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Nature Conservation Saves for Tomorrow

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Preliminary Regional Issues Assessments of the Hawkins and Rumker areas near Mudgee

The Blue Mountains Conservation Society (the Society) is a community-based volunteer organisation with around 900 members. Our mission is to help protect, conserve and advocate for the natural environment of the Greater Blue Mountains. In fulfilling its mission the Society advocates to protect the Greater Blue Mountains World Heritage Area (GBMWHA) of over one million hectares.

The Society does not support the issuing of coal exploration licences for the Hawkins and Rumker (HR) areas for the following reasons:

- Potential impacts on the adjacent GBMWHA, which is already at great risk from prolonged drought, global warming and climate change induced extreme fire in 2019 -20;

- The impacts of coal mining on the GBMWHA are inadequately controlled through state and federal environmental legislation, as demonstrated, for instance, by Clarence Colliery's toxic discharge into the GBMWHA and the recent weakening of water quality standards in Sydney's drinking water catchment for existing mine operations[1];

- The HR area contains significant environmental values which coal exploration and subsequent mining are likely to damage or destroy along with causing possible impacts to its wider catchment area;

- It is imperative that the NSW and Federal governments do not approve any new

[1] This was in response to the NSW Court of Appeal's judgment on the Springvale Mine extension, see *4nature Incorporated v Centennial Springvale Pty Ltd* [2017] NSWCA 191. Read also Environmental Defenders Office NSW article on the court's decision: https://www.edo.org.au/2017/10/06/springvale-coal-mine-case/

mining areas in order to help address the serious and growing impacts of global warming on Australia and the world.

We raise the following significant and concerning environmental issues which relate to the release of the HR area for a coal mining exploration licence currently under consideration through a Preliminary Regional Issues Assessment (PRIA).

Hawkins – Rumker Areas

The Hawkins and Rumker strategic release areas are located in the Central Tablelands of NSW and cover a combined total of 32,755 hectares. The area is located to the immediate west of the GBMWHA with a common boundary 33 km long. It is on broken sandstone plateaux mixed with valley farms in a beautiful landscape. The tenure of the areas includes Crown reserves and private tenures. The HR area is located in an "intact landscape with very significant remnant vegetation" and native vegetation covers over half of the total area.[2] It also contains threatened species and endangered ecological communities including nationally listed swamps. Coxs Creek in the southeastern parts of the HR area is part of the upper Cudgegong River catchment.

Impacts of coal mining

The ultimate purpose of issuing exploration licences is to determine whether mining should be allowed, so the impacts of this ultimate purpose need to be considered. It is well demonstrated that coal mining, both open-cut and underground, are highly destructive processes. The Society has extensive knowledge of these damaging impacts in the western coalfields north of Lithgow as demonstrated in the Society's submissions (available on its website). Mining in the western coalfields north of Lithgow has permanently destroyed nationally listed swamps; discharged toxic mine water to watercourses including the Wollangambe River and, at times, the Coxs River; dried up rivers and waterfalls when mine subsidence cracked creek or swamp beds; lowered watertables in adjoining areas; removed native vegetation and habitat for native animals including many threatened species; allowed a coal fines stockpile to collapse into the world heritage area via a designated wild river (the Wollangambe); left untreated toxic waste heaps and large unrehabilitated empty pits.

Ecologists have studied the environmental impacts of longwall mining, a more intensive method of underground mining: "We have seen increasing drying out of vegetation in undermined swamps (Junction Swamp undermined 2003–2004; East Wolgan Swamp, 2006; Carne West Swamp, 2013–2014; Gang Gang West Swamp, 2015–2016; Gang Gang East Swamp, 2017–2018) and increasing evidence of lowering water tables. … In addition to the mire (i.e.swamp) ecosystems themselves, associated groundwater dependent fauna, including the endangered Giant Dragonfly, *Petalura gigantea*, and endangered Blue Mountains Water Skink, *Eulamprus leuraensis*, are threatened by the potential compounding effects of lowering water tables, more intense fire regimes, and projected climate change ... Our observations of the impact of the longwall mining-related lowering of watertables and subsequent

