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Preserving the Balance of Nature

To: Referrals Gateway epbc.referrals@awe.gov.au

15 July 2022

Dear Minister,

RE: Angus Place West EPBC Number: 2022/09270

I am writing on behalf of Lithgow Environment Group Inc. Thank you for the opportunity to comment on whether the proposed action should be assessed under the EPBC Act and what the controlling provisions should be.

Summary

In summary our submission states:

The proposed action should be assessed as a controlled action under the EPBC Act because it is likely to have a significant impact/s on the following matters of national environmental significance:

a. Nationally listed threatened species and ecological communities

- Temperate Highland Peat Swamps on Sandstone (THPSS) – EPBC Act: Endangered
- *Eucalyptus aggregata* (Black Gum) - EPBC Act: Vulnerable
- *Kunzea cabbagei* – EPBC Act: Vulnerable
- *Pultenaea glabra* – EPBC Act: Vulnerable
- *Velleia perfoliata* – EPBC Act: Vulnerable
- *Xerochrysum palustre* (Swamp Everlasting) – EPBC Act: Vulnerable
- Giant Burrowing Frog (*Heleioporus australiacus*) – EPBC Act: Vulnerable
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) - EPBC Act: Endangered
- Greater Glider (*Petauroides volans*) - EPBC Act: Vulnerable
- Large-eared Pied Bat (*Chalinolobus dwyeri*) - EPBC Act: Vulnerable

b. Listed migratory species

- Rainbow Bee-eater (*Merops ornatus*) – EPBC Act: Migratory
- Latham's Snipe (*Gallinago hardwickii*) – EPBC Act: Migratory

c. Significant impact on a water resource

- The Proposal will mine to within 60m of the Coxs River, a major source of Sydney's drinking water, along a major Geological Fault Line and near other Type 1 Lineaments. This will have significant and unpredictable impacts on surface water yield and quality, groundwater aquifer drawdown for long periods over a wide area, and will adversely impact upon existing groundwater and surface water regimes over the entire area.

1. INADEQUATE SEARCH EFFORT FOR OTHER EPBC LISTED THREATENED SPECIES & COMMUNITIES

Only *Eucalyptus aggregata* and *Xerochrysum palustre* are identified as being adversely affected. Impacts on eight (8) other EPBC listed Threatened Species are not adequately addressed. The EPBC Listed endangered ecological community of Temperate Highland Peat Swamps on Sandstone (THPSS) was not identified. Inadequate search efforts were conducted for other EPBC Act listed species with potential to occur within the Proposal area including *Commersonia prostrata* (E); *Isotoma fluviatilis subsp. fluviatilis* (X); *Pultenaea parrisiae* (V); *Thesium australe* (V); *Dasyurus maculatus* (E); *Eulamprus leuraensis* (E); and *Paralucia spinifera* (E).

2. NSW BCA LISTED THREATENED SPECIES WITHIN THE PROPOSAL AREA

As well as impacting on ten (10) Federally listed Threatened Species & Communities actually recorded within the proposal area, seventeen (17) NSW BCA listed Threatened Species & Communities will also be impacted—

- Newnes Plateau Shrub Swamp in the Sydney Bioregion – Endangered Ecological Community, NSW BCA
- Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions EEC) - Endangered Ecological Community, NSW BCA
- *Eucalyptus aggregata* – Vulnerable NSW BCA
- *Eucalyptus cannonii* - Vulnerable NSW BCA
- *Pultenaea glabra* – Vulnerable NSW BCA
- *Veronica blakelyi* - Vulnerable NSW BCA
- Giant Burrowing Frog (*Heleioporus australiacus*) - Vulnerable NSW BCA
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) – Vulnerable NSW BCA
- Little Eagle (*Hieraaetus morphnoides*) – Vulnerable NSW BCA
- Brown Treecreeper (eastern subspecies) – Vulnerable NSW BCA
- Varied Sittella (*Daphoenositta chrysoptera*) – Vulnerable NSW BCA (recorded 1982)
- Scarlet Robin (*Petroica boodang*) – Vulnerable NSW BCA
- Flame Robin (*Petroica phoenicea*) – Vulnerable NSW BCA (recorded 1982)
- Diamond Firetail (*Stagonopleura guttata*) – Vulnerable NSW BCA
- Greater Glider (*Petaurus volans*) - Vulnerable NSW BCA? ((recorded 1982)
- Large-eared Pied Bat (*Chalinolobus dwyeri*) – Vulnerable NSW BCA
- Giant Dragonfly (*Petalura gigantea*) - Endangered NSW BCA

The Lithgow Environment Group has lodged many submissions on mining proposals in the past 17 years. Never have we encountered such an extraordinarily large number of Threatened Species and Communities within a single mine proposal area – **10 EPBC Listed**, and **17 NSW BCA listed**. This must surely be a Controlled Action that will have significant Direct and Indirect impacts on Matters of National Environmental Significance which need to be assessed quite specifically?

3. EPBC LISTED THREATENED SPECIES AND ECOLOGICAL COMMUNITIES

3.1 Temperate Highland Peat Swamps on Sandstone (THPSS) – Endangered EPBC Act

The Proponent variously claims in the Referral that “No EPBC Act listed TEC was found within the Project Area”, “The proposed action is unlikely to have a significant impact on any EPBC Act listed ecological communities as there were none identified in the proposed action area.” and “No Commonwealth listed threatened ecological communities were identified within the proposed action area.”

The Proponent then attempts to reclassify nationally listed endangered ecological communities of Temperate Highland Peat Swamps on Sandstone (THPSS) as other non-listed communities, based on extremely limited desktop searches of historic vegetation surveys in the project area, other publicly available databases other than Bionet, and flora surveys undertaken <2 years (21 months) after the unprecedented 2019 fires.

