

Lithgow Environment Group Inc.

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Preserving the Balance of Nature

NSW Department of Planning, Industry and Environment Locked Bag 5022 Parramatta NSW 2124

26 April 2020

Dear Sir/Madam

RE: ANGUS PLACE MINE EXTENSION (SSD 5602-AMENDMENT EXHIBITION)

1. LITHGOW ENVIRONMENT GROUP'S RELATIONSHIP TO THE PROPOSAL

The Lithgow Environment Group Inc. (LEG) is a local group formed in 2005 to protect, conserve, and enhance our unique natural environment, landscapes, flora, fauna, and waterways.

Our members live and work in the Lithgow area. LEG representatives regularly meet with Centennial Coal staff, including tours of Angus Place and Clarence Colliery's. LEG has representatives on Energy Australia's Community Consultative Committee, Lithgow Council Environment Advisory Committee, Central West Environment Council, Lithgow Community Nursery, and other local organisations.

Core functions of LEG include water quality monitoring; flora and fauna surveys; swamp monitoring; mine subsidence monitoring; establishing a Renewable Energy Hub; Transition planning, Tourism, Eastern-pygmy Possum Nest Tube program with Lithgow Womens Shed; seed collecting for Lithgow Community Nursery, swamp restoration and tree planting working bees; education and promotion. LEG therefore has a hands-on and realistic understanding of the issues associated with this Proposal.

A key focus for LEG since 2005 has been working with the Gardens of Stone Alliance towards reservation of a 39,000 Ha Gardens of Stone (GoS) State Conservation Area over Newnes State Forest through promotion of the *Destination Pagoda* tourism proposal, to bring visitors to Lithgow. Centennial Coal supports this reserve proposal in the Angus Place Mine Extension (APMEP) by proposing to 'offset' some of the mine subsidence damage to nationally endangered swamps by coupling Biodiversity Offset compensation with conservation management in Newnes State Forest.

However financial compensation does not justify the damage being proposed, which is contrary to the Biodiversity Offset Hierarchy of **'avoid, minimise, offset'**. Centennial are proposing to increase mining intensity of the 2014 EIS by widening longwall widths from 261m to 360m, raise extraction heights up to 3.4m (LW1002-1008), and assume *Maximum Offset Liability* and total loss of all NPSS, NPHS and associated Threatened Species. This is far in excess of Centennial's protection approach taken at Airly mine. To limit damage to Mugii Murum-ban State Conservation Area, mining intensity at Airly mine was reduced across the entire mining area to protect important heritage values.

Endangered Newnes Plateau Shrub Swamps comprise just 2% of Newnes Plateau. The majority of Threatened Species recorded in the Project area occur in these endangered swamp communities. **The DoPIE must seek a compromise by requiring Centennial Coal to avoid just 2% of the proposed mining area and save these endangered swamps and the Threatened Species within them.**

2. GROUNDS FOR OBJECTION

The Lithgow Environment Group objects to the proposed Angus Place Mine Extension (APMEP), which would see increased intensity longwall mining operations relative 2014 EIS proposal. This new proposal will increase subsidence damage in mined areas of the Gardens of Stone region. Increasing the damage is at odds with Centennial's stated support for the Gardens of Stone reserve proposal.

This mine expansion application seeks to permit mining of 4.5 million tonnes per annum of Run of Mine (ROM) coal, and planning consent until 2053. The long consent period requested and increased intensity of mining relative to the original 2014 proposal are totally at odds with the global approach to climate change mitigation, the declining international appetite for coal, and protection of heritage values in the Gardens of Stone region.

Coal supplies for Mount Piper Power Station have been secured by Centennial's recently constructed Lidsdale Coal Unloader. Coal can now be transported by rail from Airly Mine, Clarence Colliery, and other Centennial mines using empty coal trains returning from the coast. Mount Piper Power Station also has an approved Coal Unloader at Pipers Flat, which can transport coal by rail from Mudgee or other areas via the Sydney-West, Parkes, or Wallerawang-Gwabegar rail networks.

The Proposed Mine Plan layout with the underground roadway located at the western downstream end of Tri Star and Twin Gully Swamps will drain those swamps, thereby negating possible future options of shortening the longwall panels to avoid and protect these nationally endangered swamps.

2.1 Unacceptable impacts

This proposed extension will cause:

- Destruction or severe loss of nationally endangered NPSS and NPHS swamps;
- Loss of water flow over the iconic Wolgan Falls;
- Loss of water flow in the Wolgan River and other streams in and near the proposed mining area, and loss of downstream flows into the Blue Mountains World Heritage Area;
- Loss of Commonwealth EPBC Act and NSW BC Act listed Threatened Species;
- Significant damage to the Birds Rock Flora Reserve;
- Pollution of pristine Carne Creek and Wolgan River, both of which flow through the Greater Blue Mountains World Heritage Area and six-star Emirates Wolgan Eco-resort downstream;
- Significant damage spectacularly unique geomorphology of the 'pagoda country';
- Potential damage to Aeolian Sand dunes along Sunnyside Ridge not identified in APMEP;
- The APMEP mis-reported its scope 3 emissions as being 30 times smaller than the reality;
- A consent until 2053 is unjustifiable given the urgent need to address climate emergency;
- The Project is unnecessary as coal supplies for Mount Piper Power Station have been secured by Centennial's Lidsdale Coal unloader. Coal can be transported by rail from Airly Mine, Clarence Colliery, or other Centennial mines on empty trains returning from the coast. to supply Mount Piper Power Station. Energy Australia have approval for the Pipers Flat Coal Unloader so can access coal from the west via Parkes, or Mudgee if the rail line is upgraded.

None of the above impacts and issues have been adequately addressed in the original 2014 EIS, or Amendment Report, or Appendix's forming part of the amended environmental impact statement.

3. LOSS OF ENDANGERED NEWNES PLATEAU SHRUB SWAMPS AND HANGING SWAMPS

Nationally endangered Temperate Highland Peat Swamps on Sandstone (THPSS), and State Listed Newnes Plateau Shrub Swamps (NPSS) and Newnes Plateau Hanging Swamps (NPHS) occupy less than 2.2 % of Newnes State Forest.

Centennial's Springvale Colliery, Angus Place Colliery, and old Clarence Colliery longwall panels have already caused the loss of over 50% of THPSS, NPSS, and NPHS in Newnes State Forest.

The current Angus Place Mine Extension Project proposes to destroy a further six (6) NPSS located within the area of potential impact, comprising:

- Wolgan River (upper, central, and lower)
- Tristar
- Twin Gullies
- Japan (Trail 6)
- Sunnyside (northern extent)
- Narrow (northern extent)
- Rattle Snake

In addition several un-named Newnes Plateau Hanging Swamps (NPHS) will potentially be impacted, including those in Birds Rock Flora Reserve.

In the 2014 Angus Place EIS Centennial Coal opted to lie about the impact on endangered swamp communities, claiming that longwall mining would have *negligible environmental consequences*. This resulted in the loss of 4 major NPSS since the 2015 Springvale Extension Approval, including:

- Sunnyside East Swamp
- Carne West Swamp
- Gang Gang East Swamp, and
- Gang Gang West Swamp.

In addition to the above, the 2019 Springvale Annual Report stated that

"Water levels in <u>Pine Swamp</u> piezometers dropped suddenly and some have dropped below the loggers while LW425 passed during the review period. <u>Paddys Creek Swamp</u>, PC2, located on a surface lineament that is within 100 m of LW425 experienced large declines in water levels. Both Pine Swamp and Paddys Creek Swamp are under current investigation."

Furthermore Carne Central Swamp is also showing severe signs of drying out. Marrangaroo Creek Swamp is next in Springvale's firing line.

