Rylstone Region Coal Free Community

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Hawkins Rumker PRIA Submission: Economic Impacts

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Acknowledgement of Country

The RRCFC acknowledges that we live and work on Wiradjuri Country.

We acknowledge the Wiradjuri peoples as the traditional custodians of the land, and pay our respects to Elders past, present and future.

Executive Summary

2020 Strategic Statement and the PRIA process

The NSW Government's June 2020 Strategic Statement on Coal Exploration and Mining outlines the NSW Government's approach to transitioning to renewable energy and supporting the economy and aims to improve certainty about where mining should not occur. It identified 14 potential future coal exploration release areas (NSW Government, 2020). The Hawkins and Rumker potential release areas were identified in this Statement; the Ganguddy-Kelgoola area, which sits adjacent to Hawkins and Rumker, is also identified in this statement.

Following the release of the Strategic Statement, the NSW Government Advisory Body for Strategic Release has requested the Hawkins and Rumker areas be put through the Preliminary Regional Issues Assessment (PRIA) process (Department of Planning, Industry and Environment (DPIE), 2021a). Ganguddy-Kelgoola is expected to go through the PRIA process in the near future once further exploration is completed.

The PRIA process, also set out in the Strategic Release Framework (NSW Government, 2020), is an initial assessment of social, environmental and economic matters relating to areas that could be released for exploration. In theory, it involves engaging with interested and potentially impacted stakeholders to identify issues for consideration.

RRCFC's Economic Impacts Submission

This report is the Rylstone Region Coal Free Community's (RRCFC's) submission to the PRIA process on *Economic Impacts*. Separate submissions for a range of other issues are also being submitted by the RRCFC. The RRCFC recognises that coal exploration is a precursor to coal mining, and therefore it is predominantly the mining phase that is considered in this submission. The RRCFC strongly opposes the release of Hawkins and Rumker as coal exploration areas.

Impacts are direct, indirect, cumulative and profound

The International Energy Agency (IEA) expects the global coal trade to decline by 130 million tonnes per year by 2030 under currently stated climate and energy policies or halve to around 600 million tonnes per year in total under its Paris Agreement-aligned scenario. NSW Treasury is at least considering a scenario where all NSW coal production is phased out by 2040, along with others showing major declines after either some growth or steady production.

Given that no growth in coal exports is expected, and a substantial decline is being considered as evidenced by reduced capacity forecasts for Hunter Valley coal railways, the idea that there is a need for any new coal mines in NSW appears absurd. The level of absurdity increases when one considers that existing coal mines in the Hunter are operating at well below their approved capacity, collectively by around 100 million tonnes per year. As existing coal mines, not to mention current proposals, have the capacity to meet demand, and demand is likely to decline; there is no need for further coal exploration in new areas such as the Hawkins and Rumker areas.

In the unlikely event that any eventual mine proposal in these release areas reached the approvals stage in 10 years' time, it is highly likely it would not be economically viable. Any company seeking to develop a mine in the Hawkins Rumker area would face significant headwinds such as low coal quality, high unit costs, difficulties attracting finance and strong community opposition. These factors have seen most new mine proposals fail in recent years, including several in the local area, e.g., Bylong, Watermark, Cobbora and Rocky Hill, among others.

The combined effects of reduced global demand, the potential imposition of global carbon tariffs, and the rapid energy transition away from fossil fuels indicate that any PRA for coal exploration is unwarranted, uneconomic and an investment in it would likely become a stranded asset. The PRA locality examined here, has a vibrant and viable agricultural and tourism economy which should not be placed at risk.

Such proposals inflict considerable uncertainties and costs on local communities. Having a mine proposal near residential and agricultural properties can lead to a decline in the value of properties and houses as the uncertainty renders them impossible to sell. As these projects can leave the community in limbo for many years, businesses defer investment decisions or just give up and leave. This can lead to declines in population and a reduction in community cohesion. The natural environment declines as water quality and availability diminishes, flora and fauna deteriorate, and air quality and noise impinge on health outcomes. Agriculture and tourism industries would have been sacrificed for no gain. The region would suffer an economic collapse that could not be recovered due to the permanent impacts of the mining industry.

Such costs are certain, while the potential benefits of new mines are unlikely. **It is the RRCFC's strongly held view that the PRIA should find that the proposed exploration areas should not be opened for exploration and the resulting report, and the Advisory Board recommend against release of the proposed areas.**

Coal exploration should not proceed in the Hawkins and Rumker areas.

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1.1 Preliminary Regional Issues Assessment (PRIA) Process

The NSW Government's Advisory Body for Strategic Release has asked the NSW Department of Planning, Industry and Environment (DPIE) to prepare a Preliminary Regional Issues Assessment (PRIA) (DPIE, 2021a) to consider the benefits, opportunities, risks and constraints of releasing two adjacent areas located near Rylstone in the Mid-Western Regional local government area.

These areas are shown in Figure 1 and include:

- Hawkins - an area of 14,900 ha located directly north of Rylstone, and
- Rumker - an area of 17,800 ha located directly northeast of Rylstone.

An initial assessment of resource potential undertaken by the Division of Mining, Exploration and Geoscience within the Department of Regional NSW has identified coal resources within the Hawkins and Rumker areas that could be mined by underground mining methods (DPIE, 2021a). It is noted that these areas could just as well be mined using aboveground methods.

In June 2020, the NSW Government released the Strategic Statement on Coal Exploration and Mining (NSW Government, 2020). The Strategic Statement "outlines the NSW Government's approach to transitioning to renewable energy and supporting the economy and aims to improve certainty about where mining should not occur." It identified 14 potential future coal exploration release areas (NSW Government, 2020).

Adjacent to Hawkins and Rumker is the area of Ganguddy – Kelgoola, which is slated to go through the PRIA process once further exploration is completed (NSW Government, 2020).

1.2 PRIA Preparation

The PRIA process is also set out in the Strategic Release Framework (NSW Government, 2020). It is an initial assessment of social, environmental and economic matters relating to areas that could be released for exploration. In theory, it involves engaging with interested and potentially impacted stakeholders to identify issues for consideration.

DPIE has engaged Resource Strategies to undertake 'preparation of a Preliminary Regional Issues Assessment document in relation to a defined area that could be released for coal exploration' for a sum of $167,156 (NSW Government eTendering, 2021).

On its website Resource Strategies (2021) says it facilitates development approvals for major mining and associated infrastructure projects and prepares comprehensive and timely environmental assessment documentation with the assistance of recognised experts across all environmental fields.