LEG highlights some of the Proponents key arguments, and conflicting data –

- a. The Proponent describes the vegetation community in Kangaroo Creek Swamp (APW2) and eastern arm of Long Swamp as *PCT 1256 - Tableland swamp meadow on impeded drainage sites of the western Sydney Basin and South Eastern Highlands Bioregion (Moderate condition)*, and all of Long Swamp as *PCT 335 - Tussock grass - sedgeland fen - rushland - reedland wetland in impeded creeks in valleys in the upper slopes sub-region of the NSW South Western Slopes Bioregion – Moderate*
 - LEG was actively involved with NSW Local Land Services and NSW Forests on two swamp restoration projects at the northern end of APW1 in 2019 funded by the NSW Environmental Trust as part of the ‘*Swamped by Threats – Conserving Species Reliant on Upland Swamps*’ program. The NSW Environment Trust, Local Land Services, and Forestry Corporation of NSW clearly identify threatened Upland Swamps in Long Swamp.
 - The “*Swamp meadow*” classification conflicts with a historic Benson & McRae, National Herbarium of NSW, August 1982 *Vegetation Survey for Proposed Extension of Mining Lease Areas for Angus Place Colliery*, which described Vegetation Unit 6a & b in Kangaroo Creek Swamp (APW2) as “*Tall shrubland of Leptospermum species*” and “*Closed heath on poorly drained valley floors*”. Listed were a range of indicative swamp species not identified in the Proponents flora assessment.
 - The “*Swamp meadow*” classification conflicts with the historic Kingston & Allen, The Australian Museum, September 1982 *Fauna of the Angus Place Colliery Lease*, which described vegetation unit 6b (APW2) as “*Swampy Heath – dominated by a wide variety of shrub species including Grevillea acanthifolia, Epacris paludosa and Leptospermum species*”. And “*Two habitats that have been previously recognised to be of particular significance occur extensively within the lease area: Swampy heath and sandstone outcropping*”. And “*Subsidence of strata resulting from underground mining could have impact on faunal habitat via two pathways: Rockfalls, and Alteration of surface drainage pattern - This is a likely result of subsidence below creeks and swamps*”. Kingston & Allen predicted 40 years ago what will occur if this Proposal is approved.

- The “Swamp meadow” and “Tussock grass - sedgeland fen” classification conflicts with Appendix I Angus Place Water Management Plan, Figure 2-4 of the Referral documents, which maps patches of MU50 Newnes Plateau Shrub Swamp in Kangaroo Creek Swamp (APW2) east of Angus Place Colliery Pit Top, in the headwaters of Lambs Creek, plus MU51 Newnes Plateau Hanging Swamp in the headwaters of Kangaroo Creek. All of Long Swamp is mapped as MU53 Mountain Hollow Grassy Fen (EEC).
 - The Proponent states “*Unresolved species identifications (due to bushfire recovery or absence of flowers), grasses (which can fluctuate seasonally), weeds and Eucalyptus species were removed prior to analysis. One notable exclusion was Leptospermum grandifolium (Mountain Tea-tree)*”. LEG recorded *Leptospermum grandifolium* in flower in Kangaroo Creek Swamp (APW2) on the iNaturalist Australia database on 2 November 2021, around the same time that RPS were undertaking Flora Surveys for this Proposal. It is the most common *Leptospermum* species in that area, although is less common further west in the Long Swamp (APW1) area. LEG does not agree that flowers are necessary to identify this species, as it can easily be differentiated from other common *Leptospermums* in the area (eg. *L. obovatum*, *L. continentale*, *L. myrtifolia*) by growth habit and leaf characteristics. Many *Eucalypts* such as *E. aggregata*, *E. stellulata*, and *E. cannonii* can be identified, despite fire, based on seedling and epicormic leaves and old fruit capsules which survived fire. Most grasses have flowered since the December 2019 fires. The Proponent also appears to infer that because *Lepidoperma limicola* was not sighted, these swamps were not THPSS. Based on this reasoning, THPSS in Kanangra-Boyd National Park containing *Boronia deanei subsp. deanei* should also not be classified as THPSS as *Lepidoperma limicola* isn’t recorded there on Bionet eg. Belarah Swamp.
- b. The Proponent appears to infer that because swamps in APW1 & APW2 are at a lower altitude than Newnes Plateau Shrub Swamps on the plateau proper, that they are not THPSS. Kangaroo Creek Swamp is at an altitude of 940m, the same as Rocky Creek Swamp at 940m. Deanes Creek Swamp is at 950m, THPSS in the Goochs Crater area at 950m, Nayook Creek Swamp is at 960m, and Dinner Gully Swamp at 960m.
- c. In 2018 the *Angus Place Modification 5 – Water Treatment* was approved allowing the water table in the Angus Place 800 Area (immediately east of APW2) to be lowered for an indefinite period. The Proponent did not lodge an EPBC Referral, and claimed that endangered THPSS communities in Long Swamp, Kangaroo Creek Swamp, and Lambs Creek Swamp were “*Typha orientalis rushlands*”. This is despite the nearest Bionet Atlas record for any *Typha* species in 2018 being 5km further south along the highly disturbed Sawyers Swamp Creek. LEG, Blue Mountains Conservation Society, the Colong Foundation, and other groups opposed the lowering of groundwater levels in the area for long periods, because of the adverse impact this would have on endangered EPBC listed THPSS in that area. The DPIE ignored community concerns, and approved lowering of the water table across a wide area during the worst drought in history followed by unprecedented bushfires under catastrophic weather conditions. The Proponent has failed to identify in this Referral that pumping mine water out the 800 Area (and therefore hydraulically interconnected 300, 700, and 900 Areas) for long periods has already caused significant damage to Federally listed endangered THPSS in the past, including in

2006 and post 2018. This Proposal, if approved, will once again result in lowering of the water table across the APW1, APW2, and wider area for at least 8 years, with catastrophic consequences for all moisture dependent Flora & Fauna species.

- d. The Proponent claims that analyses revealed swamps in the proposed action area were only 20% similar to those on Newnes Plateau using multivariate analyses, and therefore were not THPSS. This conflicts with the NSW Scientific Committee Final Determination to list Newnes Plateau Shrub Swamp in the Sydney Basin Bioregion (included in THPSS) as an ENDANGERED ECOLOGICAL COMMUNITY in Part 3 Schedule 1 of the Act in 2005 (and 2011 Minor Amendment Determination). The NSW Scientific Committee determined that Newnes Plateau Shrub Swamp is characterised by the assemblage of species listed below. 40 of those 49 species (or 81.6%) have been recorded within the Proposal area.