[2] *Western Coalfields Strategic Release Mapping and Analysis*, Prepared by Earthscape P/L, May 2021, p.4.

fire impacts in these swamps provides dramatic evidence of the irreversible damaging impacts of longwall mining… No more swamps should be allowed to be destroyed".[3]

Subsidence from longwall underground mining has included 'far-field impacts' which can fracture rock up to 700 metres from the mining location due to lineaments in the underlying rock. Mining from the Springvale mine near Lithgow, for instance, has destroyed nationally listed swamps, most notably, Carne West Swamp, due to far field impacts. [4] University of NSW research has shown that longwall mining can dry out swamps above mine paths. They conclude that vital upland swamps that feed drinking water catchments need to be protected. [5]

In 2005 the NSW Threatened Species Scientific Committee determined "the alteration of habitat following subsidence due to longwall mining" was a Key Threatening Process in NSW in recognition of the potential impact of subsidence on the quality and/or quantity of groundwater available to groundwater-dependent ecosystems." The listing found that it endangered 27 species and 4 EECs.[6]

1. Impacts on the Greater Blue Mountains World Heritage Area

Values of the GBMWHA

The GBMWHA covers over one million hectares and stretches from the southern edge of the Hunter Valley to the southern highlands near Mittagong. World Heritage listing is the highest level of international recognition that an area can gain. The Greater Blue Mountains was granted World Heritage listing in 2000 for its outstanding biodiversity and for the diversity and evolution of its Eucalypt species.[7] The GBMWHA contains at least 423 fauna species with 69 of them classified as threatened species and 2,296 flora species, 95 are threatened plus endangered ecological communities. [8] Twelve of the WHA's bird species are also protected under international migratory species agreements. Australia, as a signatory to these agreements, is obliged to protect these birds and their habitats within Australia.[9] GBMWHA is also a major source of water for Sydney's drinking water catchment.

The HR area is adjacent to the western boundary of the Wollemi National Park, one of the eight reserves in GBMWHA. The Wollemi Wilderness Area is home to the Wollemi Pine, a species that has survived 60 million years and was amazingly saved

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[3] "Serious impacts of longwall coalmining on endangered Newnes Plateau Shrub Swamps, exposed by the December 2019 bushfires" Ian R C Baird and Doug Benson, *Australasian Plant Conservation* | Vol 29 No 1 June – August 2020, pp.12-15 at page 12.

[4]Springvale Mine Extension Project - Extraction Plan for Longwall 19 (June 2016) (IMP Report), p.2.available on Centennial Coal's website.

[5] https://www.science.unsw.edu.au/news-events/news/restricting-longwall-mining-sydneys-drinking-water-catchment-will-protect-vital-upland-swamps

[6] https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/nsw-threatened-species-scientific-committee/determinations/final-determinations/2004-2007/alteration-of-habitat-following-subsidence-due-to-longwall-mining-key-threatening-process-listing

[7] It contains "outstanding and representative examples in a relatively small area of the evolution and adaptation of the genus *Eucalyptus* and eucalypt-dominated vegetation on the Australian continent…. (And) an outstanding diversity of habitats and plant communities that support its globally significant species and ecosystem diversity …" See https://whc.unesco.org/en/list/917/

[8] https://bmnature.info/fauna-head-count.shtml and https://bmnature.info/flora-head-count.shtml

[9] J, P and Kate Smith, Native Fauna of the Greater Blue Mountains World Heritage Area, 2019, p.14

from extinction in the recent immense fires. It is one of the world's oldest and rarest trees and yet it was only discovered in 1994. The NSW government has recently classified the Wollemi Pine as an intergenerational asset, a new classification. More rare and threatened species are still being identified in the GBMWHA, for instance, eight additional species of eucalypts have been identified since its listing in 2000. [10]

