Submission No 59

INQUIRY INTO BENEFICIAL AND PRODUCTIVE POST-MINING LAND USE

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NSW Minerals Council Submission – July 2024

The NSW Minerals Council (NSWMC) appreciates the opportunity to assist the Standing Committee on State Development in its inquiry into beneficial and productive post mining land use.

NSWMC is the peak body representing the State's $24.5 billion mining industry, representing around 80 member companies, including most coal and metals mining operations in NSW and a range of explorers.

The NSW minerals industry undertakes rehabilitation of mine sites as an integral part of mining. Sites are progressively rehabilitated throughout the life of a mine. The NSW mining industry has many examples of effective and sustainable rehabilitation. Traditionally, the focus of mine site rehabilitation has been to restore land to its pre-mining state. Most mining development consents require a mix of pasture and ecological rehabilitation, reflective of pre-mining landscapes.

Importantly, many of the emerging post mining land uses, such as renewable energy, were not anticipated at the time of approval of most current operational mines. Emergence of these new land uses, where post-mining land offers significant advantages, and a greater focus on post-mining transition in some mining regions, makes it vital the NSW Government considers how the regulatory framework can facilitate these opportunities in an effective and timely manner.

All levels of government, and affected communities, have discussed the need to attract economic investment to replace economic activity lost in relation to any mine closures.There is a broad acceptance across government, industry, developers and many local mining communities that the current regulatory framework is not fit for purpose to facilitate alternative post mine land uses outside of the traditional pasture/conservation land expectations.

The NSW mining industry has proactively investigated post mine land use opportunities and challenges for many years, including through the Upper Hunter Mining Dialogue established in 2010. We have sought to bring together industry and government stakeholders to build an understanding of the barriers and look for regulatory solutions.

Many NSWMC members are in the process of attempting to develop more innovative post mining land uses by painstakingly grinding through the current regulatory framework. The lack of a fit for purpose framework that acknowledges emerging land uses more beneficial than those anticipated at the beginning of a mining project, acts as a disincentive for mining companies and proponents of new developments to explore new post mining land uses.

In many mining regions there are distinct advantages to utilising mined land for new developments. While there are existing commitments for individual projects in relation to rehabilitation, it would be short sighted not to explore how to balance those commitments against the potential advantages of facilitating new developments on mined land.

Many of the barriers to developing new and innovative post mine land uses are a result of the need to obtain multiple approvals under the Environmental Planning & Assessment Act 1979 (EP&A Act) and the Mining Act 1992 (Mining Act), as well as mining lease relinquishment requirements.

Mining in NSW

Mining underpins the strength of regional economies across NSW.

In regional NSW, the mining industry contributes 12.5% of the Gross value add, the highest of all industry sectors in regional NSW, and 3% of the regional NSW workforce.

The mining industry directly spent $23.6 billion on goods and services in NSW in 2022/23[1].

In the same period, mining royalties delivered a record $5 billion to the NSW economy.

In 2023/24, royalties delivered $3 billion, and are forecast to deliver $13.3 billion over next four years[2].

The NSW mining industry is diverse, including export and domestic thermal coal, gold copper and importantly emerging critical minerals. Although the trajectory is to phase out domestic coal, 90 percent of all coal produced in NSW is exported to more than 20 countries overseas, and demand for this high quality coal is likely to remain high for many years.

While there are some areas where mine closures will occur, largely driven by the local transition away from local consumption of thermal coal, the industry will remain strong in NSW, driven by demand for export coal.

Replacing the substantial economic contribution of existing coal mining regions, or other mines in regional areas, with alternative industries or land uses, poses a substantial challenge for government, industry and our regional communities.

[1] NSW Mining industry expenditure and jobs.

[2] https://www.budget.nsw.gov.au/sites/default/files/2024-06/Budget-Paper-No.1-Budget-Statement-Budget-2024-25.pdf

Rehabilitation in NSW

Rehabilitation is an integral part of the planning and operation of mine sites in NSW.

Progressive rehabilitation is undertaken by NSW mining operations seeking to undertake rehabilitation as soon as land becomes available. Most mining operations have commitments to restore land to pasture or native vegetation consistent with the surrounding landscapes at the time of approval.

Progressive rehabilitation

Progressive rehabilitation has a number of advantages, including shortening the overall life of the mine, lowering dust emissions, putting land back into production, restoring habitat and reducing the impact on visual amenity. NSWMC collects data on rehabilitation from mining operations in the Upper Hunter. In 2022, mines in the Upper Hunter undertook an additional 529 hectares of rehabilitation, bringing the total area of mined land rehabilitated to 14,987 hectares, 39% of all land disturbed by mining in the region to date.[3]

Sustainable and productive land

Monitoring of rehabilitation shows the industry is successful in achieving sustainable and production restoration of mined land.

A study by the Upper Hunter Mining Dialogue, with industry and community collaboration, sought to understand whether rehabilitated mine land can support long-term sustainable and profitable cattle grazing in the Upper Hunter.

Results showed cattle which grazed on mined land with improved pastures performed better than cattle on the analogue sites (unmined native pastures), gaining more weight. Monitoring of the health of the stock indicated no concerns about heavy metals. Monitoring of the pastures indicated ground cover and weeds did not change during the study and testing of plants indicated there were no concerns about heavy metals.