NSW Scientific Committee: Newnes Plateau Shrub Swamp is characterised by the following assemblage of species

- ***Baeckea linifolia*** – 3 ALA records in Proposal area, numerous records in Kangaroo Ck upstream
- ***Baeckea utilis*** – 7 ALA records in Proposal area, many more in wider area
- ***Baloskion australe*** – 3 ALA records in Proposal area, many more in wider area
- *Bauera rubioides*
- ***Blechnum nudum*** – 2 ALA records in Proposal area, many in wider area
- *Boronia deanei*
- ***Callistemon citrinus*** – 1 ALA record in Proposal area
- ***Callistemon linearis*** – 2 ALA records in Proposal area
- *Celmisia longifolia*
- ***Centella asiatica*** – 9 ALA records in Proposal area, many more in wider area
- ***Daviesia latifolia*** - 1 ALA record in Proposal area, many in wider area
- ***Deyeuxia gunniana*** – 6 ALA records in Proposal area
- *Dillwynia stipulifera*
- ***Drosera spathulata*** – 1 ALA record in Proposal area, common
- ***Eleocharis sphacelata***– 7 ALA records in Proposal area
- ***Empodisma minus*** - 12 ALA records in Proposal area, many more in Kangaroo Ck upstream
- ***Epacris microphylla*** - 7 ALA records in Proposal area
- ***Epacris paludosa*** – 3 ALA records in Proposal area, more in Kangaroo Ck upstream
- ***Gahnia sieberiana*** – 4 ALA records in Proposal area, many more in Kangaroo Ck upstream
- ***Geranium neglectum*** - 11 ALA records in Proposal area, very common
- ***Gleichenia dicarpa*** - 3 ALA records in Proposal area, many more in Kangaroo Ck upstream
- ***Gonocarpus micranthus*** – 12 ALA records in Proposal area, more in Kangaroo Ck upstream
- ***Goodenia bellidifolia*** – 8 ALA records in Proposal area
- ***Grevillea acanthifolia*** – 23 ALA records in Proposal area, more in Kangaroo Ck upstream
- *Gymnoschoenus sphaerocephalus*
- ***Hydrocotyle peduncularis*** (now *sibthorpioides*) – 7 ALA records in Proposal area, common
- ***Juncus continuus*** – 12 ALA records in Proposal area, very common
- ***Lepidosperma limicola*** – 2020 Bionet record just outside Proposal area on Kangaroo Creek
- ***Leptospermum continentale*** – 4 ALA records in Proposal area, 1982 L. aff *juniperinum*
- ***Leptospermum grandifolium*** – 6 ALA records in Proposal area, common Kangaroo Ck swamp
- ***Leptospermum myrtifolium*** – 9 ALA records in Proposal area, common in Long Swamp
- ***Leptospermum obovatum*** – 19 ALA records in Proposal area, very common
- ***Lepyrodia anarthria*** – 3 ALA records in Proposal area
- *Lepyrodia scariosa*
- ***Lomandra longifolia*** - 3 ALA records in Proposal area, common
- ***Luzula ovata*** - 2 ALA records + *L. modesta* + *L. flaccida* subsp *Long Anther* ([K.L.Wilson 828 et al.](#))
- ***Notochloe microdon*** - 3 ALA records in Proposal area

- *Olearia quercifolia* – Benson & McRae 1982, Kangaroo Creek lower swamp, more upstream
- *Patersonia fragilis*
- *Sporadanthus gracilis*
- *Sprengelia incarnata*
- *Stylidium graminifolium* – 14 ALA records in Proposal area, common
- *Todea Barbara* – 1 ALA record in Proposal area, common
- *Utricularia dichotoma* – 6 ALA records in Proposal area, common
- *Velleia montana* – 1 ALA record in Proposal area
- *Viola sieberiana* – 4 ALA records Proposal area + 1 x *Viola* sp, 4 x *V. hederacea*, 2 x *V. caleyana*
- *Xanthosia dissecta* – 1 ALA record just outside Proposal area along Kangaroo Ck + 1 *X. pilosa*
- *Xyris gracilis* – 4 ALA records in Proposal area
- *Xyris ustulata* – 2 ALA records just outside Proposal area upstream along Kangaroo Ck

Furthermore the official 2005 Commonwealth Listing Advice describes and maps the location of swamps included in the EPBC listed THPSS community, and clearly states them to include:

- Blue Mountains swamps in the upper reaches of Hawkesbury River (such as Grose R and Wentworth Ck) and Nepean R (such as Bedford Ck and upper tributaries of Coxs River);
- Newnes Plateau swamps in the upper reaches of Wolgan River, Wollangambe River, Bungleboori Creek, Nine Mile Creek, Nayook Creek and Coxs River.

Furthermore, the 2016 publication “*The spatial distribution and physical characteristics of Temperate Highland Peat Swamps on Sandstone (THPSS)*” (<https://site.emrprojectsummaries.org/2016/04/20/the-spatial-distribution-and-physical-characteristics-of-temperate-highland-peat-swamps-on-sandstone-thpss/>) funded by an Enforceable Undertaking as per section 486A of the *Environment Protection and Biodiversity Conservation Act 1999* between the Minister for the Environment, Springvale Coal Pty Ltd and Centennial Angus Place Pty Ltd (see Appendix 1), clearly maps THPSS in the Proposal area.

Over 81% (40 of 49 species) characterising Newnes Plateau Shrub Swamps have been recorded in the Proposal area on either Bionet, AVH, ALA, iNaturalist, or historic flora surveys. The 2005 Commonwealth Listing Advice describes and maps THPSS as occurring within the Proposal Area. Limited flora surveys 21 months after unprecedented fires under catastrophic weather conditions at the end of a prolonged drought are not sufficient evidence to reclassify EPBC listed endangered THPSS as “Swamp Meadows”. Further independent flora surveys are required for THPSS the area.

3.2 *Pultenaea glabra* – EPBC Act: Vulnerable

The EPBC Referral team chose to exclude *Pultenaea glabra* (Vulnerable EPBC Act) within the Angus Place Mine Lease from previous EPBC Referrals, such as the 2015 Angus Place Colliery & Springvale Mine Extensions (*Kunzea cabbagei*, *Eucalyptus aggregata*, *Xerochrysum palustre*, and many others were also excluded). That does not mean *Pultenaea glabra* doesn’t exist, and should not be considered as a MNES in this Proposal.

And just because *Pultenaea glabra* isn’t listed on the Bionet Atlas, that does not absolve the EPBC Referral Team from the responsibility of checking other publicly available databases such as AVH, ALA, iNaturalist Australia, and others.

Pultenaea glabra was recorded on the Australian Virtual Herbarium (AVH) database in 2010, a Tier 1 site based on actual collections identified by NSW Herbarium Botanists, and an official site also administered by the NSW DPIE.

Reports of *Pultenaea glabra* on Newnes Plateau date back to the early 1990s. It was probably known from the late 1970s when the NSW Government (NSW Electricity Commission) owned Angus Place Colliery, but was covered-up.

And whilst *Pultenaea glabra* may have a name change in the near future (*Pultenaea tenebrosa*), that document has not been accepted for publication yet, and name changes can take many months or years to take effect. In the future when *P. tenebrosa* is formally described and accepted, it is highly likely to be listed as Endangered or even Critically Endangered, because it has an even more restricted distribution than the currently described *Pultenaea glabra*.