Prior to the 2015 Springvale/Angus Place Mine Extension approvals 6 swamps were lost:

- East Wolgan Swamp
- Narrow Swamp
- Junction Swamp
- Kangaroo Creek Swamp
- Sunnyside West Swamp (partial loss)

Lamb's Creek Swamp was lost in the 1980's, so a total of 10 swamps have been lost, and several partials.

3.1 New Understanding and consideration of Swamp Impacts

A huge body of evidence has since proved that Centennial lied in the 2014 EIS. This has apparently led them to a develop a *New Understanding and consideration of Swamp Impacts.*

Based on the extensive monitoring data and analysis done since 2014 Centennial have apparently concluded that mining directly beneath lineaments or significant geological faults is what triggered the changes to hydrology in swamps overlying the Springvale Mine.

The Definitions on Page 4 of the Amendment Report clearly state - A lineament is a distinctive linear feature in a landscape that is an expression of an underlying geological structure such as a fault, fracture, or joint. The predicted vertical subsidence has been increased by 25% in these locations.

But this epiphany on the causal factors which killed the above 10 swamps has not translated into any action in this Proposal. Centennial simply propose to repeat those same mistakes by mining near Lineaments, accepting *Maximum Offset Liability* and killing 6 more swamps, simply saying that:

In the case of the APMEP it is not possible to avoid the associated lineaments as a very significant area of longwall extraction is sterilised and remaining extraction areas are rendered unviable.



Figure 6.2 APMEP Amendment Report – Geological Structures within the Amended Project Area This appalling arrogance is totally contrary to the Offset principles of **avoid, minimise, offset'.**

In addition LEG considers that the proposed underground roadway along the western side of Mine plan adjacent the Wolgan Lineament will sever the downstream ends of Twin Gully and Tristar swamps and drain them, negating any options to shorten longwalls to protect those swamps.

A centrally located roadway with mini-longwalls running East and west would enable similar levels of resource recovery whilst protecting swamps. Bord & Pillar mining methods are profitable at Clarence Colliery, so why wouldn't they be at Angus Place>

The APMEP must be subjected to a major review to reduce the intensity of the proposed mining operation so that the likely significant environmental impacts are avoided and where that is not possible, minimised.

4. FAILURE TO IDENTIFY AND ADEQUATELY SEARCH FOR THREATENED SPECIES

The Amendment Report (page 76, 8.2.1.1) states: A comparison between the Initial APMEP Likelihood of Occurrence (LoO) and the amended APMEP LoO has identified <u>40 additional threatened species</u> <u>that require survey within the Study Area</u>. Of these, three are likely to occur within the Study Area in Swamps and 13 are likely to occur within the Impact Envelope (refer Section 8.2.3).

Forty (40) Threatened Flora and Fauna Species were missed in the original 2014 EIS. This is appalling! Centennial Coal have had 20 years to study the Flora & Fauna within their mining leases in Newnes State Forest, are admitting that 40 Threatened Species have been missed in previous Approvals, yet want this Proposal to be approved as Exhibited, promising to monitor for these Threatened Species after approval, and will avoid them if possible.

The whole purpose of an EIS is to identify where Threatened Species occur in a Proposal area prior to commencement of works, so that any adverse impacts can be avoided or mitigated by altering the mine plan accordingly.

This is contrary to the principles of the Biodiversity Offset Hierarchy of 'avoid, minimise, offset'.

4.1 INADEQUATE FLORA SURVEYS

The Amendment Report and Appendix I Revised Biodiversity Impact Assessment claim that on-ground Flora Surveys have been conducted, and desktop searches have been done.

Those surveys failed to find the 12 Threatened Flora Species listed below, which occur within the Angus Place Colliery mine lease. LEG finds it disturbing that they are also not listed on the DoPIE Wildlife Atlas (www.bionet.nsw.gov.au). However they are recorded on either the NSW Herbarium database, (https://avh.ala.org.au), the Atlas of Living Australia database (https://spatial.ala.org.au), or the international iNaturalist Biodiversity Database (https://www.inaturalist.org).

Therefore, anyone in the world who searches for these Threatened Flora Species within the Angus Place Mine Lease can locate them, except apparently for Centennial Coal and their Consultants.

4.2 EPBC Act listed Threatened Species not identified in the Amendment Report or Appendix I

LEG has identified twelve (12) Threatened Flora Species not identified in the Amendment Report -

4.2.1 *Pultenaea parrisiae* – Vulnerable EPBC Act. Recorded 2019 in Sunnyside West Swamp and Birds Rock Hanging Swamp. Not identified in *2014 EIS*. Not identified in current *Amendment Report* or *Appendix 1 Revised Biodiversity Impact Assessment*. No EPBC Referral has ever been done for *Pultenaea parrisiae* in APMEP. Moisture-dependent species confined to swamps and seepage areas. Only known from far NE Gippsland in Victoria and 3 sites in NSW (Wadbilliga Trig area & 2 sites S of Nalbaugh). This Newnes State Forest population is the most northerly limit of its distribution.



Figure: Atlas of Living Australia (https://spatial.ala.org.au) search for Pultenaea parrisiae 20/4/2020



Figure: Pultenaea parrisiae showing characteristic leaf stipules 5-7mm long, leaves with acuminate recurved tip

4.2.2 *Pultenaea glabra* – Vulnerable EPBC Act & NSW BC Act. Recorded in 2010 and since in Angus Place 300 area, near Wolgan Falls on boundary of current proposal, and Clarence Colliery mine lease area. Not identified 2014 EIS or current APMEP. No EPBC Referral ever done. Moisture dependent species. A Key Threatening Process in Recovery Plan is altered hydrology due to longwall mining.



Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Pultenaea glabra 20/4/2020

4.2.3 *Kunzea cambagei* – Vulnerable EPBC Act and NSW BC Act. Recorded in 2010 and since near Angus Place 800 Area. No EPBC Act referral conducted in 2014 EIS or for current Proposal. A Key Threatening Process identified in the Recovery Plan for *Kunzea cambagei* is alteration of hydrology. The Angus Place record is the most northerly record for this species in NSW.



Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Kunzea cambagei 20/4/2020

4.2.4. Commersonia prostrata – Endangered EPBC Act, Endangered NSW BC Act. Recorded Newnes Plateau 2007 and 2011. Not identified 2014 EIS, Amendment Report, or Appendix I. No EPBC referral done. Bo targeted searches. Occurs only in swamps. Moisture dependent. Highly likely to occur.



Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Commersonia prostrata 20/4/2020

4.2.5 *Eucalyptus aggregata* – Vulnerable Commonwealth EPBC Act & NSW BC Act. Occurs Angus Place Colliery 300 Area. Moisture dependent species. May be impacted if 300 Area or hydraulically interconnected 700, 800, or 900 areas are drained to facilitate mining in the new Proposal area.

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Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Eucalyptus aggregata 20/4/2020

4.2.6 *Xerochrysum palustre* – Vulnerable EPBC & NSW BCA. Not identified in 2014 EIS. No EPBC Referral done. Recorded 7 March 2019 in Pine Swamp within Springvale Colliery Extension Area, after 2015 Approval. Pine Swamp has now been undermined, and it and *Xerochrysum palustre* will most likely die. Discovered in April 2020 by LEG in Angus Place Colliery 300 Area. Only occurs in waterlogged areas of swamps. Will be lost of 6 NPSS + hanging swamps in the APMEP are drained.

From the 2019 Springvale Annual Report "Water levels in Pine Swamp piezometers dropped suddenly and some have dropped below the loggers while LW425 passed during the review period. Paddys Creek Swamp, PC2, located on a surface lineament that is within 100 m of LW425 experienced large declines in water levels, whereas PC1 remained in a stable condition. Both Pine Swamp and Paddys Creek Swamp are under current investigation."



Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Xerochrysum palustre 20/4/2020

4.3 NSW BC Act Species missed in Amendment Report and Appendix I

4.3.1 *Persoonia hindii* – Endangered NSW BC Act. **W**idespread in APMEP area, only occurs on Newnes Plateau. not protected in any NPWS Reserve in NSW. At risk from this proposal.

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Figure: Atlas of Living Australia (https://spatial.ala.org.au) search for Persoonia hindii 20/4/2020

4.3.2 Caesia parviflora var. minor – Endangered NSW BC Act. Occurs throughout APMEP area. Moisture dependent. At high risk of being lost in the 6 NPSS + hanging swamps that will destroyed.



Figure: Atlas of Living Australia (https://spatial.ala.org.au) search for Caesia parviflora var. minor 20/4/2020

4.3.3 *Genoplesium superbum* – Endangered NSW BC Act. Recorded near Wolgan Falls 2005, and many areas since in Newnes State Forest. Never been recorded by Centennial Coal in Newnes SF.

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Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Genoplesium superbum 20/4/2020



4.3.4 Veronica blakelyi – Vulnerable NSW BC Act. Widespread Proposal area. Moisture dependent.

Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Veronica blakelyi 20/4/2020

4.3.5 Leucopogon fletcheri subsp. fletcheri (Endangered NSW BC Act). Recorded in Angus Place 900W Panel (still to be completed), and along Wolgan River bordering the Proposal Area.



Figure: Atlas of Living Australia (https://spatial.ala.org.au) search Leucopogon fletcheri ssp fletcheri 20/4/2020

4.3.6 Carex klaphakei – Endangered <u>NSW BCA</u>. Not listed in 2014 EIS. Recorded in Marrangsroo Creek Swamp prior to 2015 Springvale Mine Extension approval, but was somehow "lost" from DPIE Wildlife Atlas (<u>http://www.bionet.nsw.gov.au</u>). That swamp and those plants are doomed if Marrangaroo Creek Swamp is drained by approved Springvale longwalls. Surprisingly *Carex klaphakei* was recorded in EIS for this Proposal, however no Biodiversity Offset Credits have been calculated.



FIGURE 11: Appendix I Revised Biodiversity Impact Assessment. Carex klahakei = Green placemarks

4.4 OTHER RARE FLORA SPECIES NOT IDENTIFIED IN AMENDMENT REPORT OR APPENDIX I

4.4.1 Corunastylis reflexa – first recorded 1885 near Mt Jamberoo. Not recorded for 130 years. Recently rediscovered at 5 locations in Newnes State Forest, including along a Centennial Coal subsidence monitoring line. Occurs on edge of NPSS. Highly likely to occur in Proposal area.





Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Corunastylis reflexa 20/4/2020

4.4.2 Cunningham's Snow Gentian (*Gentianella cunninghamii***)** – Not recorded in any previous Centennial Coal Flora Surveys in swamp communities. Recorded by LEG in Angus Place Colliery 300 Area in March 2020. The most northerly record, the nearest other records are in Kanangra-Boyd NP. A totally moisture-dependent species. Will be lost of Angus Place 300 Area or hydraulically interconnected 700, 800 or 900 Areas are drained to enable mining of new Proposal area.



Figure: Atlas of Living Australia (<u>https://spatial.ala.org.au)</u> search for Gentianella cunninghamii 20/4/2020

LEG has recorded 134 flora species in Newnes State Forest not listed on the Wildlife Atlas, too many to list here. Suffice it to say that **Flora Surveys in Newnes State Forest have been grossly deficient.**

4.5 THREATENED FAUNA SPECIES

The Amendment Report and Appendix I Revised Biodiversity Impact Assessment provide very scant information on Threatened Fauna within the APMEP Proposal area, and expect the reader to search for the original 2014 Angus Place EIS documents.

From what LEG can ascertain from searching several sources is that nine threatened fauna species have been recorded within the Study Area, and would be subject to subsidence impacts:

- Eulamprus leuraensis (Blue Mountains Water Skink: Endangered; EPBC Act & NSW BC Act;
- *Pseudophryne australis* (Red Crowned Toadlet: Vulnerable NSW BC Act;
- Cercartetus nanus (Eastern Pygmy Possum: Vulnerable NSW BC Act;
- Petroica pheonicea (Flame Robin): Vulnerable NSW BC Act;
- Callocephalon fimbriatum (Gang-gang Cockatoo): Vulnerable NSW BC Act;
- Chalinolobus dwyeri (Large-eared Pied Bat): Vulnerable EPBC Act & NSW BC Act;
- Ninox strenua (Powerful Owl): Vulnerable NSW BC Act
- Petroica boodang (Scarlet Robin): Vulnerable NSW BC Act
- Daphoenositta chrysoptera (Varied Sittella): Vulnerable NSW BC Act

Threatened species known to be associated with THPSS which should be included in Biodiversity Offset Credit calculations include:

- Eulamprus leuraensis (Blue Mountains Water Skink: Endangered EPBC Act & NSW BC Act;
- Petalura gigantea (Giant Dragonfly: BC Act = Endangered NSW BC Act;
- Pseudophryne australis (Red Crowned Toadlet: Vulnerable NSW BC Act;

4.5.1 Eastern Pygmy-possum (*Cercartetus nanus*) – Vulnerable NSW BC Act.

An apparent discrepancy in the APMEP is that the Eastern Pygmy-possum (Vulnerable NSW BC Act) was recorded at North Swamp (named Twin Gully Swamp in this Proposal) in the Angus Place Environmental Performance report – August to November 2017.

North (Twin Gully) Swamp has been assessed by Centennial for a *Maximum Offset Liability,* assuming a total loss of all NPSS and NPHS and associated Threatened Species within this swamp.

Angus Place Environmental Performance – August to November 2017

Fauna Monitoring

 Autumn fauna monitoring conducted at Angus Place East Project Area, Subsidence Management Plan (SMP) 900/910 Longwalls and SMP 930 – 960 Longwall areas. Fall-off in diversity indices has occurred at APE but likely due to unfavourable climatic conditions as mining has not begun in this area.

Eastern Pygmy-possum resting within the nest box at North Swamp.



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Because the Eastern Pygmy-possum was officially recorded by Centennial in Twin Gully Swamp in 2017, it should be included in *Threatened species known to be associated with THPSS*, and should be assessed as part of the Biodiversity Offset Credit calculations.



Figure 12: Amended Project Area Threatened Fauna - Appendix I. Eastern Pygmy Possum = Yellow placemark

LEG has a particular interest in honest reporting on this Threatened Species by Centennial Coal. LEG is currently coordinating an Eastern Pygmy Possum Nest-tube Replacement Program in conjunction with Lithgow Womens Shed. The aim is to replace nest tubes lost in Newnes State Forest during backburning associated with the Gospers Mountain Fire. Mr Andrew Lothian is the Technical Advisor for the project. He has been studying Eastern Pygmy-possums on Newnes Plateau for many years.

Threats listed on www,environment.nsw.gov.au for Eastern Pygmy-possum include: Loss and fragmentation habitat through land-clearing for agriculture, forestry and urban development; changed fire regimes that affect the abundance of flowering proteaceous and myrtaceous shrubs, particularly banksias; and ceclining shrub diversity in forests.

Longwall mining will dry out and kill entire ecosystems in and adjacent the Proposal area, including TPPSS in Twin Gully Swamp where the Eastern Pygmy-possum has been recorded This will result in the loss of many flowering Proteaceous and Myrtaceous shrubs, in particular Banksia's, which predominately occur in open sunny heathland and swamps within the Proposal area.