The DPIE undertakes the PRIA and submits this to the Advisory Body for Strategic Release, which considers potential release areas, reviews reports and recommends assessment of the release of an area for resource exploration. The Advisory Body for Strategic Release makes recommendations to the Minister for Regional NSW, and these are considered by Cabinet and, if approved, the Minister for Regional NSW releases an area for exploration and invites companies to apply for a prospecting title.

1.3 Rylstone Region Coal Free Community

1.3.1 RRCFC

The Rylstone Region Coal Free Community (RRCFC) is a self-funded group of like-minded local residents, and supporters, of the Rylstone Region committed to stopping further exploration of coal and approval of mines in our region. Our aim is to protect the land, heritage, culture and community for now and future generations.

1.3.2 Purpose of this report

This report is the RRCFC's submission to the PRIA process on the Economic Impact coal exploration would have on the region. Separate submissions for a range of other issues are also being submitted by the RRCFC.

The RRCFC recognises that coal exploration is a precursor to coal mining, and therefore it is predominantly the mining phase that is considered in this submission.

Given that the NSW Government has not fully considered impacts through a rigorous appraisal process, and that the impacts from mining are direct, indirect, cumulative and profound, it is the RRCFC's strongly held view that coal exploration should not proceed in the Hawkins and Rumker areas. In addition, the PRIA should find that the proposed exploration areas should not be opened for exploration and the resulting report, and the Advisory Board recommend against release of the proposed areas.

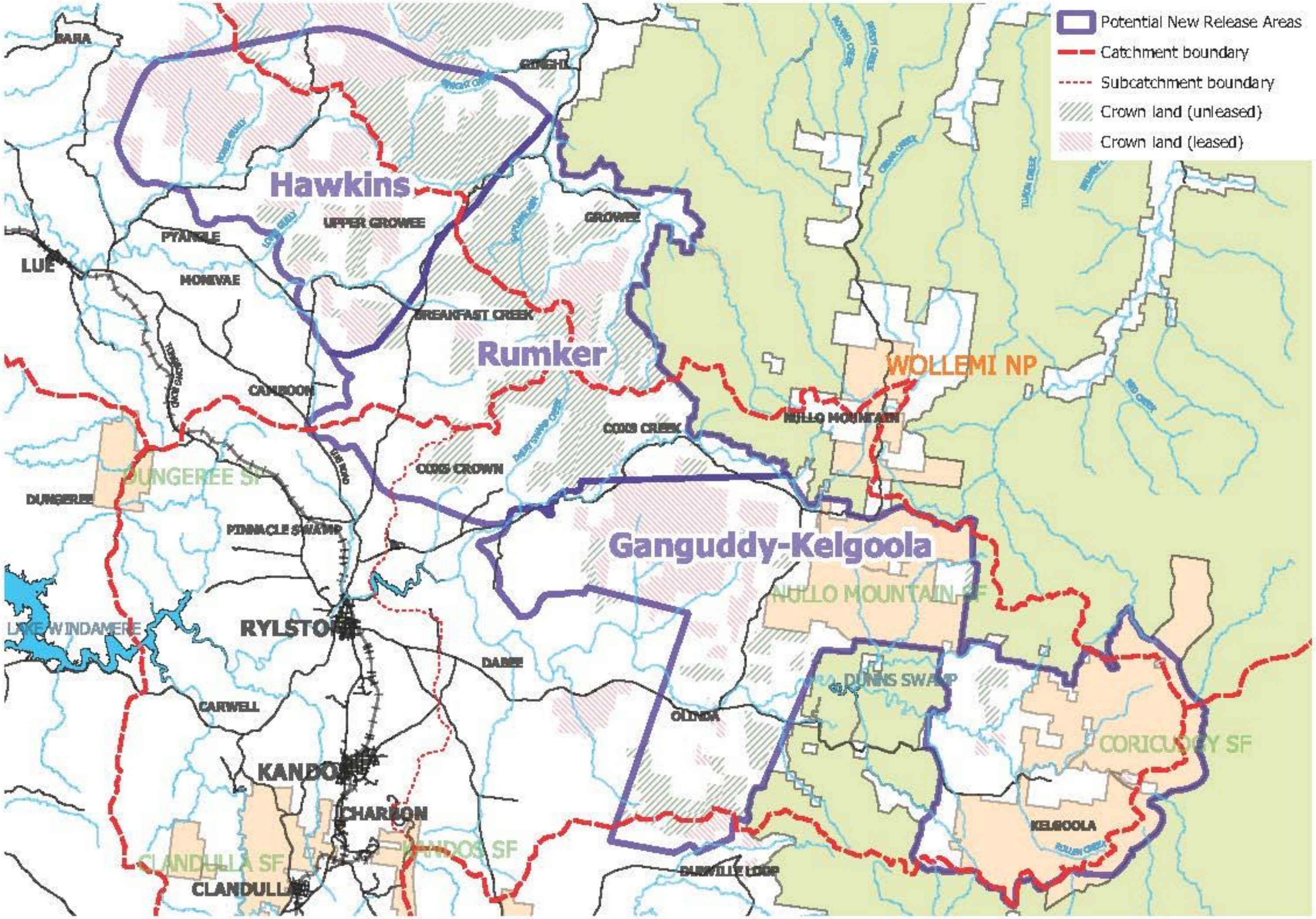

Figure 1 The proposed exploration areas (note only Hawkins and Rumker being considered in this PRIA)

2| Demand for Coal

2.1 Global Demand

2.1.1 Demand for Coal

Global demand for coal has been decreasing for more than a decade as many countries seek to transition to renewable energy sources and innovative technologies that reduce greenhouse gas emissions. Global demand for seaborne thermal coal declined around 8 percent in 2020 as the world economy slumped during the height of the COVID-19 pandemic. Although a recovery in global volumes can be expected in 2021, a sustained recovery to pre-COVID levels is unlikely; instead, it is probable that global coal demand peaked in 2018 and will never reach that level again. (Institute for Energy Economics and Financial Analysis (IEEFA) Australian Thermal Coal Outlook August 2021).

There have been a number of key international reports and agreements which confirm a forecast of further reduction in demand:

- The International Energy Agency (IEA) Roadmap for the global energy sector states the world's coal will decline to just one fifth of current levels by 2040, and to one tenth by 2050.

  In the 'Summary for Policymakers' – Priority Actions it is stated: *"There is no need for investment in new fossil fuel supply in our net zero pathway. Beyond projects already committed as of 2021, there are no new oil and gas fields approved for development in our pathway, and no new coal mines or mine extensions are required."* (IEA Roadmap 2021).

  Australia is a member of the IEA, and this Roadmap was written to inform and advocate for sustainability of energy in its member countries.

- This year, the G7 Leaders committed to an end to new direct government support for unabated international thermal coal power generation by the end of 2021 (White House briefing 2021).