At this point in time *Pultenaea glabra* is listed as Vulnerable under the EPBC Act, and therefore should be considered as an MNES in this EPBC Referral.

LEG conducted a targeted search for *Pultenaea glabra* on Newnes Plateau in 2018, recording almost 1000 plants, over 600 of which were found within the Angus Place Mine lease. Virtually the entire recorded populations were killed by the 2019 fires, however LEG has sighted a small number of plants that did survive within the Proposal area.

Of concern is that about 300 of those plants are located on a ledge and cliff base that has been severely destabilised by previous longwall mining in the Angus Place 300 Area. That ledge has a large 400mm wide subsidence crack along it, and will inevitably collapse, burying those 300 plants in a pile of rubble. More are located in the APW2 area. A recent cliff collapse (May 2022) in that area damaged or destroyed many *Veronica blakelyi* (Vulnerable NSW BCA). The current Proposal will inevitably lead to further destabilisation of already unstable cliff lines in the Proposal area, result in more cliff collapses, and will have a significant impact on MNES.

The Commonwealth Threatened Species Profile (last updated: 17 August 2021) for *Pultenaea glabra*

(<http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10712>) specifically lists as a Threat:

“Significant, protracted drying of this species’ habitat and reduction in groundwater”. Clearly this Proposal to pump out Angus Place mine workings and lower the water table for at least 8 years will have a significant impact on this Matter of National Environmental Significance (MNES).

3.3 *Kunzea cabbagei* (Vulnerable EPBC Act)

The EPBC Referral team chose to exclude *Kunzea cabbagei* (Vulnerable EPBC Act) within the Angus Place Mine Lease from previous EPBC Referrals, such as the 2015 Angus Place Colliery & Springvale Mine Extensions (*Pultenaea glabra*, *Eucalyptus aggregata*, *Xerochrysum palustre*, and many others were also excluded). That does not mean that *Kunzea cabbagei* doesn't exist, and it should be considered as a MNES for this Proposal.

Just because *Kunzea cabbagei* isn't listed on the Bionet Atlas does not absolve the EPBC Referral Team of responsibility for checking other publicly available databases such as AVH, ALA, iNaturalist, and more. *Kunzea cabbagei* was officially recorded on the Australian Virtual Herbarium (AVH) database in 2011, a Tier 1 site based on collections identified by NSW Herbarium Botanists, and an official site also administered by the NSW DPIE. *Kunzea cabbagei* in the Proposal area has probably been known since the late 1970s when the NSW Government (NSW Electricity Commission) still owned Angus Place Colliery, but its existence was covered-up.

The *Kunzea cabbagei* records in APW2 are the most northerly in NSW for this EPBC listed threatened species, the other occurrences are further south near Mount Werong and Medway. Most were killed by fire in 2019, only a few survived. The rocky outcrop in the APW2 area where *Kunzea cabbagei* occurs has some very large cracks or faults running across it. A Type 1 Lineament was mapped in that area in the 2020 Angus Place Amendment Report. Undermining the area may lead to cliff collapses and have significant impact/s on *Kunzea cabbagei* - a MNES.

3.4 *Xerochrysum palustre* (Swamp Everlasting) & *Eucalyptus aggregata* – EPBC Act: Vulnerable

The Proponent acknowledge the existence of these two Threatened Species, note that the *Xerochrysum palustre* population in APW1 & APW2 are the most northerly in NSW, is likely to be necessary to maintain genetic diversity, is a key source population for breeding/dispersal, and is an important population as per Significant Impact Guidelines.

*“It was concluded that the Project could have a significant impact on *Eucalyptus aggregata* (Black Gum; EPBC Act: Vulnerable) and *Xerochrysum palustre* (Swamp Everlasting; EPBC Act: Vulnerable). Important populations of both these species occur within the Project Area, as defined by DoE (2013). Should mining cause movement or activation of known faults within the proposed action area there is the potential for new or enhanced connection between the proposed action area and overlying groundwater sources and/or surface water and associated receptors. If it occurs, this enhanced connection has the potential to alter surface water and groundwater interactions and contribute to potential leakage from surface water features to groundwater. If this groundwater drawdown coincides with the location of the important populations of *E. aggregata* (Black Gum; EPBC Act: Vulnerable) and or *Xerochrysum palustre* (Swamp Everlasting; EPBC Act: Vulnerable), a significant impact may occur to these species. That is, drying out of habitat for these species by the action may lead to a long-term decrease in the size of this important population, reduce the area of occupancy of these important populations, adversely affect habitat critical to the survival of a species, disrupt the breeding cycle of an important population, modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species’ habitat and or interfere substantially with the recovery of the species.”*

LEG would add that whilst several populations of *Xerochrysum palustre* have now been recorded locally, all are isolated populations with a rhizomatous growth habit ie. may be clonal. Despite mass flowering after the 2019 fires, LEG has seen no evidence of any seedling germination. Further investigations should be conducted to see whether that seed is viable, otherwise these isolated populations are highly vulnerable to disturbance events – a MNES.

3.5 *Velleia perfoliata* – EPBC Act: Vulnerable

LEG recorded this Threatened Species on the edge of Long Swamp APW1). Groundwater drawdown over a protracted period as a result of this Proposal will have a significant impact, and is a MNES.

3.6 Giant Burrowing Frog (*Heleioporus australiacus*) – EPBC Act: Vulnerable

A private landholder within the Proposal area reported a sighting of this Threatened Species to LEG. The Proponents consultants visited that property, but did not conduct any Flora or Fauna surveys. LEG will leave it to that property owner to raise this issue, however the presence of Giant Burrowing Frog in the proposal area is a MNES.

3.7 Gang-gang Cockatoo (*Callocephalon fimbriatum*) - EPBC Act: Endangered

Recorded by Kingston & Allen, The Australian Museum, September 1982 *Fauna of the Angus Place Colliery Lease*. Reported as sighted in the Proposal area in Appendix C Biodiversity Investigation Report by RPS 2014, and Umwelt 2020. May be significantly impacted, a MNES.

3.8 Greater Glider (*Petauroides volans*) - EPBC Act: Vulnerable

Recorded by Kingston & Allen, The Australian Museum, September 1982 *Fauna of the Angus Place Colliery Lease*. Appendix C Biodiversity Investigation - Opportunistic sightings, reports 2 individual sightings. May be significantly impacted, a MNES.

3.9 Large-eared Pied Bat (*Chalinolobus dwyeri*) - EPBC Act: Vulnerable

Appendix C Biodiversity Investigation reports a sighting by RPS in 2014. May be significantly impacted, a MNES.