The GBMWHA is at risk now

The GBMWHA is recognised in Australia and internationally as being at risk from coal mining in its vicinity; as well as from species extinction; global warming induced drying out and rising temperatures in south-eastern NSW; recovery from the catastrophic bushfires of 2019-20 and following flooding rain; plus future climate-change induced bushfires such as the northern hemisphere is currently experiencing. As well, there is the threat of flooding from the proposal to raise Warragamba Dam's wall by 14 metres. In 2020 the International Union for Conservation of Nature (IUCN)'s World Heritage Outlook Assessment, carried out three yearly, raised the outlook to "Significant concern" largely because of the very high threat from "fire/fire suppression" and "Habitat Shifting/ Alteration, Droughts, Temperature extremes, Storms/Flooding (Climate Change) [11]

International concerns about the impact of coal mining operations

The World Heritage Committee (WHC) of the United Nations Education, Scientific and Cultural Organisation (UNESCO) in 2019 has expressed its concern about the impact from coalmining "in the vicinity of and adjacent to" the GBMWHA (referred to as 'the property' in the following quotations) as follows:

> "5. Notes with concern that several mining projects exist in the vicinity of or adjacent to the property, and that some mining activities have resulted in impacts on the property, as evidenced by the incident at the Clarence Colliery, and requested the State Party to undertake an assessment of potential cumulative impacts of all existing and planned mining projects in the vicinity of the property through a Strategic Environmental Assessment (SEA) or a similar mechanism;[12]

The "incident at Clarence Colliery" mentioned above occurred in 2015 when 2,300 tonnes of coal fines from the Clarence Colliery adjacent to the GBMWHA escaped from storage piles and entered the GBMWHA via the Wollangambe River for over 10km. Mine owner, Centennial Coal, was fined over $1million in a prosecution under the NSW legislation, *Protection of the Environment Operations Act, (NSW) 1997*. Clarence Colliery is also allowed to discharge polluted saline mine water into the

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[10] State party report on the state of conservation of the Greater Blue Mountains Area, 2020, page 31.

[11] "New management approaches to fire are needed, as conventional approaches are shown to be less effective than under previously experienced conditions. Impacts of developments adjacent to the site require ongoing vigilance. The large size and extensive perimeter of the site and the existence of major enclaves (inholdings) creates further management challenges." Page 1 IUCN World Heritage Outlook: https://worldheritageoutlook.iucn.org/ Greater Blue Mountains Area - 2020 Conservation Outlook Assessment.

[12] World Heritage Commission, .WHC/19/43.COM/7B.Add, 2019 Page 7.

GBMWHA via the Wollangambe River despite the NSW Environment Authority's stated goal of reducing this toxicity.[13]

So far, Australia has failed to deliver the cumulative impacts study despite it being due by the end of 2020. In the most recent decisions of World Heritage Committee in July 2021, Australia has reported that "Eight mining proposals in the vicinity of the property are subject to environmental assessment under the *Environment Protection and Biodiversity Conservation Act (Cth)* 1999 (EPBC Act)' and an assessment of the cumulative impacts of existing and planned mining projects in the vicinity of the property …is being undertaken, with a specific assessment of all stressors that present risk to the OUV (outstanding universal value) of the property"[14] The WHC has required this assessment be submitted to the WHC for review by the IUCN as soon as it is available. The cumulative impacts study would be a very important contribution to the PRIA process. This process should be deferred until this important study is available.

Significantly, the WHC has said to Australia regarding the GBMWHA that "While some mines were in existence near the property at the time of inscription, it will be important to consider whether the number of mine projects and activities in the vicinity of (or even adjacent to) the property might cumulatively result in any significant impact on its Outstanding Universal Value. It should be recalled that this property does not have a formal Buffer Zone, increasing its vulnerability to edge effects". Approving a new mine, such as in the HR area, would increase the existing concern for the GBMWHA area.