4.6 VEGETATION COMMUNITIES MISSED IN THE AMENDEMENT REPORT AND APPENDIX I

4.6.1 MU1 Sandstone Canyon Warm Temperate Rainforest.

Not identified in APMEP. Characterised by the presence of Coachwood (*Ceratopetalum apetalum*) and Sassafras (*Doryphora sassafras*). Recorded by LEG in a canyon near Birds Rock, and probably more widespread in canyons within Proposal area. A moisture-dependent rainforest community, which will dry up and become more fire-prone, which will kill this unique vegetation community. MU1 is historically significant, as the **Wollemi Pine** was discovered in the MU1 Vegetation Community. Below are photos of *Doryphora sassafras* within that Canyon near Birds Rock.



Figure: MU1 Sandstone Canyon Warm Temperate Rainforest and Doryphora sassafras - canyon near Birds Rock

LEG has identified ten (10) rainforest tree species in Newnes State Forest not listed on the DPIE Wildlife Atlas as occurring in this State Forest. These major discrepancies should be addressed by the DPIE, as other Rainforest Vegetation Community types may occur within and near the APMEP area.

4.6.2 Aeolian Sand Dune Vegetation Community

Not identified in Amendment Report or Appendix I is an ancient wind-blown sand dune landform unique to Newnes Plateau. The vegetation community may also be unique on Newnes Plateau, a shrubby woodland with *Xanthorrhoea resinifera* not common in surrounding vegetation.

This geo-heritage feature is in the north-east corner of the Project area (LW 1014 & 1015). The Sunnyside Dune is a classic crescent-shaped body of sand, 280m long, 70–110m wide, up to 4.6m thick and thinning at the edges, with an estimated volume of 50 000m³.

Sand stripped by wind from local landforms was deposited as dunes in the lee of cliff-lines. For wind erosion to occur, Newnes Plateau must have been above the tree line due not only to the climate being 8–9°C colder and drier, but also because atmospheric carbon dioxide was lower. The relatively large number of relict heath plant species found on the Plateau also must have survived these very harsh conditions.

Other examples of this rare landform on Newnes Plateau have been lost to sand-mining, quarrying and other developments before they could be adequately studied.

LEG believes that Centennial should be required to conduct a Flora Survey of this unique geoheritage feature and take all possible steps to avoid or minimise any damage.

5. INADEQUATE OFFSET LIABILITIES

Centennial Coal have elected to accept the *Maximum Offset Liability* for this proposal, assuming a total loss of all TPPSS, NPSS and NPHS and associated Threatened Species within those swamps.

The maximum offset liability for species credits for THPSS-associated Threatened Species are presented in Table 8-13 of the *Amendment Report*. Only four (4) Threatened Species are listed -

- Blue Mountains Water Skink (E. leuraensis) 844 Credits required
- Giant Dragonfly (P. gigantea) 1276 Credits required
- Boronia deanei 844 Credits required
- Red-crowned Toadlet 630 Credits required

Table 8-13 notes that: *Although the calculations in the Swamp Offset Strategy do not currently includeXerochrysum palustre and Carex klaphakei, the final offset calculations will be revised following developmentapproval and all impacted species will be included.

LEG regards it as highly inappropriate that Centennial should be granted approval to search for Threatened Species <u>after approval</u>. How can this possibly be compliant with the Biodiversity Offset Hierarchy of **'avoid, minimise, offset'**? Surely Centennial should be required to conduct Targeted Searches for all Threatened Species prior to Approval, so avoid, minimise, and lastly offset?

Centennial Coal have has had 20 years to locate Threatened Species within their mining leases in Newnes State Forest. Yet the *Amendment Report* (page 76, 8.2.1.1) states:

A comparison between the Initial APMEP Likelihood of Occurrence (LoO) and the amended APMEP LoO has identified <u>40 additional threatened species that require survey within the Study Area</u>. Of these, three are likely to occur within the Study Area in Swamps and 13 are likely to occur within the Impact Envelope (refer Section 8.2.3).

Therefore approval was granted to Springvale Colliery by the PAC and DoPIE in 2015, despite the fact up to 40 Threatened Species may have been missed!!! Two of the Threatened species missed were -

- Xerochrysum palustre recorded in Pine Swamp 7 March 2019, which was undermined by LW425 only a few months later. The 2019 Springvale Annual Report stated Water levels in Pine Swamp piezometers dropped suddenly and some have dropped below the loggers while LW425 passed during the review period. These Threatened Xerochrysum palustre are now doomed only months after having been 'officially' recorded. Had they been recorded prior to approval this damage may have been 'avoided, minimised, or offset'.
- *Carex klaphakei* recorded in Marrangaroo Creek Swamp prior to the 2015 Springvale Mine Approval, but somehow "lost" from the DPIE's Wildlife Atlas database. Marrangaroo Creek Swamp will be undermined by Springvale, and those plants will die. Had the DPIE not "lost" those records, then the loss of these plants may have been **'avoided, minimised, offset'.**

In section 4 above LEG has listed **twelve (12)** Threatened Flora Species occurring within the APMEP but not identified in the Amendment Report or Appendix 1 Revised Biodiversity Impact Assessment.

LEG can find no evidence of an EPBC Referral ever having been lodged under the 2014 EIS or current APMEP for these **12 Threatened Species**, or that any Targeted Searches have ever been undertaken -

- Pultenaea parrisiae Vulnerable EPBC Act
- Pultenaea glabra Vunerable EPBC Act & NSW BC Act
- Kunzea cambagei Vulnerable EPBC Act and NSW BC Act
- Commersonia prostrata Endangered EPBC Act, Endangered NSW BC Act

- Eucalyptus aggregata Vulnerable Commonwealth EPBC Act & NSW BC Act
- Xerochrysum palustre Vulnerable EPBC & NSW BCA
- Persoonia hindii Endangered NSW BC Act
- Caesia parviflora var. minor Endangered NSW BC Act
- Genoplesium superbum Endangered NSW BC Act
- Veronica blakelyi Vulnerable NSW BC Act
- Leucopogon fletcheri subsp. fletcheri Endangered NSW BC Act
- Carex klaphakei Endangered NSW BC Act

The Lithgow Environment Group regards it as highly irregular that our small group can find **12 Threatened Flora species** actually occurring within the Angus Place Colliery mine lease area, yet not identified by Centennial Coal after 20 years of Flora monitoring.

The Lithgow Environment Group regards it as equally irregular that the above **12 Threatened Flora species** are not recorded on the DPIE Wildlife Atlas (<u>www.bionet.nsw.gov.au</u>), despite the fact some of these species were recorded over 13 years ago, back in 2007. Equally disturbing is the fact that the Wildlife Atlas records for *Carex klaphakei* in Marrangaroo Creek were somehow 'lost'.

It is LEG's understanding that the DPIE Wildlife Atlas is meant to act as a definitive guide for Flora Consultants on which Threatened Species to search for. Clearly the DPIE Wildlife Atlas is failing in this regard, at least in Newnes State Forest. If this can be extrapolated across the whole of NSW then many 100's of Threatened Species are currently not being assessed under the EPBC or NSW BC Acts/

The Lithgow Environment Group regards it as highly irregular for the DPIE to grant a consent for Centennial to search for these Threatened Species <u>after approval</u>, when they failed to find them despite 20 years of swamp and other flora monitoring. It is reasonable for the community to assume that Centennial will never find any of these Threatened Species after approval either.

LEG will be seeking legal advice on this entire issue.

Lithgow Environment Group believes that, at the very least, Offset Liability Credits should be calculated for all **12 Threatened Flora species** occurring in the Angus Place mine lease listed above,

5.1 IREGULARITEIS IN THE EPBC REFERRAL PROCEESS

An EPBC Referral was apparently lodged by Centennial Coal for this Proposal in 2013. Apparently approval was granted by the Federal Government. LEG cannot find any documentation this process.