Analysis from IEEFA indicates strong growth in the clean energy sector, particularly as pandemic-stimulus packages of governments in Europe and South Korea put green energy investment at the forefront of recovery plans. *"In financial year 2020, the clean energy sector received record investment commitments totaling US$501 billion – 9 percent more than the previous year. The renewable energy segment led with US$303bn in 2020, which is 60 percent of total investment committed into the overall low carbon energy transition sector"* (IEEFA 2021). This strategic shift in global finance dialogue is driving further investment in clean energy.

Commitments to reduction in fossil fuel usage are occurring across the world and are impacting on demand for Australia's coal exports. As this is a contracting sector of global trade, it is imperative that Australia reduce its participation in this sector and increase its participation in expanding global markets such as renewable energy.

Australia's biggest coal markets of Japan, China and South Korea (absorbing 75 percent of Australia's coal exports) have all committed to reaching net zero emissions. The coal power project pipelines in South and Southeast Asia – supposedly the new demand centres for Australian thermal coal to replace those markets – are drying up rapidly after an 80 percent decline since 2015 (IEEFA 2021).

The Reserve Bank of Australia (RBA) anticipates international thermal coal demand to decline in the long-term as renewable electricity generation becomes more viable (RBA 2019). This is a clear indication to policymakers and planners that additional coal supply is not needed. By implication, exploration for additional coal extraction is unnecessary, and would in fact be an investment that is counterproductive to the anticipated needs of investment and future export opportunity. It is clear that the Hawkins and Rumker areas should not undergo any further investigation.

The NSW Treasury has acknowledged this movement away from coal and concluded in a Research Paper for the 2021 Intergenerational Report that 'global demand for coal is expected to weaken considerably' (Wood, Beauman, Adams 2021).

In addition, NSW Treasury (2021) has recently modelled three scenarios, all of which assume significant decline before 2050, as shown in Figure 2below.

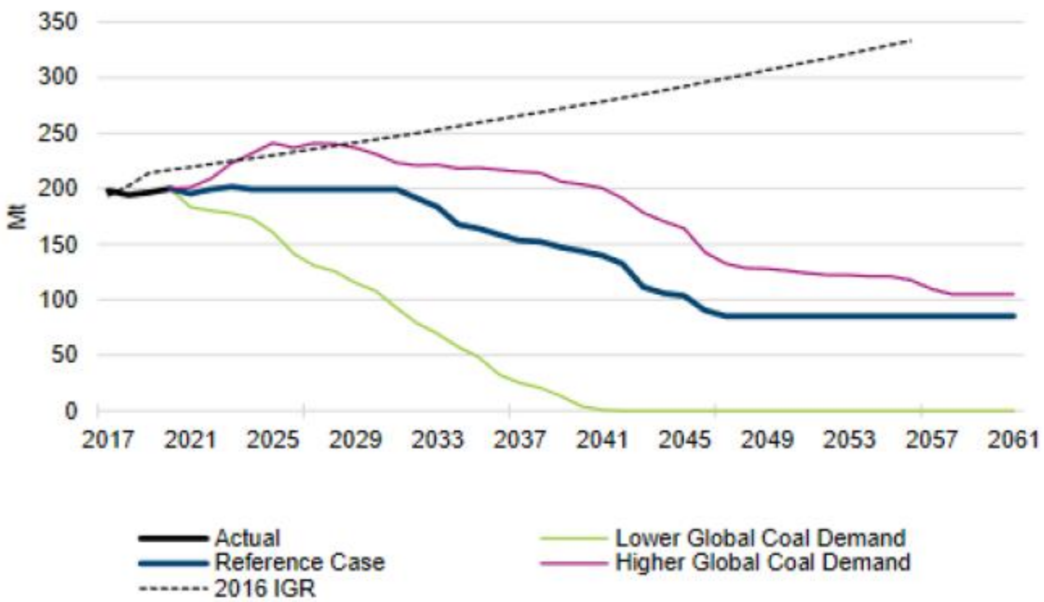

Figure 2 NSW coal production volumes under Treasury scenarios
(Source: NSW Treasury 2021)

Figure 2 shows that NSW Treasury is at least considering a scenario where all NSW coal production is phased out by 2040, along with others showing major declines after either some growth or steady production. The actions of key players in the NSW coal industry show that decline is most likely:

- The long-mooted expansion via a fourth coal terminal at the Port of Newcastle has been abandoned.
- The Australian Rail Track Corporation has reduced capacity estimates for the Hunter coal railways.

With the major port and rail operators reducing, or at least not expanding their capacity, it seems clear that key industry players are not expecting growth, contrary to the forecasts in the Strategic Statement.

2.2 NSW production capacity

Given that no growth is expected, and the more likely scenario of substantial decline within the next two decades is being considered, it appears unlikely that there is a need for any new coal mines in NSW. **It is the RRCFC's strongly held view that the PRIA should find that the proposed exploration areas should not be opened for exploration, and the Advisory Board recommend against release of the proposed areas.**

Coal exploration should not proceed in the Hawkins and Rumker areas.

Furthermore, existing coal mines in the Hunter are operating at well below their approved capacity, collectively by around 100 million tonnes per year. Recent analysis by Mach Energy, the owners of the Mount Pleasant mine, shows that existing approvals could see more than 50 million tonnes per year being produced up to 2040.

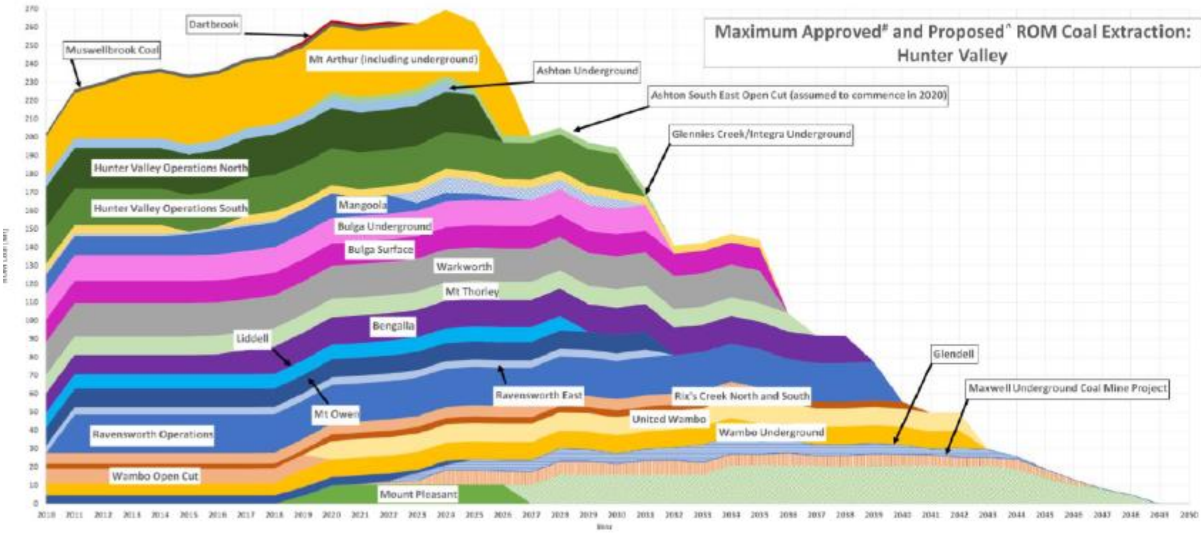

Figure 3 Approved and proposed coal extraction in the Hunter Valley

(Source: Mach Energy 2020)