The GBMWHA Strategic Plan identifies adjoining development is one of the major risks to the GBMWHA's integrity and conservation. The Plan advocates "Ensuring that environmental impact assessments for proposals that may affect the GBMWHA (whether or not on the reserves themselves) adequately address potential and existing impacts on World Heritage values and are carried out in accordance with the principles of the EPBC Act" and " Where there is doubt about the potential impacts of an action on World Heritage values the precautionary principle shall be applied; every effort will be made in consultation with the relevant parties to minimise any risk of adverse impacts."[15]

Catastrophic impacts from 2019-20 bushfires*.*

The GBMWHA already faces other major risks at present. The impact of these fires on the Greater Blue Mountains World Heritage Area (1,080,588 ha) was that 79% (855,310 ha) was burnt, 29% (311,642 ha) was extreme or high intensity burning. Native fauna impacted by the 2019-20 fires in the Greater Blue Mountains World Heritage Area (855,310 ha burnt) are estimated to be Mammals (excluding bats) 15.0 million, Birds 17.7 million, Reptiles 110.4 million making a total of 143.1 million.[16]

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[13] See https://www.epa.nsw.gov.au/licensing-and-regulation/licensing/environment-protection-licences/licensing-under-poeo-act-1997/variations-to-ep-licences-under-s8-of-poeo/clarence-colliery

[14] *State of conservation of properties inscribed on the world Heritage list,* WHC/21/44.COM/7B.Add, p.178

[15] *GBMWHA Strategic Plan*, NPWS, 2009, p.28

[16] Impact of the 2019-20 Fires on the Greater Blue Mountains World Heritage Area – Version 2. Report to Blue Mountains Conservation Society, Peter Smith 23 May 2021 pages 6-7. Full report with maps is available at the Blue Mountains Conservation Society website:

Wollemi National Park is the part of the GBMWHA directly adjoining HR area. 76% (380,826 ha) of Wollemi National Park was burnt, 26% of which was high or extreme burning and concentrated on the north-west and western sides of the park. Genetic diversity will be greatly reduced and species may be lost from the area. Many species, and possibly ecological communities, will be locally threatened. Adjacent well wooded areas like the HR area would be in the range of the same birds as in the World Heritage Area nearby.

Before these fires, the need for threatened species protection had been clearly identified in the GBMWHA, particularly given the heightened risk of extinction from the effects of climate change. Australia is facing a wave of faunal extinctions due to global warming. The decline of species due to warming was already being reported in the Greater Blue Mountains. Bushfires occurred on top of this, greatly increasing the risk of rapid species decline and extinctions. The area's biodiversity values, which are part of its Outstanding Universal Value, are under threat. UNESCO has required detailed progressive reports from the Australian Government about the bushfire's impacts on the internationally significant values of the GBMWHA.

Wollemi National Park and the whole of the GBMWHA is facing an extensive period of recovery from these devastating files. "To avoid further species declines, Australia must urgently reassess the extinction vulnerability of fire-impacted species and assist the recovery of populations in both burnt and unburnt areas. Population recovery requires multipronged strategies aimed at ameliorating current and fire-induced threats, including proactively protecting unburnt habitats."[17] Recovery activity is underway with funding from both state and federal governments but it will be a long and challenging process. For many species further fires of the scale or worse of the 2019-20 fires will need to be avoided yet this is what is predicted as the impacts of global warming progress.

In summary, the GBMWHA urgently needs protection and assistance because of its long road to recovery post bushfires and rapidly changing climate due to climate change. The NSW government should not be opening up new areas to coal mines in areas adjoining the GBMWHA

The GBMWHA needs buffer zones

Today World Heritage Areas are required to have buffer zones to protect them. "Buffer zones are an important tool for conservation of properties inscribed on the World Heritage List." The Operational Guidelines state that

> "103. Wherever necessary for the proper protection of the property, an adequate buffer zone should be provided.
> 104. For the purposes of effective protection of the nominated property, a buffer zone is an area surrounding the nominated property which has

https://www.bluemountains.org.au/documents/bushfires/impact-of-2019-20-fires-on-gbmwha-may-2021.pdf

[17] Michelle Ward et al, " Impact of 2019–2020 mega-fires on Australian fauna habitat" ***Nature, Ecology and Evolution,*** 20 July 2020

complementary legal and/or customary restrictions placed on its use and development in order to give an added layer of protection to the property "[18].