LEG cannot understand how an EPBC Referral could have been approved without listing the individual EPBC Act listed Threatened Species occurring within the APMEP area? Six (6) additional EPBC Act listed Threatened Flora Species and have been identified since the 2013 EPBC Referral was approved, In addition Six (6) NSW BC Act listed Threatened Flora Species have be identified.

The Amendment Report (page 76, 8.2.1.1) states that A comparison between the Initial APMEP Likelihood of Occurrence (LoO) and the amended APMEP LoO has identified <u>40 additional threatened</u> <u>species that require survey within the Study Area</u>. Surely a new EPBC Referral is required to update the 2013 Approval with those 40 missed species???

5.2. Valuation of Swamps

As part of 2015 Approval Process the NSW OEH provided a Community Valuation report of Newnes Plateau Shrub Swamp EECs that would be lost as a result of the Springvale Mine Extension Approval.

The OEH estimated that the ten NPSS potentially affected by the Springvale and Angus Place mine extensions would have a community value of at least \$157M (\$2M/Ha X 78.75 Ha). For example:

- Carne West Swamp alone would potentially have a community valuation6 of approximately \$27M (\$2M/Ha X 13.8 Ha).
- Gang Gang East Swamp would potentially have a community value of \$25.6M (\$2M/Ha X 12.8 Ha).
- Trail 6 Swamp above the Angus Place proposal would potentially have a community value of \$12.8M (\$2M/Ha X 6.4 Ha).

The OEH noted that as a group, most of the swamps above the proposed Springvale Colliery longwalls are within the category considered to be in the best condition (Benson and Baird 2013, Henson 2010) and they form an important cluster of swamps; with Gang Gang East and Gang Gang West swamps being almost contiguous with one another. *Source: Attachment B, OEH Science Division, Review of Springvale and Angus Place Mine Extension ElSs*

LEG cannot find any information on how the Offset Liabilities were calculated for the current Proposal. However Centennial Coal have opted for *Maximum Offset Liability* assuming total loss of all six NPSS, and an unspecified number of Hanging Swamps (NPHS). If Trail 6 Swamp alone was valued by the OEH at \$12.8 million, then the other swamps must increase this by 5-fold. And that is before the Offset Credits for the 40 Threatened Species missed in the 2014 EIS have been calculated.

The DPIE needs to provide the community with a detailed analysis of the EPBC Referral and Biodiversity Offset valuation process.

5.3 WILL THE BIODIVERSITY OFFSET COMPENSATION FUNDING EVER BE PAID?

Centennial Coal have opted for a *Maximum Offset Liability* assuming the loss of all NPSS and associated Threatened Species within those swamps. Rather than abide by the Biodiversity Offset Hierarchy of **'avoid, minimise, offset'/**

Centennial's entire Biodiversity Offset Strategy is based on financial compensation. They make a range of commitments relating to –

- monitoring the swamps they have destroyed and will destroy in future for a number of years afterwards, even though they didn't finally acknowledge causing any damage to any NPSSs up until this year in the current APMEP,
- commit to searching for Threatened Species in Newnes State Forest, despite admitting on page 76 of the *Amendment Report* tha forty (40) Threatened Species were missed in the 2014 EIS, but expect the community to have confidence that they will find them in future;
- offer reservation of parts of Newnes State Forest into the *Gardens of Stone*, even though this land doesn't belong to Centennial Coal but to the NSW public as a State Forest.

LEG has serious reservations as to why Centennial Coal would be offering to monitor dead swamps for 10 years afterwards – could they be trying to avoid or minimise the amount of compensation?

Whitehaven Coal made similar Biodiversity Offset commitments in 2013 to secure 5,532 hectares to compensate for clearing Critically Endangered Box Gum Woodland in Leard State Forest. Seven (7) years on they have failed to secure those offsets. https://www.edo.org.au/2020/04/03/court-challenge-over-coal-mines-critically-endangered-woodlands-offsets-failure/

6.0 LOSS OF THE ICONIC WOLGAN FALLS

Wolgan Falls has been an iconic destination for generations of bushwalkers. It is one of the most scenic areas and a jewel-in-the-crown of the *Gardens of Stone* proposal. The *Amendment Report* (page 50) says "<u>There are no mapped waterfalls within the Study Area that are free flowing</u>. There may be some ephemeral waterfalls during rain events within the amended Project Application Area."

LEG members are incensed that Centennial are falsely portraying Wolgan Falls as 'ephemeral'. LEG has visited Wolgan Falls on at least 10 occasions in the past 20 years, including during the crippling millennium drought in 2008 and recent 2019 drought, and have never sighted them not flowing.



Figure: Location of Wolgan Falls relative to Proposal area showing the streams which feed the falls. Streams marked X ceased flowing when East Wolgan and Narrow Swamps were drained by Springvale and Angus Place



Photo: Wolgan Falls: Verne and Joyce Moffitt Family Collection – 1992 and 1994

A series of photos of Wolgan Falls over the years, including two above from the Verne & Joyce Moffitt Collection (original Gardens of Stone campaigners). LEG is confident that a call-out to all bushwalking groups will unearth a huge dossier of photos proving it is not an "ephemeral waterfall".



Photos: Wolgan Falls after the bushfires – 11 February 2020



Photos: Wolgan Falls – 29 October 2018

Wolgan Falls drop about 50m off Newnes Plateau and mark the start of the Wolgan Valley.



Photos: Wolgan Falls 2 March 3018





Photos: Wolgan Falls 24 February 2015









31 May 2014

20 May 2013

15 November 2010

Wolgan Falls have already suffered a reduced flow when East Wolgan Swamp, Narrow Swamp, Junction Swamp, and part of Sunnyside West Swamp were undermined by Springvale and Angus Place Longwall Panels. That loss of flow is permanent. This swamp damage is documented in the *Amendment Report*.

The main flow which currently supports Wolgan Falls is from Tristar Swamp, Twin Gully Swamp, and a reduced flow from Sunnyside East Swamp. This Proposal to undermine the last main swamps feeding Wolgan Falls will the death knell, and Wolgan Falls will cease to be a permanent waterfall.

LEG reminds the DPIE that two other waterfalls, Gang Gang Falls and Carne West Falls, have been lost in the past 4 years due to the 2015 Springvale Mine Extension approval. Meanwhile the waterfall at the end of Carne Central Swamp has a severely reduced flow, and may also dry up. The loss of Gang Gang Swamp and Carne West Swamp is documented in the *Amendment Report*. The damage to Carne Central Swamp has yet to be 'officially' identified.

Below are photos of the waterfalls lost in the last 4 years due to the 2015 Springvale Mine Approval.



Gang Gang Falls – no longer flow Carne Central Falls – low flow Carne West Falls – No flow

The failure of the DPIE and PAC to compromise or modify the 2015 Springvale Mine Extension Project in any way has resulted in the loss of two permanent waterfalls in 4 years in Newnes State Forest. Now Wolgan Falls are on the chopping block. And which waterfalls will be next? Is the DPIE going to retain any waterfalls in the Lithgow area for future generations to enjoy?

LEG is appalled and disgusted by the abuse of power by the DPIE. The very reason we have a Planning System in NSW is to achieve a balance between development, resource extraction, social and environmental matters. Any semblance of balance disappeared a long time ago. The DPIE has become a rubber stamp for developers with no regard for the values that ordinary people hold.

This should not be an either/or issue – mining or swamps, mining or waterfalls. Surely the DPIE must try to achieve a balance whereby there can be mining and waterfalls, mining and swamps?

The APMEP mine plan must be altered to protect Wolgan Falls, and nationally endangered swamps.

6. NO MAPPED SPRINGS?

Yet another erroneous statement on page 50 of the Amendment Report is -

"Other than the seepage faces that support the shrub and hanging swamps, <u>there are no</u> <u>mapped springs within the amended Project Application Area</u> or listed in the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011."