Figure 3 shows that existing approvals in the Hunter Valley alone have the capacity to meet substantial coal demand for decades to come. Considering that this analysis excludes the major coal mines closer to Gunnedah and Mudgee and other potential major extensions such as BHP's Mt Arthur and ignores that most of these mines are currently operating under capacity, it seems there is quite simply no need for further coal exploration in new areas such as the Hawkins and Rumker areas. Existing coal mines, not to mention current proposals, have the capacity to meet demand and demand is likely to decline.

The NSW Government has accepted the global challenge of addressing climate change and the necessary reduction in coal production and exports. It has set a Net Zero Goal which involves a plan to grow the economy, create jobs and reduce emissions over the next decade (NSW Government 2020c). This Government goal is appropriate for international expectations of activity and national behaviour. It is disingenuous to suggest that a Net Zero Goal for greenhouse gas emissions is consistent with opening a greenfield site such as the Hawkins Rumker PRA. Planning activity and investment should occur in the expected growth sectors such as clean energy and renewables.

To further illustrate the schizophrenic behaviour of NSW State Government, PV Magazine reported in June that, "Plans to deliver 3 GW of firmed renewable energy in the New South Wales Central West have generated massive interest from prospective developers. The state government has announced it received 113 registrations of interest, totaling 27 GW and valued at $38 billion, signaling a major job and investment bonanza for regional NSW.

The government program is designed to unlock a huge pipeline of large-scale renewable energy and storage projects in NSW's first renewable energy zone around Dubbo in the run-up to the planned retirement of its aging thermal-generation fleet. To support the development of the Central-West Orana zone, the government has pledged to provide a four times bigger funding package than originally planned.

On Tuesday, Energy Minister Matt Kean said the NSW Government committed a further $31.6 million to the Central-West Orana REZ, bringing the total budget to over $40 million. "With this funding locked in, we can bring the Central-West Orana REZ from a vision to a reality," he said. "The Central-West

Orana REZ, the first of the State's three Renewable Energy Zones, will be the modern-day equivalent of a traditional power station, capable of powering 1.3 million homes."

In its Strategic Statement on Coal Exploration and Mining in NSW released in June 2020 (NSW Government 2020a) the NSW Government describes one of its four actions as 'supporting diversification of coal-reliant regional economies to assist with the phase-out of thermal coal mining'.

The Hawkins and Rumker areas and the Rylstone region is not a coal-reliant community and does not need the 'support of diversification' offered. It already has a diverse and thriving community and economy. If the potential release occurred, and mining proceeded in the area, it would then need support when the mining ceased. This is obviously not the intent of the government action outlined. It is far more logical to use the current situation within the Hawkins and Rumker areas and Rylstone region as an example of existing diversity.

3| Local impacts

3.1 Economic viability in doubt

At a local level, the granting of exploration rights will impose significant costs on the local community and provide no long-lasting benefit. Indeed, as detailed in the RRCFC's submissions on Surface Water, Groundwater, Health and Social impacts and Land Use Capability and Conflicts, the environmental impact of drilling on water resources will most likely have a negative economic impact on affected landholders.

It is highly unlikely that any eventual mine proposal would be economically viable and provide benefits such as royalties and employment, to a degree that would outweigh environmental and social costs. In addition to the global demand factors discussed above, the Australia Institute Hawkins Rumker PRIA submission suggests the following issues work against a viable mine in the Hawkins and Rumker areas:

- Low coal quality – materials presented by the NSW Department of Planning, Industry and Environment (DPIE) (2020) state that coal quality is likely to be similar to Ulan, Wilpinjong and Moolarben mines. Wilpinjong and Moolarben both produce substantial volumes of high ash, low energy coal mainly sold to domestic coal fired power stations, unlikely to compete in a declining export market.
- High costs – the same DPIE presentation states that mines would be underground mines, which typically have higher per tonne costs than open cut mines, so are unlikely to compete with established open cut mines.
- Difficulties attracting finance – Australian and global investors are now reluctant to finance new thermal coal mines.
- Community opposition – opposition to new thermal coal mines has proved to be strong in the local area, not to mention across NSW and Australia.

The difficulty in establishing a new coal mine, perhaps a decade into the future, is further demonstrated by the fact that most recent attempts to start new mines have failed, including many in the nearby area as detailed by the Australia Institute in its submission - **Back to the past Submission on Hawkins-Rumker Preliminary Regional Issues Assessment of new coal exploration areas**:

- Rocky Hill, proposed for near Gloucester: abandoned after community legal action.
- Hume Coal, proposed for the Southern Highlands: currently under consideration by the Independent Planning Commission (IPC), following repeated recommendations against approval by DPIE and fierce community opposition.
- Bylong, proposed for Bylong Valley: rejected by IPC following community opposition, with possible appeal against that decision.
- Wallarah 2, proposed for Central Coast: has all approvals but has not been developed likely for financial reasons and appears to be for sale.
- Watermark, proposed for Liverpool Plains: now abandoned. Faced fierce opposition by local water users and traditional owners, but also likely to have been financially marginal.
- Cobbora coal project, proposed for near Dunedoo: approved but abandoned as not financially viable.
- Further afield, Queensland has approved many new coal mines in the Galilee Basin and elsewhere that have not progressed largely due to financial non-viability.

3.2 The cost to local communities - uncertainty

Such proposals inflict considerable uncertainties and costs on local communities. Having a mine proposal near residential and agricultural properties can lead to a decline in the value of properties and houses as the uncertainty renders them impossible to sell.

For example, the Bylong Valley project has dragged on for 11 years and is still under appeal while the Watermark project saw a 13-year battle culminating with the NSW State Government buying back the licence from the Chinese government owned Shenhua. This uncertainty can lead to property values declining, and houses outside the actual zone of exploration become impossible to sell until the project is abandoned or developed.