4.0 Listed migratory species

- Rainbow Bee-eater (*Merops ornatus*) – EPBC Act: Migratory
- Latham's Snipe (*Gallinago hardwickii*) – EPBC Act: Migratory

The Proponent identified a permanent wetland habitat for *Gallinago hardwickii* (Latham's Snipe; Migratory) within the Coxs River and Long Swamp toward the west of APW1. The Proponent claims they will avoid this population by not directly undermining that site. However the Coxs River is located along a major geological fault line, mining near Fault lines and Lineaments can have unpredictable and unintended adverse consequences, and groundwater draw down across the entire area will occur over a period of at least 8 years. This will result in drying of all swamps across the entire area, resulting in more intense fires, significantly impacting on Latham's Snipe and Rainbow Bee-eater, a MNES.

5. Significant impact on a water resource

The Proposal will mine within 60m of the Coxs River, a major source of Sydney's drinking water, along a major Geological Fault Line.

One of the largest mine subsidence cracks LEG has ever recorded occurs along the boundary of the APW1 Proposal area, likely associated with old Wallerawang Colliery bord & pillar workings. It is 1.5 – 2m wide and 30m long, and occurs on the edge of this Coxs River Fault Line. Just one example of an unintended consequences of bord & pillar mining.

Another Type 1 Lineament in the APW2 area was mapped in the 2020 Angus Place Amendment Report. This is very close to where the recent May 2022 cliff fall occurred at Kangaroo Creek Swamp.

This Proposal will see underground mining in APW1 extend to boundary of previously mined areas of Invincible Colliery and Baal Bone Colliery. Invincible Colliery had two longwall panels near where the current old borehole and rusty tank (LDP1) still stand, and the swamp upstream has entirely dried up.

Baal Bone Colliery longwalls 29 -31 were mined between 2009 and 2012, and despite being 420 metres from Long Swamp and the Coxs River, and severe groundwater aquifer drawdown and swamp damage occurred. In October

2009 LEG discovered two waterholes downstream of piezo BBP4 had suddenly dried up for the first time since LEG began Streamwatch water quality monitoring in September 2006. The Baal Bone Colliery Subsidence Management Status Report 6 for LW 29–31 subsequently identified 'Anomalous Groundwater Behaviour' ie. a drop in groundwater levels. A Trigger Action Response Plan (TARP) was issued.

The water lost from the Coxs River flowed down into Baal Bone mine workings and resurfaced on the western side of the Great Dividing Range into Jews Creek, the Turon River, Macquarie River, and Murray-Darling catchment ie, inter-catchment transfer from east to west flowing rivers.

Alteration to the natural flow of rivers, streams, floodplains and wetlands is listed as a KEY THREATENING PROCESS in Schedule 3 of the Threatened Species Conservation Act 1995.

Given the proximity of this Proposal to the Wolgan Valley and longwall mine subsidence in Long Swamp as a result of Baal Bone and Invincible longwall mining - a worse-case scenario could be that activation of known faults by this Proposal may form new connections resulting in all water currently flowing into the Coxs River to flow into the Wolgan River, or via Baal Bone underground workings into Jews Creek, the Turon River and ultimately the Murray-Darling.

Lowering groundwater levels across a wide area by 20m or more over a protracted period of at least 8 years will directly impact on a water resource ie. the Coxs River – a major part of Sydney's drinking water.

This Proposal will have unpredictable direct and indirect impacts on surface water yield and quality, groundwater aquifers, and will adversely impact upon existing groundwater and surface water regimes in the wider area. These are significant impact/s on a Water Resource, and a MNES.

6. World Heritage Area

Whilst the Proposal area is located outside the Greater Blue Mountains World Area (GBMWA), it overlaps the 'Greater Blue Mountains – Additional values' (Item 105696) nominated listing. The Proposal occurs partly within the Gardens of Stone Conservation Area, which ultimately will be included in the GBMWA. The Coxs River and Wolgan River flow into the Greater Blue Mountains Heritage Area (GBMWA). This Proposal will have direct and indirect impacts on surface and groundwater flows in the Coxs River and Wolgan River, negatively impacting on moisture dependent vegetation communities and aquatic habitats downstream in the GBMWA. This is a MNES.

7. Conclusion and Recommendations

This Proposal (Angus Place West EPBC Number: 2022/09270) will have a significant impact on an extraordinarily large number of Matters of National Environmental Significance – 10 EPBC Listed Threatened Species and Communities; 2 EPBC Listed migratory species; 17 NSW BCA listed Threatened Species; Significant Impacts on a water resource in the Sydney water catchment; and adverse Impacts on Greater Blue Mountains World Area (GBMWA).

This Proposal must be referred as a Controlled Action and receive prior approval from the Minister for the Environment.

The assessment methods chosen by the Minister must take into consideration that –

- The previous EPBC Approval for the 2015 Angus Place & Springvale Mine Extension resulted in significant and irreversible damage to MNES ie. loss of large areas of EPBC Listed Temperate Highland Peat Swamps (THPSS) and associated EPBC Listed Threatened Species, including species not identified in that EPBC Referral eg. *Xerochrysum palustre*, *Carex klaphalei*, *Prasophyllum pallens*, *Genoplesium superbum*. The Proponent claimed the proposal would have “Negligible impacts” on Endangered Swamps, yet within 2 years Sunnyside Swamp, Carne West Swamp, Gang Gang East Swamp, Gang Gang West Swamp, and Carne Central Swamp were dead; and three waterfalls (Carne West Falls, Gang Gang Falls, and Carne Central Falls) had dried up permanently. Clearly those EPBC Referral documents and the EIS were severely flawed.
- The documentation provided for this Proposal is once again inadequate because only two Nationally Threatened Species were found to be adversely impacted – *Xerochrysum palustre* and *Eucalyptus aggregata* - however direct and indirect adverse impacts on seven (7) other EPBC Listed Threatened Species and two Migratory Species have not been adequately addressed.
- The documentation for this Proposal is once again flawed because the EPBC Listed EEC of Temperate Highland Peat Swamps of Sandstone (THPSS) within the Proposal area has not been identified;
- The documentation for this Proposal is once again inadequate because only limited Flora and Fauna Surveys were conducted less than 2 years after the severe December 2019 bushfires, making the detection of all Threatened Species & Communities occurring within the Proposal area very difficult, if not impossible;
- The documentation for this Proposal is once again inadequate because Major Geological Fault Lines and Lineaments along the Coxs River and in the APW2 area were not identified by the Proponent. Mining near fault Lines and Lineaments can have severe and unintended consequences on surface and groundwater, and aquifer drawdown over a wide area for 8 years will affect Endangered Swamps and Threatened species.
- History has proven that the Proponent has an extremely poor history of being honest about the true impacts that mining will have on EPBC Listed Endangered Swamp Communities and the EPBC Listed Threatened Species that are dependent on those swamps.
- History has proven that the Proponent has a poor history of compliance with Pollution Reduction Notices; an extremely high number of POEO Licence Non-compliances at the 3 mines in the local area; has been issued with many Enforceable Undertakings such as the \$1.45 million for causing swamp damage (Appendix 1); and fined on numerous occasions for offences eg. Coal Fines Spill into the Wollangambe River, and most recently a \$150,000 fine at Airly Mine for surface cracking in Muggii Murrumbidgee State Conservation Area (SCA) up to 700mm wide in exceedance of the 125mm limit approved under Consent Conditions.
- The Minister should consider the Disclaimer by RPS East Australia Pty Ltd on many of the Figures in Attachment C: *IMPORTANT NOTE 1. This plan was prepared for the sole purposes of the client for the specific purpose of producing a photographic overlay plan. This plan is strictly limited to the Purpose and does not apply directly or indirectly and will not be used for any other application, purpose, use or matter. The plan is presented without the assumption of a duty of care to any other person (other than the Client) ("Third Party") and may not be relied on by Third Party. 2. RPS Australia East Pty Ltd will not be liable (in negligence or otherwise) for any direct or indirect loss, damage, liability or claim arising out of or incidental*