When GBMWHA was inscribed in 2000 it was not a requirement but it is understood that the majority of new world heritage listings have buffer zones. Buffer zones decrease edge effects. This is a particularly important measure for the GBMWHA which is a very large property (over one million hectares) with an extremely long perimeter. Buffer zones around GBMWHA would also be very important in the current bushfire recovery as they could provide habitat for surviving species and plants. However, Australia has chosen not to add a buffer zone to GBMWHA.

Instead, Australia relies on the EPBC Act to control inappropriate development or damaging activities on land adjacent to the GBMWHA[19]. Unfortunately, it has not proved effective in controlling external impacts from adjacent areas. For instance, Clarence Colliery owners were not prosecuted under the EPBC Act in relation to the massive coal fines collapse from the Clarence Colliery in 2015 mentioned above, presumably because of this Act's narrow definition of harm. Indeed, the recent Federal government appointed independent review of the EPBC Act in 2020 found that "The EPBC Act is ineffective. It does not enable the Commonwealth to effectively protect environmental matters that are important for the nation. It is not fit to address current or future environmental challenges…. Good outcomes for the environment … cannot be achieved under the current laws'.[20] The Federal Government has not yet implemented the review's recommendations.

Coal exploration and mining must not be allowed in areas adjacent to a WHA. Instead adjacent land should be used as buffer zones, preferably through becoming formal buffer zones where the land is part of the national park estate or is private land protected, for instance, through voluntary conservation agreements.

Opening up a whole new area to mining

The Society is not aware of mining occurring in the HR area so if it were allowed it could open up a whole new area to environmental damage. Mining exploration itself can be damaging. Coal exploration can easily lead to a subsequent mining lease under NSW law. Impacts on water quality, toxic discharges and subsidence, including far field impacts discussed above are all possible. Open cut mining in the HR area would draw groundwater from surrounding area including the adjacent Wollemi National Park. The HR area has river terraces where mining in valleys might be contemplated. This mining could be open-cut, with underground presumably extending beneath plateau areas. Existing environmental controls at state and federal level on existing mining operations have proved to be ineffective in preventing permanent environmental damage, as set out above at pages 2, 4-5. The proposal to consider starting new coal operations in the HR area is ill-considered and unnecessary, presumably driven by a desire to increase state revenue and to please mining interests.

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[18] WHC Operational guidelines cl 104 and 105 at https://whc.unesco.org/en/guidelines/

[19] WHC/21/44.COM/7B.Add, p.178

[20] Independent Review of the EPBC Act – Final Report October 2020 Professor Graeme Samuel, Executive Summary p.1.

2. **Hawkins and Rumker areas need protection**

The HR area itself is unsuitable for coal mining exploration or the ultimate objective of coal mining. There are potentially Threatened Ecological Communities, 16 threatened fauna species and 3 threatened flora species. Some of the key species recorded in HRA include the Koala, the critically endangered Regent Honeyeater and the endangered Spotted-tailed Quoll. There is a significant number of Groundwater Dependant Ecosystems (GDEs) mapped in the proposed coal release areas and there are six Groundwater Sharing Plans. There are also 28 recorded aboriginal heritage sites and additional sites that are classified as Restricted.[21] Three internationally recognised Key Biodiversity Areas (KBAs) are nearby: Mudgee-Wollar KBA to the north; Capertee Valley KBA to the south and Greater Blue Mountains KBA to the east. KBAs are places of global significance for the conservation of birds and other species.[22] The HR area, with its considerable areas of native vegetation and remnant trees, provides connectivity between these KBAs and the GBMWHA for fauna and flora.