As these projects can leave the community in limbo for many years, businesses defer investment decisions or just give up and leave. This can lead to declines in population and a reduction in community cohesion. The natural environment declines as water quality and availability diminishes, flora and fauna deteriorate, and air quality and noise impinge on health outcomes. Agriculture and tourism industries would have been sacrificed for no gain. The region would suffer an economic collapse that could not be recovered due to the permanent impacts of the mining industry.

There are only a few large landholders remaining in the Bylong Valley and these have all stated that they have not invested in their substantial agricultural properties for more than 10 years; they have done "*the bare minimum of maintenance*" (pers. com. D. Baguley).

"Kepco's exploration of the Bylong Valley began more than a decade ago. Through a process of divide and conquer it bought up the farms of the local landholders - some of the best agriculture land in the state. After completing its exploration, Kepco eventually set in train the mine approval process. It wasn't approved, Kepco appealed to the Land and Environment Court and lost. It is still appealing its case so 12 years later. In the meantime, the community has been decimated while good farming land degenerates. The few landholders left haven't invested in their properties for more than a decade because of the uncertainty. Community events such as the world-famous Bylong Mouse Races don't happen anymore as there's no community and there no-one to volunteer for the local RFS. How is this good for rural communities?" (pers. com. B. Hodge)

The negotiation of access agreements places huge pressure – mentally and financially - upon local residents. Landholders who choose to fight the mine may be up for tens or hundreds of thousands of dollars in fees to consultants, lawyers and other experts. These costs are considerable and very likely to arise with any new mining project in the Hawkins-Rumker areas. In addition, mining companies have a long track record of retaliating against opponents by lowballing their property valuations when they are forced to sell because they are surrounded by mining lease.

By contrast, economic benefits for the local community are few. Due to the financial and technical factors discussed above, the odds of a successful development in the Hawkins and Rumker areas are marginal. In addition, the list of coal projects that have failed to secure development approval for the mine is long - Rocky Point, Watermark, Berrima, just to name a few. Because of the high risk, such projects attract speculators, not mining companies that develop beneficial projects who have a good reputation to lose. Such wannabe developers would have every incentive to cut corners on environmental and safety standards in a race to the bottom that further externalises costs to the community.

3.3 The existing local economy

The Hawkins and Rumker areas are within the Mid-Western local government area (LGA) of NSW. The nearest towns are Rylstone and Kandos. The Hawkins and Rumker areas cover approximately 32,000 ha of land and would directly affect 181 landholders.

The REMPLAN (2021) website presents economic and demographic insights for the LGA. REMPLAN divides the LGA into East and West areas. The East area runs from Capertee in the south through to Kerrabee in the north, with Rylstone and Kandos sitting approximately in the centre. The East area is highlighted in Figure 4 below.

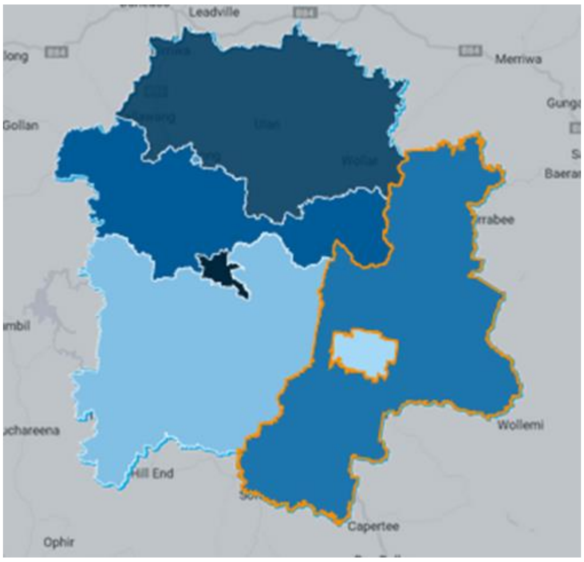

Figure 4 The East area in the Mid-Western Regional LGA

(Source: REMPLAN 2021)

There are many and varied small businesses throughout the Hawkins and Rumker areas. Farms and business activities including grazing, cropping, orchards, vineyards, plantation forests and native forestry have been successfully developed. Additional economic activities include tourism-based businesses such as farm stays, B&Bs and retreats, as well as horse and cattle studs, poultry egg production, artisanal workshops, mineral water supplies, boutique brewers and more.

These land uses and businesses are all sustainable long-term businesses and rely on the land and its water resources for their viability. Coal mining places this sustainability at risk. This potential destruction of existing sustainability is at odds with government policy. The existence of the Hawkins and Rumker areas is an unwarranted and unwanted anomaly.

REMPLAN (2021) (Figure 5reports the industry sector with the largest employment within the Rylstone Kandos and East areas is Agriculture, Forestry and Fishing accounting for 22.3 percent of jobs in the selected areas. Mining by contrast is only 2 percent.

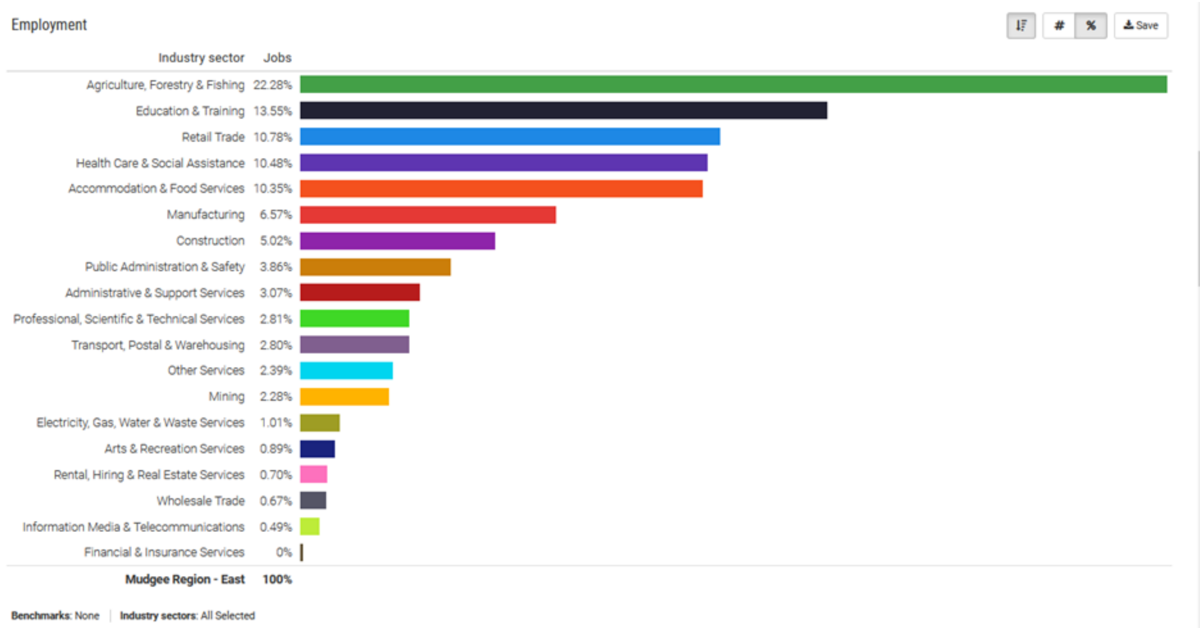

Figure 5 Industry breakdown

(Source: REMPLAN 2021)

The Hawkins Rumker community is not coal reliant. If this were to change and coal mining develop in the area the major employment opportunities currently on offer would be destroyed. This upheaval and reversal of community and economic stability and sustainability should not occur.