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- The Minister therefore must rule out Assessment on Referral Information; Assessment on Preliminary Documentation; Assessment by Public Environment Report; and Assessment by Environment Impact by Environmental Impact Assessment (EIS) – because all of the above methods have completely failed to protect Matters of National Environmental Significance (MNES) in the past, in particular Endangered Swamp Communities.

Assessment by Public Inquiry is the only way that the Minister may be able to protect some Matters of National Environmental Significance (MNES), in particular Endangered Swamp Communities.

Yours sincerely

Chris Jonkers
Vice President
Lithgow Environment Group Inc.

APPENDIX 1:

A reminder that Angus Place Colliery was subject to a \$1,450,000 Enforceable Undertaking in 2011 for causing damage to Temperate Highland Peat Swamps on Sandstone (THPSS).

ENFORCEABLE UNDERTAKING

Environment Protection and Biodiversity Conservation Act 1999

Section 486DA

Undertaking to the Minister for Sustainability, Environment, Water, Population and Communities given for the purposes of section 486DA

by

Springvale Coal Pty Limited (ACN 052 096 769)

and

Centennial Angus Place Pty Limited (ACN 101 508 945)

1. Person giving undertaking

The persons giving the undertaking are Springvale Coal Pty Limited (***Springvale Coal***) and Centennial Angus Place Pty Limited (***Centennial Angus Place***).

Springvale Coal is giving the undertaking in its capacity as the Manager of the Springvale colliery. Springvale Coal manages the Springvale colliery pursuant to the Springvale Joint Venture Agreement for and on behalf of the owners of the Springvale colliery, Centennial Springvale Pty Limited and Springvale SK Kores Pty Limited. Springvale Coal has registered offices at: Level 18, 1 Market Street, Sydney NSW 2000.

Centennial Angus Place is giving the undertaking in its capacity as the Manager of the Angus Place colliery. Angus Place manages the Angus Place colliery pursuant to the Springvale Joint Venture Agreement for and on behalf of the owners of the Angus Place colliery, Centennial Springvale Pty Limited and Springvale SK Kores Pty Limited. Centennial Angus Place has registered offices at: Level 18, 1 Market Street, Sydney NSW 2000.

2. Preamble

The Springvale and Angus Place collieries are underground coal mines located near Lithgow in NSW. These collieries are adjacent to one another, as depicted in **Figure 1**.

Coal mining at the Angus Place colliery has been undertaken by long wall mining methods since circa 1979, and since circa 1995 at the Springvale colliery.

Combined groundwater from these collieries, can be discharged through Springvale colliery's licensed discharge points 4 and 5 in an emergency under Environment Protection Licence 3607.

Groundwater from the Angus Place colliery only can be discharged through Angus Place colliery's licensed discharge point 6 in an emergency under Environment Protection Licence 467.

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) commenced operation on 16 July 2000. When the EPBC Act came into operation, Springvale Coal and Centennial Angus Place held all requisite "specific environmental authorisations" (as defined in section 43A(2) of the EPBC Act) to lawfully operate the Springvale and Angus Place collieries.

The Springvale and Angus Place collieries contain stratum which are contiguous to the Temperate Highland Peat Swamps on Sandstone threatened ecological community. The Temperate Highland Peat Swamps on Sandstone ecological community was listed as "endangered" under the EPBC Act on 12 May 2005.

Since the listing of the Temperate Highland Peat Swamps on Sandstone ecological community, Springvale Coal and Centennial Angus Place have varied and obtained "environmental authorisations" (as defined in section 43A(2) of the EPBC Act), relevantly, including the following.

- (a) Springvale colliery was issued with Environment Protection Licence 3607 on 8 June 2000 under the *Protection of the Environment Operations Act 1997* (NSW). Environment Protection Licence 3607 was varied on 3 October 2006 for the addition of two emergency groundwater discharge points (being licensed discharge points 4 and 5) to be used in the event that there was a failure in the overland mine discharge water pipeline running from the Springvale colliery to the Wallerawang Power Station.
- (b) Centennial Angus Place was granted a Part 3A Project Approval on 13 September 2006 pursuant to section 75J of the *Environmental Planning and Assessment Act 1979* (NSW) for the "Angus Place Coal Project" (Project Application Number 06_0021).

Consequently, the Minister for Sustainability, Environment, Water, Population and Communities considers that section 43A of the EPBC Act no longer applies to the Springvale and Angus Place collieries.

3. Breach of the EPBC Act

The Minister considers that Springvale Coal and Centennial Angus Place have contravened the EPBC Act in that, contrary to section 18(6) of the EPBC Act, Springvale Coal and Centennial Angus Place have undertaken an action (being coal mining, and/or related mine groundwater discharge, at the Springvale and Angus Place collieries) without approval. The Minister considers that this action has had a significant impact on Temperate Highland Peat Swamps on Sandstone, specifically:

- (a) Narrow Swamp;

(b) East Wolgan Swamp; and

(c) Junction Swamp

These swamps are part of the threatened ecological community Temperate Highland Peat Swamps on Sandstone listed as “endangered” under the EPBC Act, and are also depicted in **Figure 1**.