Below is a copy of part of the 1932 Wallerawang Map, produced by the Australian Army Survey Corps. It shows a clearly mapped Spring near Birds Rock Trig (then named Sunnyside Trig). All signs of the Hut have disappeared, but the Spring still is still there, and is currently flowing.



Figure: Spring near Birds Rock Trig – 1932 Wallerawang Map <u>https://nla.gov.au/nla.obj-283727828/view</u>



That Spring would have sustained aborigines, early settlers, and wildlife for millennia. The Trig will be undermined by LW1009 of this Proposal. The Spring will dry up and disappear. Birds Rock (then known as Sunnyside) Trig will subside by up to 2 metres and tilt, making it useless for surveying. The old Hut probably belonged to the Bird Brother's, after whom the Trig is now named.

Jim (James) Bird (1895-1978) and his brother Richard (Bert) **Bird** (1891-1961) have a long history using horse teams for logging in Newnes State Forest. They also worked for the renowned

Lieutenant Colonel Hugh Clews who fixed Cockatoo Hill Trig, Galah Trig, and many other famous landmarks in the area in the 1930s.

The first European to visit Birds Rock was pioneer Surveyor Robert Hoddle (1794-1881) in 1823 while surveying Bells Line of Road. There are also the remains of an old hut and hand-dug well, and a cave in which LEG found some aboriginal stone implements and a 1940's JW Winchester bottle.

But Centennial Coal are reporting in the *Amendment Report* that there is no European Heritage in the Proposal area, and did not record/report this aboriginal habitation/stone implement site or another stone tool grinding site in Birds Rock Creek. So who will the DPIE believe? Sadly LEG is pretty sure we know the answer.

7. CLIFF FALLS AN SUSIDENCE CRACKS

Angus Place Colliery has a long a chequered history in terms of cliff falls and surface cracks caused by mine subsidence. The intensification of mining proposed in the APMEP (ie. increasing longwall width from 261m t0 360m, and extraction heights up to up to 3.4m in LW1002-1008) appears to be taking Angus Place back to the bad old days of the 1980s.

Angus Place Colliery was previously known as Newcom Colliery, which operated for 25 years before the current Angus Place Colliery pit-top was commissioned in 1977. In 1979 the Electricity Commission of NSW introduced the first ever longwall mining in Australia at Angus Place Colliery.

The first Longwall Panels 1-10 were disastrous in terms of cliff falls and swamp damage. In a 1991 report by renowned mine subsidence expert Professor Philip Pells, he stated that

"About sixteen rock falls occurred during mining of the first eight longwall panels. Ten rock falls were observed in the vicinity of longwall 9. These ranged in volume from 20 to 3300 cubic metres. Photograph 2 (below) shows one of the larger rock falls."

MINE SUBSIDENCE TECHNOLOGICAL SOCIETY. Proceedings of the Second Triennial Conference on Buildings and Structures subject to Mine Subsidence. Mine Subsidence Technological Society Maitland, 25th to 27th August 1991 ISBN 0 646 05155 5

A Note on Escarpment Instability Associated with Mining Subsidence P.J.N. PELLS <u>MSc(Eng)</u>, DIC, <u>F.I.E.Aust</u>., Director, Coffey Partners Int.

2.6 Angus Place, Near Lithgow

Angus Place Colliery is on the western edge of the Blue Mountains plateau where the plateau margin is deeply dissected by creeks which form steep to vertically sided north east trending valleys. Mining is in the Lithgow Seam and the cover varies from 150m at the base of the <u>clifflines</u> to about 300m beneath the plateau area. Figure 7 shows the location of various rock falls in relation to longwalls 5 to 10. In all cases the longwalls extend beneath and outside the <u>clifflines</u>.

About sixteen rock falls occurred during mining of the first eight longwall panels. Ten rock falls were observed in the vicinity of longwall 9. These ranged in volume from 20 to 5500 cubic metres. Photograph 2 shows one of the larger falls. panels. Ten rock falls were observed in the vicinity of longwall 9. These ranged in volume from 20 to 5500 cubic metres. Photograph 2 shows one of the larger falls. LEG's subsidence monitoring labels Pell's Photograph 2 as Site 9 on the map below. Lambs and Kangaroo Creek swamp (THPSS) were also severely damaged by LW1 - 10 in the 1980's.



Figure: Cliff Falls (Red Placemarks) and Subsidence Cracks – Angus Place Colliery 300 Area

A public outcry by conservation groups about cliff falls forced the company to re-orient Longwalls 11-15 by 90 degrees. The Angus Place 900 Area (LW 920 – 980, and 900W still to be completed) resulted disastrous damage to Kangaroo Creek Upper Swamp, some of the worst damage LEG has yet seen. That is because Angus Place mined under the Kangaroo Creek Lineament. East Wolgan Swamp, Junction Swamp, Carne West Swamp and the Gang Gang Swamps were all killed by mining near Lineaments.

Longwall mining near Lineaments is HIGH RISK. The current APMEP Proposal will be the deepest longwall mining ever attempted in the Western Coalfields (over 400m deep) in very challenging conditions. Throw in Lineaments, and it is a disaster waiting to happen - for workers, cliffs, swamps, and waterfalls. Re-orienting the Longwalls 90 degrees may not work this time. The DPIE must require Centennial to reduce the intensity of mining, avoid swamps, pagodas and cliffs, and require Centennial to consider using mini-longwalls as used at Airly Mine. Alternatively Bord & Pillar methods are financially viable at the nearby Clarence Colliery, so are also likely to be viable here.

As recently seen at Springvale Colliery, longwall mining is hugely susceptible to prolonged stoppages and huge financial losses in adverse geological conditions due to the inflexibility of a single Longwall working a single face in a predetermined direction.

Mini longwalls and Bord & pillar methods on the other are cheaper to set up, are more flexible, several faces can be mined simultaneously, and if geological problems do arise then they can withdraw, adapt, avoid, minimise safety risks and financial losses.

8. AFTERMATH OF SWAMP DEATHS

What does the DPIE think happens after endangered Temperate Highland Peat Swamps are killed by longwall mining? Does the DPIE even think at all? Is the DPIE too busy rubber-stamping the next ecological disaster to bother about the aftermath of previous disastrous approvals?

The 'E' in DPIE stands for 'Environment', just in case the Department of Planning has forgotten. You people are the sole custodians of the World Heritage Areas, National Parks, Threatened Flora and Fauna Species and Endangered Ecological Communities, Drinking Water Catchments, River Health, Aboriginal and European Heritage, and Geodiversity that still remains in tact in NSW.

The word 'Peat' in Temperate Highland Peat Swamps on Sandstone should indicate to the DPIE that peat performs an enormously important function in upland swamps in the headwaters of our drinking water catchments and river systems – peat acts like a huge sponge that absorbs and slowly releases water into natural waterways.

Once a peat swamp dries out due to longwall mining other plants don't just magically regrow to replace the unique ecosystem that were lost. Nature doesn't seem to know how to deal with dead swamps, and those areas remain a lifeless barren biological desert for decades. The swamp below was killed in 2006 by longwall mining. Absolutely nothing has regenerated in 15 years.



Because noting grows back in swamps killed by longwall mining they are massive sources of erosion and siltation for decades afterwards. This is especially the case after bushfires as have just been experienced, as the peat is burnt, the former swamps become channelised, and 'gully-raker' storms mobilise 100,000s of tonnes of silt which moves down stream choking waterholes, dams, and river systems downstream in Drinking Water Catchments and World Heritage Areas.