The people in the region have built long-term sustainable economic stability for this region. According to latest data released from the National Skills Commission, as part of Mid-Western Regional Council's Builders and Developers Update, the Mid-Western Region's unemployment rate has remained under 5 percent following record tourist visitation in the second half of 2020, and strong construction activity establishing in the region. The region's unemployment rate decreased by 0.6 percent for the March 2021 quarter to 4.1 percent. The revenue generated by this high level of employment stays in the pockets of our local businesses and is circulated within the region. Businesses that have helped build the tourism industry in the region include vineyards, olive groves, horse studs, beef and sheep farms, eco-tourism, short stay accommodation, restaurants, cafes, antique shops, soft furnishings and knick-knacks for example. These businesses are incompatible with mining: tourists do not come to see coal mines.

Figure 6 details how dollars spent by a visitor to Mid-Western Regional LGA benefits local industries.

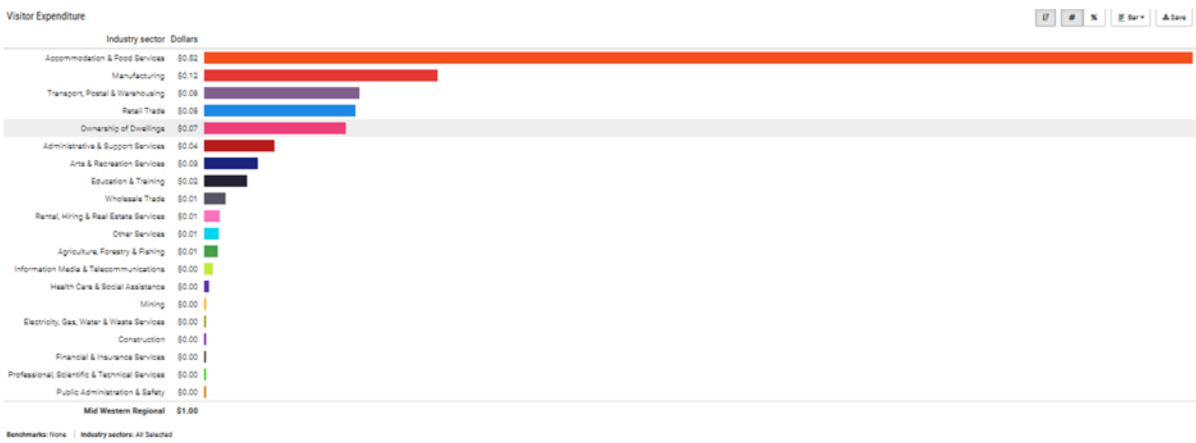

Figure 6 Breakdown of the tourist dollar spend

(Source: REMPLAN 2021)

Accommodation and food services are far and away the greatest industry sector that benefits from tourism. It is estimated that this sector captures $0.516 for every dollar spent by visitors. The businesses that provide these services are owned and managed by locals. Services to these businesses are provided by other local businesses. It would be uneconomic to allow this financially viable situation to evaporate. This would occur if the Hawkins and Rumker areas proceeds.

The opening up of greenfield coal mining is obviously going to bring major changes to a locality. None of these changes are warranted or desirable in the Hawkins and Rumker areas. Table 1 below lists and summarises the most obvious of these negative impacts on the local area but put simply, building coal mines in the Hawkins and Rumker areas will lead to the destruction of the areas thriving agriculture, tourism and hospitality industries.

Table 1 Impacts and cost burden from coal mining in the Hawkins and Rumker areas

Mining Activity	Impact	Cost burden
Purchase land	Fewer residents. Economic and personal uncertainty. Investment and confidence declines. Falling land values.	Local economy contracts. Resilience is compromised e.g., RFS brigades are lost.
Develop mine infrastructure Test drill	Loss of agricultural land. Loss of natural ecosystems. Loss of amenity, landscape, connection to country.	Present and future generations quality of life reduced. Soil carbon is lost. Agricultural output and associated economic activity is reduced. Ecosystem services are lost to present and future generations.
Operate mine	Climate change – including destruction of housing and infrastructure caused by increasingly extreme weather events. (Scope 1, 2 and 3 emissions.) Increased noise, dust, vibration, traffic. Pollution of ground and surface water. Loss of water for agriculture due to damaged aquifers.	All nations and the global population. Insurance charges are increased. Need for Government health and mental health services increased. Local tourism industry contracts. Cumulative and on-going costs as listed above.
Modifications Extensions	Solastalgia.	Need for Government health and mental health services increased.
Mine closing Rehabilitation	Long term pollution from leaching acid sulphates, heavy metals etc - due to inadequate or non-existent security deposits to cover long term rehabilitation and monitoring. Local towns close. Unemployment and associated issues such as crime, increase.	Pollution containment, management and remediation, if possible, by present and future generations, including government agencies.

Coal mining has many impacts – including, but not limited to those listed above.

The immediate cost burden of these impacts is strongest in the locality. As mining progresses the cost burden widens and includes regions and governments. Global impacts and costs cannot be denied. The cost burden extends deeper to future generations and the management that will be required of the negative legacy created.

Environmental degradation cannot be costed. Damage to the climate, soil and water cannot be reversed. Remediation is not an option. Any royalties, taxes and other income derived from the activity are therefore annulled and redundant.

3.4 Jobs a chimera

While mining royalties are the – unstated - main motivation for State government to open new areas to mining exploration and exploitation, the fig-leaf it uses to give legitimacy to its actions is jobs. **The promise is that a mine will bring hundreds of high-paying jobs within a few kilometres of town. While this was once the case, current conditions in the coal industry render this highly improbable.**

Coal miners are highly skilled and specialised – coal mining is a separate stream in most mining engineer courses. Apprenticeships and positions are unlikely to be offered to the local community, but rather, skilled workers will be brought across from other mines, particularly as the industry declines, freeing up skilled labour. So, what will happen is that rather than kids leaving Kandos High School at the end of Year 12 getting jobs in the mine, older, high-cost mines in the Hunter and elsewhere will get put into care and maintenance and the workers made redundant will fly-in fly-out or drive-in drive-out to the new mine in the Hawkins and Rumker areas. The end result of that is no next increase in jobs and little or no opportunity for people in the community whose land is being destroyed.