4. The Undertaking

Without conceding that it has breached the EPBC Act or any other Act, but acknowledging that the Minister considers that the action has had a significant impact on Temperate Highland Peat Swamps on Sandstone, Springvale Coal and Centennial Angus Place hereby undertake, for the purposes of section 486DA of the EPBC Act, to pay the total sum of \$1,450,000 to the Fenner School of Environment and Society, Australian National University, for the purpose of undertaking a Research Program, the terms of which are set out in **Attachment A**.

Payment of the total lump sum for the Research Program will be made within 30 days of execution of this undertaking.

Oversight of the Research Program will be provided by a Research Program Steering Committee which will be established in accordance with the Terms of Reference at Schedule 2 of **Attachment A**.

The Minister acknowledges and agrees that, on the basis that Springvale Coal and Centennial Angus Place will fulfill the requirements of this undertaking, the Minister will not pursue further action against Springvale Coal or Centennial Angus Place in relation to the activities, works and impacts affecting Narrow Swamp, East Wolgan Swamp and Junction Swamp referred to in this undertaking.

5. Reporting

Springvale Coal and Centennial Angus Place will report the whole or any part of payment described in clause 4 to the Department of Sustainability, Environment, Water, Population and Communities by sending a letter to the Assistant Secretary of the Compliance and Enforcement Branch, Department of Sustainability, Environment, Water, Population and Communities, GPO Box 787, Canberra, ACT, 2601.

Other reporting will be in accordance with the Research Program Agreement, refer **Attachment A**.

6. Acknowledgement

Springvale Coal and Centennial Angus Place acknowledge that:

(a) the Minister will make this undertaking available for public inspection including on a public register;

(b) the Minister and/or the Commonwealth may from time to time publicly refer to this undertaking through, but not limited to, media releases.

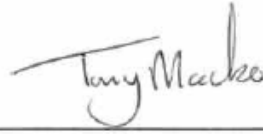
Signed by Springvale Coal Pty Limited by:



Signature of Director

STEVE BRACKEN

Name of Director (print)



Signature of Director/Secretary

Tony Macko

Name of Director/Secretary (print)

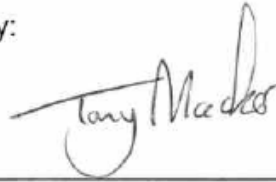
Signed by Centennial Angus Place Pty Limited by:



Signature of Director

STEVE BRACKEN

Name of Director (print)

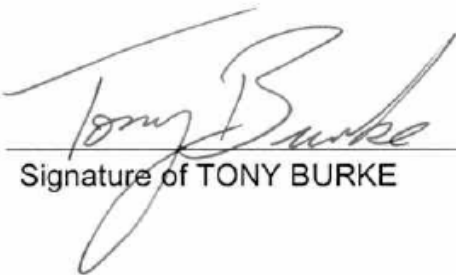


Signature of Director/Secretary

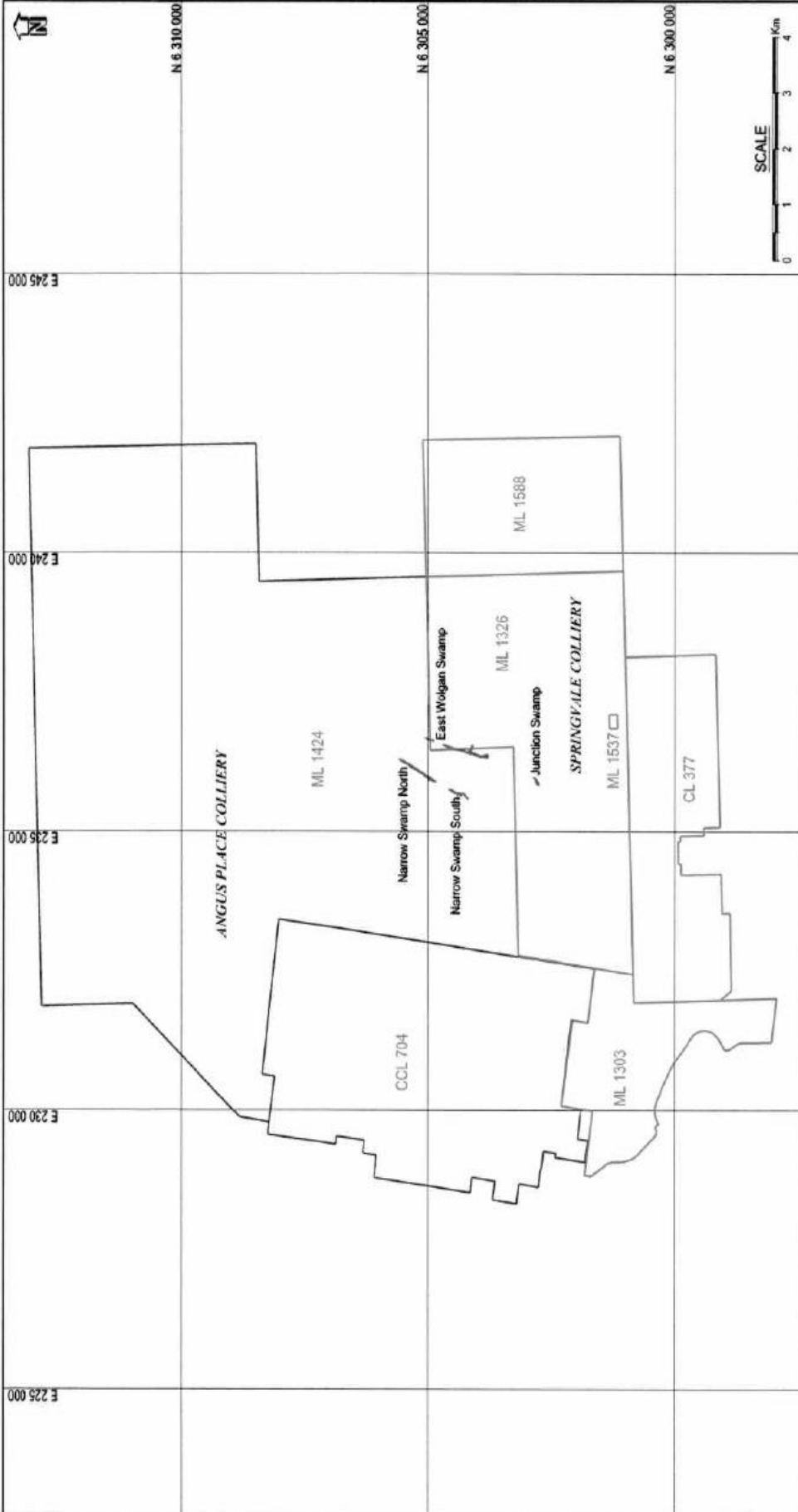
Tony Macko

Name of Director/Secretary (print)

Accepted by the Minister for Sustainability, Environment, Water, Population and Communities under section 486DA of the Environment Protection and Biodiversity Conservation Act 1999 on this 12 day of October 2011.