For example East Wolgan Swamp killed by Springvale Long Wall Panel 413 in 2007 has become severely channelised, and huge volumes of silt were mobilised and have flowed into the Wolgan River and Greater Blue Mountains World Heritage Area downstream. Centennial Coal did some token restoration work in small parts of East Wolgan swamp using coir logs and brush matting to reduce erosion and siltation, however all of that was burnt in the recent bushfires.



East Wolgan Swamp

Kangaroo Creek Swamp

Wolgan River Swamps

The damage to East Wolgan Swamp by Springvale Colliery LW413 and Kangaroo Creek Swamp by Angus Place Colliery 900 LW panels is well documented in the *Amendment Report*. Less well documented is the damage caused to the Wolgan River Swamps (par of the current APMEP) proposal) by minewater discharges from Springvale Licence Discharge Points LDP 4 & 5. The huge volumes of minewater discharge caused severe channelisation causing large parts of these swamps to die. They are only just starting to recover, and now the APMEP wants to undermine and kill them off permanently.

LEG could provide 100s of photos of severe channelization, erosion, and siltation in THPSS damaged or killed by longwall mining in Newnes State Forest. We hope however that the above are enough for the DPIE to gain an understanding of the issue.

When a developer clears a forest or swamp to build infrastructure or houses, the erosion and siltation issues are usually addressed by well-designed and permanent drainage works.

However whilst longwall mining may not directly clear-fell native vegetation, it drains entire ecosystems such as swamps over huge areas, which collapse and die, resulting inmassive erosion and siltation impacts downstream. Yet no permanent infrastructure is put in place to address this erosion or siltation, and genuine efforts are made to rehabilitate these swamps. A few coir logs and brush-matting does not in LEGs opinion constitute permanent infrastructure nor rehabilitation.

The DPIE must require long-term, effective, and permanent measures to address the ongoing erosion and siltation from swamps killed by longwall mining by the current APMEP, and previous Centennial longwall mining operations in Newnes State Forest.

9. THIS IS A HIGH RISK PROPOSAL

As pointed out above, this Proposal involves the deepest longwall mining ever attempted in the Western Coalfields with a 450m depth of cover near Birds Rock, in challenging terrain, near a range of Type 1 & 2 Lineaments and other geological structures.

Yet these are the conditions in which Centennial are proposing to intensify mining by increasing the longwall width from 261m in the 2104 EIS to 360m, increases the extraction height to 3.4m, and accept *Maximum Offset Liability* resulting in total loss of all NPSS and associated Threatened Species.

And if that is not enough, Centennial is doing so at a time when there have been three (3) serious OH&S incidents in the last 2 years –

 On **31 January 2020** Clarence Colliery Pty Ltd were issued with a **\$524,942** Work Health & Safety Enforceable Undertaking, https://www.resourcesregulator.nsw.gov.au/__data/assets/pdf_file/0019/1200772/Clarenc
<u>e-Colliery-WHS-undertaking-proposal_Redacted.pdf</u>. That was due to an incident on 4 July 2018 when a falling coal rib struck two workers in the underground workings of the mine when the strata failed on 4 July 2018. One worker suffered serious injuries. The NSW Resources Regulator commenced an investigation to determine the cause and circumstances of the incident.

https://resourcesandgeoscience.nsw.gov.au/__data/assets/pdf_file/0015/824100/IIR18-05-Falling-coal-hits-two-workers-underground.pdf

• On **5 February 2019** a Worker was injured releasing jammed conveyor chain at Springvale Colliery

https://resourcesandgeoscience.nsw.gov.au/ data/assets/pdf_file/0010/1118647/IIR19-03-Worker-injured-releasing-jammed-conveyor-chain.pdf. A shearer operator was injured in the process of releasing a jammed armoured face conveyor (AFC) chain using the shearer on a longwall. The injury occurred when an eight-tonne working load limit (WLL) Rud link, located on the shearer ranging arm, failed due to overload. The shearer operator was hit on the leg by recoiling components of the tow rope assembly when the Rud link failed. The worker was in the roof support walkway at the maingate end of the longwall, approximately 22 metres (15 roof supports) from the failed connection point on the shearer.

• On **5 July 2018** - Serious injuries at an underground coal mine - Springvale Mine. <u>https://resourcesandgeoscience.nsw.gov.au/ data/assets/pdf_file/0003/824106/IIR18-06-Serious-injuries-at-underground-coal-mine.pdf</u> A flying object hit a worker and inflicted a serious injury while he was attempting to free a jammed conveyor chain of a continuous miner in underground workings of the mine on 5 July 2018. The NSW Resources Regulator has commenced an investigation to determine the cause and circumstances of the incident

And as recently experienced at Springvale Colliery, longwall mining is hugely susceptible to prolonged stoppages and huge financial losses in adverse geological conditions due to the inflexibility of a single Longwall machine working a single face in a predetermined direction.

Add to this the escalating traffic safety issues on Newnes Plateau. risks to bushwalkers posed by cracks and cliff falls, increased bush-fire risk due to dried out and dessicated environments, and this is a very high-risk proposal – safety wise, financially, socially, and environmentally.

The DPIE must require Centennial to reduce the intensity of mining, avoid swamps, pagodas and cliffs, redesign the proposed Mine Plan and/or require Centennial to consider using mini-

longwalls as used at Airly Mine. Alternatively Bord & Pillar methods which are financially viable at the nearby Clarence Colliery could also be viable here. The Government will get similar levels of resource extraction, without the high safety, financial, social and environmental risks.

10. GREENHOUSE GAS EMISSIONS

Centennial coal has vastly under-reported their "scope 3 emissions" claiming they are 30 times lower than they actually are.

The coal from Angus Place is mined in order to be burned at Mount Piper Power Station. The burning of coal is the number one driver of global warming. As such, the approval of additional coal mining jeopardises the safety of the global climate, creating a catastrophic generational inequity.

EMM Consulting, working for Centennial Coal, reported the expected greenhouse gas impacts of the project in Appendix K of the Amendment report.

The overwhelming majority of emissions from coal mining result from the burning of product coal. These are called downstream emissions or "scope 3 emissions".

Centennial coal reported their scope 3 emissions as 364,500 t, or 0.368% of NSW emissions (Table 8-22 of the Amendment Report, p102). However this is incorrect. The actual scope 3 emissions are 10.96 million tonnes CO2e, or 8.5% of NSW emissions.

Centennial coal mis-reported its downstream emissions as being 30 times smaller than reality.

Calculation - scope 3 emissions of mining coal caused by downstream burning of produced coal:

Saleable coal: 4.5 Mtpa Energy content: 27 GJ/t (Table 1, NGAF 2019) Emissions factor: 90.23 kg CO2e/GJ (Table 1, NGAF 2019) Total emissions from downstream burning of produced coal = 4.5 Mt \times 27 GJ/t \times 0.09023 t CO2e/GJ = 10.96 Mt CO2e per year

NSW total emissions in the calendar year 2017 were 129 Mt CO2e, meaning that the AMEP would be responsible for 8.5% of NSW emissions if approved.

The climate impacts caused by such a large emissions source are quantifiable, with reference to the best available climate science, and devastating. Centennial coal has failed to estimate their greenhouse emissions, and the impacts of these emissions, and we recommend refusal of the project on these grounds.

11. MINE LIFE

The amended APMEP proposes to undertake mining operations up to 31 December 2053 with rehabilitation activities to continue beyond this date. The applicant claims that this aligns mining operations at Angus Place Colliery to the current projected life of the Mount Piper Power Station.

The Mount Piper Power Station was commissioned in stages over 1992-1993, with a technical life of 50 years (LEG notes that Wallerawang Power Station Units 7 & 8 closed after only a 35 year life). As such, the Australian Energy Market Operator lists its expected closure date as 2042.

This date, however, does not consider efforts by Australia and globally to avoid dangerous global warming.