Given that any mine is unlikely to go ahead, if it goes ahead at all, for at least a decade, it is almost certain that it will be highly automated. Currently, BHP, Rio Tinto and Fortescue all have mines operating in the Pilbara that are run from control rooms in Perth with few human workers on site. The workers that are on site are highly skilled tradespeople such as mechanics and electricians who also have experience and skills in robotics and the Internet of Things. According to the 2021 NSW Treasury Intergenerational Report, mining employment has declined by 25 percent since 2016 and as the pace of automation increases, this trend will only accelerate.

This is a trend that the NSW Treasury is well aware of according to IEEFA's Australian Thermal Coal Exports Outlook August 2021. *"[T]he NSW Treasury projects a major decline in coal mining jobs – between 75% and 100% fewer jobs in the sector by 2061 (Figure 7). Under the base case, NSW Treasury projects that employment in coal mining will decline by an average of 600 jobs per year over the next two decades."*

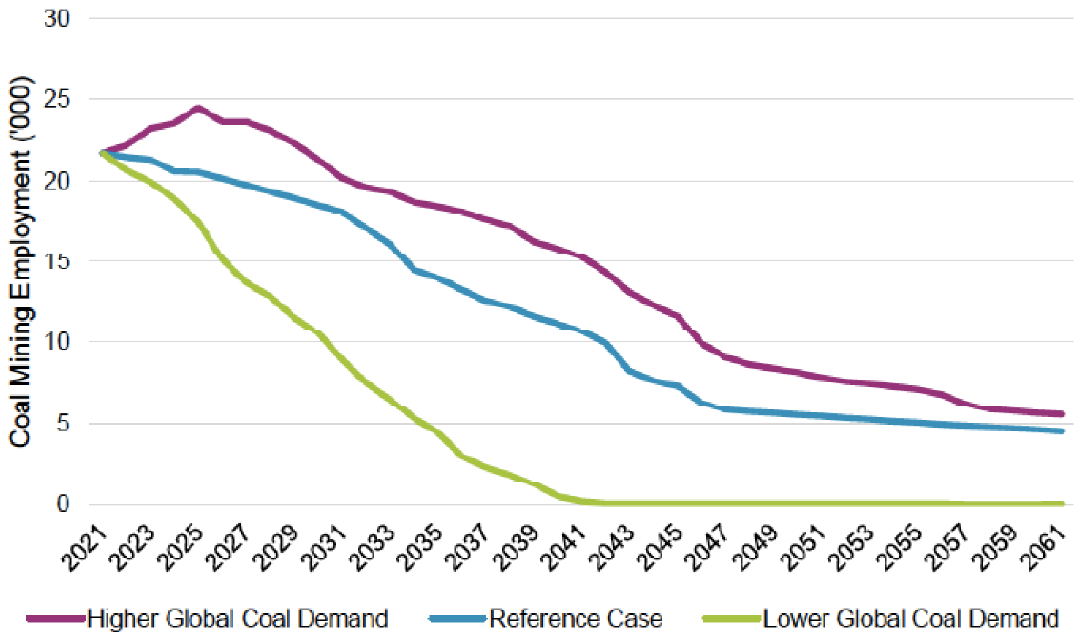

Figure 7 NSW Government 2021 Employment in Coal Mining Forecasts
(Source: NSW Treasury 2021)

3.5 Social and economic costs of 2-speed economy

The social impacts upon the community are covered in more detail under the RRCFC's 'Health and Social Impacts' submission, however, it is important to consider the social and economic costs that accompany coal mines at their construction and operational phases.

People living in the region have seen these impacts at close range. When the big coal mines well north of here, Ulan Moolarben and Wilpinjong, were starting up, there was a huge strain put on Mudgee. Property prices climbed rapidly, and local people could not afford to rent or buy which led to people becoming homeless or leaving town. One person had rented the same place for 20 years and was kicked out to make way for mining construction crews coming to town (pers. comm. B. Hodge)

The local community saw firsthand how companies and organisations in Mudgee struggled to fill positions during the construction phase of large mines north of here. There was no accommodation available - if a person from out of the region accepted a job in a local business, they were unable to relocate because there were no rental properties available. There is a perception that mines bring jobs and increase property prices, but what mines do is create a two-speed economy divided between those who secure work at the mines and everybody else. Even now, prices for food and drink in Mudgee are close to Sydney prices because of the 'mining tax' that mine wages place upon the whole community.

High property prices overall and the volatility mentioned above have an impact on local people. If they were renting, they were displaced or struggled to buy. Mudgee's tourism industry took a hit because tourists could not visit because there was nowhere for them to stay! Mid-Western Regional Council spent tens of thousands of dollars since the end of the mining boom to rebuild the region's tourism industry to the point where it was prior to the construction of the three mines.

Many local people could not get work on their vehicles done at local businesses, for example panel beating done to fix their cars, because the smash repairers in Mudgee were unable to keep staff – so people went to Bathurst instead. The local service stations and car dealerships struggled to keep apprentices – they would get jobs in the mines as soon as they had any experience. Rural produce supply stores were losing staff to the mines at that time. This is not the mark of a sustainable local economy – it is undermining the long-term viability of those businesses affected and the community they service.

The local infrastructure was also unable to cope during this period. The traffic between Mudgee and the mine sites along Ulan Road was well above pre-mine levels, with heavy vehicles and a high number of vehicle movements. The local roads were unsuitable leading to accidents and damage to these roads. Despite the usual practice of private developments being required to fund the infrastructure they need to support their developments, neither of the three mining companies were prepared to pay for essential and much as needed road upgrades. This led to the State government stepping in and works being funded via taxpayer revenues. This community has seen that mines do not bring economic benefit but rather, cost both the local and State economy. The economic benefit is reaped by the mostly foreign shareholders of overseas mining companies.