Signature of TONY BURKE



LEGEND

Swamp Area

Mining Lease

NOTES

1. Springfire titles are mining leases ML 1326, ML 1588, ML 1537, CL 377 and ML 1303.

2. Angus Place titles are mining leases ML 1424 and CCL 704.

LOCATION SVC / APC
 SEAM Lithgow
 DRAWN P.J.M.
 CHECKED
 APPROVED
 SCALE Not to Scale

For details see 1:100,000 scale map of the Lithgow Coalfield, NSW, Australia, published by the NSW Department of Mines and Geology, Sydney, NSW, Australia.

ENFORCEABLE UNDERTAKING
FIGURE 1

Centennial Coal

DATE: 26-Nov-2010 PC3517

MEDIA RELEASE

21 October 2011

Mining company to pay for environmental damage

A New South Wales mining company has committed to pay \$1.45 million after causing damage to a nationally threatened ecological community.

An investigation by the federal environment department found that the long wall coal mining operations of Centennial Coal on the Newnes Plateau, near Lithgow, New South Wales, had caused a significant impact on the endangered *Temperate highland peat swamps on sandstone* ecological community.

The mining activities caused a loss of ecosystem function shown by loss of peat, erosion, vegetation dieback and weed invasion in three swamps. They also caused the formation of a large slump hole, several metres wide and more than one metre deep, at the East Wolgan swamp.

These changes mean the swamps can no longer serve their important hydrological role of acting as water filters and releasing water slowly to downstream watercourses.

Centennial Coal will pay \$1.45 million towards a research program to be administered by the Fenner School of Environment and Society at the Australian National University.

This research program will be of great conservation benefit for these protected swamps and inform better understanding of the impacts of land use change.

The program will map the distribution and extent of the swamps, explore their functions, water dynamics, ecology and history, and look at human impacts on the swamps. It will provide valuable knowledge to protect *Temperate highland peat swamps on sandstone* and to promote land management practices that minimise impacts on these swamps.

The payment will be made as an 'enforceable undertaking' under national environment law—the *Environment Protection and Biodiversity Conservation Act 1999*.

This is an effective way to hold companies accountable for environmental damage without going through lengthy and costly legal proceedings.

This outcome shows the Australian Government takes environmental protection seriously, and will not tolerate companies causing needless damage to the environment.

Media contact: 6275 9880

Coal mine fined for 'unacceptable' damage to world-renowned NSW rock formations

21 June 2022 [Coal mine fined for 'unacceptable' damage to world-renowned NSW rock formations - ABC News](#)

An Australian coal mining giant has been fined for damaging sandstone formations, some estimated to be millions of years old, in a New South Wales conservation area.

A NSW Department of Planning, Industry and Environment (DPIE) investigation found Centennial Coal's Mount Airly operation, north-west of Lithgow, caused fractures to internationally renowned pagoda rock formations.

"Following an investigation by our compliance officers, we have determined the breaches are unacceptable," a DPIE spokesperson said.

But there were fears the destruction in the Muggii Murrumbidgee State Conservation Area (SCA) could be worse than currently understood and the full extent of the damage would take years to uncover.

Surface cracks reported

An independent review, conducted on Centennial Coal's behalf, found 15 surface cracks related to mining activity in the most western corner of the Gardens of Stone.

Of those reported to the DPIE, the biggest was 250 metres long.

The damage was caused by land below the rock formations caving in.

The company must now carry out remediation work, which includes filling some of the cracks.

But Blue Mountain Conservation Society member Yuri Bolotin said that would almost certainly fail.

"Once they're undermined they will eventually collapse even with the best intentions, which I don't think they [Centennial Coal] have," he said.

"The damage to pagodas is completely irreversible."

He said the stone towers did not occur anywhere else in the world, dating them between six million and 10 million years old.

More surface cracks possible

The mine sits about 300 metres below the surface.

Subsidence (ground movement) has exceeded 700 millimetres in some sections, more than five times the allowed limit of 125mm.

The company's Environmental Impact Statement had stated surface cracking was not expected from its panel and pillar mining techniques.

Centennial Coal acknowledged there may be more cracks that have not yet been identified.

DPIE found the company breached its consent obligations and fined it \$150,000 for the offences.

The money will go towards NSW National Parks and Wildlife Service's conservation work in the area.

"The company will also be required to continually monitor and remediate any future cracks identified over the life of the mine," the DPIE spokesperson said.

An 'extraordinary travesty'

Capertee Valley resident Mary Thirlwall described the damage as an "extraordinary travesty".

"Basically they get a slap on the wrist for having caused this amount of damage over one of the most iconic areas," she said.

"Unfortunately these impacts often aren't realised for years down the track."

Ms Thirlwall considered the fine to be petty cash for a mining giant.

"It's just saying, "Carry on" basically and they've got to because Mount Piper [a coal-fired power station] needs coal," she said.

An expansion was approved in December last year enabling Centennial Coal to mine up to 1.8 million tonnes of coal a year until 2037.

Centennial Coal has since reviewed its mine design to develop wider pillars in an attempt to keep subsidence at allowed levels.

A company spokesperson said it had "implemented changes to achieve its performance criteria".

It has begun mining underneath the adjacent Mount Genowlan, but both Ms Thirlwall and Mr Bolotin warned it was even more vulnerable than Mount Airly.

Risks to a fragile environment

The damage has raised concerns about the NSW government's plans to turn the Gardens of Stone SCA into an eco-tourism playground for 200,000 visitors a year.

Chris Jonkers, from the Lithgow Environment Group, said around 120 cliff collapses had been recorded in the Lithgow region, almost all of which were above areas that had previously been mined.

He most recently observed one near Angus Place Colliery, which was mined from 1979 to 1980, and was owned by the NSW government at the time.

"Cliffs can continue to fall for decades afterwards," Mr Jonkers said.

"It's not the sort of place you want to bring thousands of visitors — into unstable areas."

A NSW National Parks and Wildlife spokesperson said all infrastructure proposals were subject to rigorous assessment and designs would consider fragile areas.

Deputy Premier Paul Toole said there were areas that "we won't have people going into".

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