The area drains northwards, mostly via Wollar Creek and Growee River, into the Goulburn River, much of which is within Goulburn River National Park and already struggling with the impacts of its mixed catchment, including coal mine water. Other creeklines in the area, such as Coxs Creek and Lawsons Creek, drain westward to the Cudgegong River. In the valleys open-cut mining is likely, with possible underground mining extending beneath plateau areas.

The Rumker area includes in its south-easterly parts the Coxs Creek which roughly follows the Coxs Creek Rd. Coxs Creek forms part of the upper Cudgegong River catchment and has an extensive system of groundwater-dependent peat swamps along its length, variably degraded as a result of grazing/agriculture, but with some large sections of good quality montane fens (Tableland Swamp Meadows), with small patches of montane bog on margins.[23] It is understood that these peat swamps are covered by the NSW Biodiversity Conservation Act listing for the Montane Peatlands and Swamps in NSW Endangered Ecological Communities (EEC) and would also form part of the Temperate Highland Peat on Sandstone EEC (EPBC Act).

Coxs Creek and its associated swamps drain down from near the Nullo Mountain area and it probably receives additional groundwater supply from these higher elevation and higher rainfall areas in its headwaters. Any mining under or near this system has the potential to cause irreparable damage to these groundwater dependent ecosystems.[24] Other similar areas are further downstream towards Rylstone. The

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[21] *Western Coalfields Strategic Release Mapping and Analysis*, Prepared by Earthscape P/L, May 2021

[22] Key Biodiversity Areas (KBAs) are the areas that are critical to maintaining biodiversity in Australia, according to a rigorous, internationally recognised, scientific standard www.keybiodiversityareas.org/ publications (IUCN 2016)

[23] Hydrogeomorphology, floristics, classification and conservation values of the little-known montane mires of the upper Cudgegong River catchment, Central Tablelands, New South Wales" Ian R. C. Baird and Doug Benson, **Cunninghamia,** 2018) 18: 001–021

[24] "Hydrogeomorphology, floristics, classification and conservation values of the little-known montane mires of the upper Cudgegong River catchment, Central Tablelands, New South Wales" Ian R. C. Baird and Doug Benson, **Cunninghamia,** 2018) 18: 001–02. See map **at page 5.**

Rumker area abuts Wollemi National Park and GBMWHA, where mining is not permitted, so any coal mining approved would need to have a substantial buffer area.

3 Global warming

Australia does not need more coal resources as renewables are displacing the need for coal fired power. Coal is the most significant single contributor to global warming. We are already experiencing more extreme weather events directly caused by a warming world due to burning fossil fuels. Burning more fossil fuels will worsen the climate crisis with more unprecedented storms, floods, droughts, heatwaves and fires such as the extreme fires and temperatures in the northern hemisphere at present. Emissions from burning coal do not observe country boundaries; wherever it is burnt it all contributes to the warming we are already experiencing.

Importantly, the World Heritage Committee of UNESCO has restated in July 2021, in relation to the GBMWHA, the importance of all countries undertaking "the most ambitious implementation of the Paris Agreement of the UN framework convention on Climate Change" and it noted that Climate Change is recognised as an increasing threat to the property[25]

The proposed potential awarding of exploration licence is at odds with the NSW government's own net-zero goal. Other countries are moving towards phasing out coal production because of its contribution to global warming. The International Energy Agency has recently called for an immediate ban on new oil, coal and gas development. The G7 agreed to end government support for new coal power by the end of 2021. Australia needs to take action and support moves to sustainable energy sources. This proposal to allow coal exploration in the HR area adjoining the GBMWHA should be rejected.

Yours sincerely

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CC Hon M Kean, NSW Minister for Environment
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Ms P Sharpe, Shadow Minister for Environment
Ms K Butler, Shadow Federal Minister for Environment

[25] WHC/21/44.COM/7B.Add p.180