4| Indirect economic impacts

4.1 Cost of mental health impacts

When the environment and landscape are changed beyond recognition as in coal mining, the community that exists there grieves for the place they have called home. The mental health of the remaining residents is affected in many ways – often convoluted and difficult to analyse. This combined stress was identified and named in the Hunter Valley – Solastalgia. Solastalgia (Albrecht G 2005) is a recent concept in mental health and identity. It is defined as the *"pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault. It is manifest in an attack on one's sense of place, in the erosion of the sense of belonging (identity) to a particular place and a feeling of distress (psychological desolation) about its transformation.*"

People who experience Solastalgia are negatively affected. The distress they experience can escalate into more serious health and medical problems. This places a huge burden on society in many, varied on-going ways: not least of which is family and society breakdown, and on-going inter-generational health needs. The cost burden of this is largely hidden and not considered in planning matters.

RRCFC believes this cost must be recognised, given a higher profile and considered as a matter of course in any mining assessments. The effects and costs of potential Solastalgia indicate the Hawkins and Rumker areas should not be opened up for exploration or mining.

4.2 Clean up costs not provided for

In theory, mining companies are required to rehabilitate mine sites once the resource has been extracted and the mine closed. Putting aside the fact that agricultural land can never be completely destroyed after all the biologically active topsoil has been dug up, stockpiled and put back into the void, in practice, mining companies employ a variety of tactics to evade these requirements. As a result, voids are left as a problem for future generations to deal with or state governments, and ultimately the taxpayer, is left to foot the bill.

This issue has been around for a long time. The NSW Audit Office warned in a 2017 report that security deposits of the state's 450 mines *"do not include sufficient contingency given the substantial risks and uncertainties associated with mine rehabilitation and closure.*

"There is also no financial assurance held over the risk of significant unexpected environmental degradation in the long-term after a mine is deemed to be rehabilitated and the security deposit is returned," the report argued.

Fast forward four years and the Sydney Morning Herald's Peter Hannam reported on a May 2021 Australia Institute report found that filling in the 23 mine voids extant in the Hunter Valley would cost between $11.5 billion and $25.3 billion, based on the stated costs per hectare of four mines in the Upper Hunter. By comparison, the NSW government holds just $3.3 billion in bonds to meet the rehabilitation costs of all mines across the state.

Report after report has found that mine rehabilitation bonds are woefully insufficient and mining companies do as much possible to avoid rehabilitation. According to the 2016 Environmental Justice Australia report, *Dodging clean-up costs Six trick coal mining companies play*, mining companies seek to avoid clean-up costs by:

- Mothballing or putting mines into 'care and maintenance' perpetually to avoid triggering rehabilitation provisions.
- Continuing to extract a resource when it is no longer financially viable to effectively bankrupt the company.
- Not rehabilitating. Some voids, such as Rio Tinto's Mount Thorley are held to be so large and so costly to rehabilitate that state governments let the company off the hook.
- Selling off the mine. Prices for coal mines are depressed. BHP wishes to exit from coal mining completely, however, it cannot find a buyer for its last mine, Mt Arthur, which was recently valued at **negative** $200 million. Some mining companies have sold off a mine for as little as $1 to escape the liability for rehabilitation.
- Expanding. By expanding an existing mine rather than closing it, mining companies can delay triggering the rehabilitation provisions.
- Governments granting inappropriate discounts to companies on the amount of financial assurance held by way of bank guarantees on the grounds that such assurances can impact the company's solvency.

Due to the mining industry's appalling rehabilitation record, especially when it comes to open cut mines of the size likely to ensue from exploitation of the Hawkins and Rumker areas, it is likely that the cost of rehabilitating the site will be an economic cost faced by future generations.

4.3 Royalties and tax revenue

Mines provide a flow of revenue to governments and their (mostly foreign) owners, however, the flow on to local businesses and local communities is generally not seen. According to the Australia Institute's *Coal Fact Sheet*, coal mining royalties only contribute two percent of NSW State Government Revenue; similar to what it receives from fines and licences. Coal mining companies operating in NSW are 90 percent foreign owned, so most coal mining profits go offshore, very little makes it back to coal mining communities.

At a meet the candidates session for the recent Upper Hunter byelection, community members complained bitterly about the lack of services, the long wait times for medical procedures, the poor health care despite the region supposedly contributing hundreds of millions of dollars to state economy (pers. comm. S. Baguley).

The same fact sheet suggests it's a similar story when it comes to federal government taxes. In 2011/12, the coal mining industry paid a 12 percent company tax rate, markedly below the Australian average company tax rate of 17.6 percent. Indeed, global coal behemoths such as Glencore, routinely pay no tax whatsoever.

5| Conclusion

The International Energy Agency expects the global coal trade to decline by 130 million tonnes per year by 2030 under currently stated climate and energy policies or halve to around 600 million tonnes per year in total under its Paris Agreement-aligned scenario. NSW Treasury is at least considering a scenario where all NSW coal production is phased out by 2040, along with others showing major declines after either some growth or steady production.

Given that no growth in coal exports is expected, and a substantial decline is being considered as evidenced by reduced capacity forecasts for Hunter Valley coal railways, the idea that there is a need for any new coal mines in NSW appears absurd. The level of absurdity increases when one considers that existing coal mines in the Hunter are operating at well below their approved capacity, collectively by around 100 million tonnes per year. **As existing coal mines, not to mention current proposals, have the capacity to meet demand, and demand is likely to decline; there is no need for further coal exploration in new areas such as the Hawkins and Rumker areas.**

In the unlikely event that any eventual mine proposal in these release areas reached the approvals stage in 10 years' time, it is highly likely it would not be economically viable. Any company seeking to develop a mine in the Hawkins Rumker area would face significant headwinds such as low coal quality, high unit costs, difficulties attracting finance and strong community opposition.

The combined effects of reduced global demand, the potential imposition of global carbon tariffs, and the rapid energy transition away from fossil fuels indicate that any PRA for coal exploration is unwarranted, uneconomic and an investment in it would likely become a stranded asset. The PRA locality examined here, has a vibrant and viable agricultural and tourism economy which should not be placed at risk; especially since most coal mining companies are foreign owned which would mean profits would flow overseas while local people would bear the costs of the degraded landscape.

Such proposals impose significant costs on local communities. Having a mine proposal near residential and agricultural properties brings huge uncertainty. Property values can decline, and houses become impossible to sell. Businesses have to defer investment decisions through the many years these projects are in limbo which leads to population numbers declining and a reduction in community cohesion. The natural environment declines as water quality and availability diminishes, flora and fauna deteriorate, and air quality and noise impinge on health outcomes. Agriculture and tourism industries would have been sacrificed for no gain. The region would suffer an economic collapse that could not be recovered due to the permanent impacts of the mining industry.

Such costs are certain, while the potential benefits of new mines are unlikely. It is the RRCFC's strongly held view that the PRIA should find that the proposed exploration areas should not be opened for exploration and the resulting report, and the Advisory Board recommend against release of the proposed areas.

Coal exploration should not proceed in the Hawkins and Rumker areas.

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