If the mine is to be approved, LEG recommends reducing the life of the mine to end by 2030 at the latest. This would avoid licencing and locking in a significant source of greenhouse gas emissions in contravention of Australia's commitments under the Paris Agreement, and NSW Government's net-zero emissions target.

However, LEG suggests that other coal mines, for example Airly and Clarence, could better supply coal to Mount Piper Power Station for the remainder of its life, without causing an additional significant emissions source to be added in NSW.

12. CONCLUSIONS

Centennial Coal's proposal fails to adequately assess, avoid, minimise, or adequately compensate for the loss and damage of biodiversity and natural heritage values. This submission by the Lithgow Environment explains that a thirty-two year long consent over such a valuable heritage region, with no adaptation of mining operations to avoid or mitigate damage, cannot be justified by financial offset payments for the area's outstanding heritage value, in particular its ntionally endangered swamps in the Threatened species within them. All the values must be assessed, including scenery and geodiversity, and protected as much as possible.

Centennial Coal has failed to adequately consider the first steps of the offset process - avoidance and mitigation of potential damage, where their Springvale and Airly mines have amply demonstrated how this can be done in the Australian coal market.

Whilst more avoidance protection could and should have been required of Springvale at the Approval stage for impacted swamps, at least steps were taken after the 2015 consent to limit the damage by curtailing longwall mining where far-field impacts were likely. Given these steps to avoid impact avoidance, it is now appropriate to apply this kind of protection to swamps at Angus Place.

There are also administrative failures to protect natural heritage, as Federal and State offset policies only apply to native plants and animals and not waterfalls, landscapes, or geodiversity.

Given Centennial Coal's failures and omissions in this EIS, the DPIE cannot recommend issuing a consent for the APMEP in its current form. The Lithgow Environment Group believes that the APMEP requires substantial revision and amendment along the lines recommended below.

13. RECOMMENDATIONS

- The APMEP which potentially damages 2,000 Ha of the Gardens of Stone reserve proposal must be determined by an Independent Planning Commission, as there has been significant community opposition to it.
- The DIPE must recommend against consent until controversy of this state significant development has been reduced by further damage avoidance and mitigation so as to satisfy the overall objectives of both the NSW and Federal Biodiversity Offset policies - to prevent the extinction of nationally endangered swamps on Newnes Plateau. This is best achieved by further environmental assessment and an independent determination with a public hearing.
- A further environmental assessment is required for the APMEP to avoid, minimise, mitigate damage, report on omitted Threatened Species, aboriginal heritage, ancient aeolian sand

dunes that explain our past climate, the area's other rare plants and fauna, internationally significant pagodas and geodiversity - Wolgan Falls, Birds Rock, and Cathedral Cave.

- To mitigate damage, the DIPE must recommend the mine plan be revised, the underground roadway moved so that it does not truncate the downstream ends of Tristar and Twin Gully Swamps, narrow the long wall panel width, increase the chain pillar width, reduce the extraction height, remove and/or shorten longwall panels to avoid endangered swamps, and/or use mini-longwall panels like those used at Airly Mine, and/or Bord & Pillar methods.
- All Aboriginal heritage must be assessed and protected.
- Tristar and Twin Gully swamps should be placed in mining protection zones to protect these swamps and reduce the risk of mining intersecting with secondary geological lineaments associated with the Wolgan River Lineament Field. Trail Six, Birds Rock and Crocodile swamps should also be in mining protection zones that prevent mining related impacts, such as far-field mine impacts.
- The swamps on the Wolgan River and Wolgan Falls must be further protected, as they are at high risk of losing water due to secondary lineaments associated with the Wolgan Lineament Field.
- Cathedral Cave, Birds Rock, and Birds Rock Flora Reserve must be protected from mining given it is a nature reserve with equivalent status to a National Park.
- Pagoda landforms must continue to be afforded *special significance status* and granted the highest possible protection, particularly pagodas associated with swamps and pagodas associated with gully forests, particularly those containing stands of Blue Mountains Ash.
- All pagodas must be mapped and photographed, including isolated pagodas and small groups of pagodas.
- Targeted flora and fauna surveys are required post fire to locate threatened flora species not identified on *BioNet* but known to occur in the area from the NSW Herbarium *AVH* database, the *Atlas of Living Australia*, and *iNaturalist* databases.
- The Greater Blue Mountains World Heritage Area must be protected from toxic groundwater pollution and loss of water flows. Any water pollution damage should result in cessation of mining and revision of the mine plan to prevent further damage.
- Permanent fire-resistant erosion and siltation structures and comprehensive revegetation programs must be put in place to prevent the massive channelization, erosion and siltation that has and continues to occur in upland Peat Swamps damaged by longwall mining.
- The DIPE must recommend an effective TARP process for environmental impacts that have not been assessed or when unexpected impacts are observed (e.g. to Wolgan swamps, Wolgan Falls, pagodas, cliffs, caves). This is particularly important for environmental heritage of national and international significance, or where further loss of flows and/or pollution of the Wolgan River or Carne Creek occurs. When such impacts do occur, protection by mine avoidance must be required as a penalty for not identifying such key impacts. In addition a financial penalty of ten times the swamp offset must be imposed for loss of flows over Wolgan Falls or to Wolgan River swamps given the proponent claims these values will not be damaged. Denial of damage when there is a likelihood of it must carry substantial penalties.
- The DIPE must ensure that far-field impacts beyond the coal extraction area do not occur without serious consequences. Any such impacts should also require immediate avoidance action to areas/heritage values sensitive to such impacts, as has been required at Springvale.

- The DIPE should recommend that the mine proposal be subject to critical review every five years, given the environmental sensitivity of the region and its likely reservation as a state conservation area so that consent conditions can be adapted when necessary.
- Consistent with *Destination Pagoda*, Centennial Coal must ensure that Maiyingu Marragu Road, State Mine Gully Road and Sunnyside Ridge Road as far as Birds Rock are maintained as two-wheel drive standard public access roads during and as part of mine rehabilitation.
- Should the DIPE recommend financial offsets despite this accelerating swamp extinction on Newnes Plateau, then these funds must go to on-ground conservation management of the new Gardens of Stone State Conservation Area.
- The DIPE must reassure the community that financial Biodiversity offsets will actually be paid and not avoided, as appears to be the case at Whitehaven <u>https://www.edo.org.au/2020/04/03/court-challenge-over-coal-mines-criticallyendangered-woodlands-offsets-failure/</u>
- Reservation of the new Gardens of Stone State Conservation Area is part of the Offset compensation proposal associated with this mine extension, but the proponent's reserve proposal needs to be adapted to ensure the future reserve's benefits are delivered quickly, given that it has been long delayed. DIPE should recommend reservation of the new Gardens of Stone State Conservation Area as soon as possible to facilitate timely diversification of Lithgow's regional economy and establish its unique cachet under *Destination Pagoda*.
- Centennial coal should be required to recalculate their vastly under-reported "scope 3 emissions" which they have reported as being 30 times lower than they actually are.
- The DPIE must investigate the veracity of Centennial's claims that this mine is necessary to secure coal supplies for Mount Piper Power Station, given that the recently constructed Lidsdale Coal Unloader can now transport coal by rail from Airly Mine, Clarence Colliery, and other Centennial mines using empty coal trains returning from the coast. Mount Piper Power Station also has an approved Pipers Flat Coal Unloader, which can transport coal by rail from Mudgee or other areas via Sydney-West, Parkes, or Wallerawang-Gwabegar rail networks.

The Lithgow Environment Group Inc has not made political donations or gifts totalling \$1,000 or more in the last two years.

Thank you for the opportunity to comment.

Yours sincerely

Chris Jonkers Vice President Lithgow Environment Group Inc