blue Mountain World Heritage Advisory Committee)', report written for the Greater Blue Mountains World Heritage Advisory Committee in support of National Heritage Listing for geodiversity of the World Heritage Area.