The mining industry has also been successful at restoring complex ecological communities and habitat on mined land. In 2019 an Australian Coal Association Research Program (ACARP) study was undertaken by ecologists at Umwelt with assistance from the Department of Planning, Industry and Environment[4]. The study sought to understand whether historical mine site rehabilitation had been successful in establishing self-sustaining and recognisable ecological communities.

The research project sampled 45 rehabilitation sites (some mine sites included multiple sampling sites) and 48 reference sites (sites which have not been mined and provide a baseline) in the Hunter Valley between March and May 2019.

The study found 53% of sites were strongly or very strongly recognisable at a NSW Plant Community Type. A separate study by the Department of Planning and Environment considered whether the sites were self-sustaining. Two rehabilitation sites, both 21 years old, were considered to be self-sustaining to the same extent as the reference sites. A third site at 12 years old was found to be approaching sustainability.

[3] Upper Hunter Mining Dialogue Rehabilitation Reporting 2022, https://miningdialogue.com.au/project/rehab/results/2022-results
[4] ACARP -Establishing Self-sustaining and Recognisable Ecological Mine Rehabilitation https://www.umwelt.com.au/assets/ACARP-full-report.pdf

Opportunities

Many NSW mine sites could potentially deliver significant opportunities and benefits for local communities and the State more broadly, including new jobs and investment opportunities to help offset some of the lost economic benefits once mining operations cease.

This will of course be dependent on the particular requirements of the proposed development and the suitability of a mine site. Not every mine is likely to be suitable for alternative reuse. There will be some cases where the most effective option is to return the land to pasture and vegetation.

Where viable opportunities do emerge, they will only be realised if the regulatory framework incentivises the consideration of new and beneficial land uses on former mine sites in a timely way.

Without changes, it's unlikely the existing regulatory framework will be capable of capturing these new opportunities, such as renewable energy development, and they will be lost, or go elsewhere.

Maintaining community wellbeing and prosperity

Most mining operations in NSW are deeply ingrained in the communities where they operate. The workers are part of the local community, live in the local town with their families, spend money at the local shops and restaurants, and their children attend local schools.

Once mining operations finish, the loss of people, jobs and economic activity will leave a substantial gap on many fronts that will be difficult for these communities to replace. Attracting new and beneficial reuses of former mine sites provides an important opportunity to offset these losses, and reduce the impacts on the local communities.

Availability of land and infrastructure

Mining operations comprise significant areas and various types of land. This includes disturbed areas where active mining operations occur, formerly disturbed and rehabilitated areas, infrastructure and service areas, and extensive buffer areas.

There are very few comparable circumstances where such an amount and varying types of land in single ownership will become available for potential reuse. This is an opportunity which can potentially be leveraged to accommodate many other alternative beneficial uses.

This is particularly the case for coal mining regions such as Lithgow, the Illawarra and the Hunter Valley where such land will become available over time. For example, there are approximately 15,000 hectares in the Hunter Valley under rehabilitation, and a further 23,000 hectares of disturbed land awaiting rehabilitation. This does not include other buffer lands used for agricultural purposes and under the management of mining companies which are also substantial.

Mine sites also contain significant existing infrastructure including rail infrastructure, electrical transmission lines, industrial sheds, office facilities, hard stand areas, car parking facilities, water storage and water transfer infrastructure amongst other things. In some cases this infrastructure, which is typically required to be removed at the end of mine life, may present an opportunity to be repurposed to enable other alternative uses.

Access to existing infrastructure and services

Many mines, particularly those in NSW coal mining regions, are located close to significant population centres, established industries, infrastructure such as roads, rail, electricity, telecommunications, and a variety of other services.

This ready access to a potential labour force, infrastructure and services is an opportunity that will potentially make it more cost effective and efficient to attract and deliver a variety of alternative land uses when mine site land becomes available.

Similarly, remote or isolated mine sites in other parts of NSW may also provide opportunities to accommodate uses where land use conflict and environmental impacts can be minimised.

Accommodate a variety of alternative beneficial land uses

The variety of landforms and access to infrastructure and services provides an opportunity to accommodate a wide range of potential new land once mining operations have finished. Depending on circumstances such as the location of individual mine sites relative to other adjoining land uses, potential future land use demands in a region, and final landform requirements, former mine sites could potentially accommodate any future land uses.

This could include various industrial (including high tech and manufacturing) or commercial activities on former infrastructure areas, residential housing where lands are located adjacent to other residential areas, education facilities, recreation and tourism activities, renewable energy development, as well as any agricultural uses and ecological outcomes.

Enabling alternative uses such as high tech industry and manufacturing (amongst other uses) is consistent with the NSW Government's statements included in the “Future Jobs and Investment Authorities” issues paper, which is focused on job creation (particularly higher value jobs) and productive investment in the regions through the growth of engine industries[5].

The challenge will be ensuring the regulatory framework offers the necessary flexibility to quickly capture whatever new opportunity may arise.

Renewable energy projects

Mining regions have distinct advantages for the generation of renewable energy including:

- Many mining regions are in close proximity to load centres.
- Pre-existing transmission infrastructure.
- Large areas of land with minimal land use conflict.
- Features such as voids, which can be repurposed.

Former mine sites provide a significant opportunity to locate large scale renewable energy projects with minimal land use conflict. Previously disturbed and rehabilitated land, including voids, can be used, and existing mine infrastructure including transmission lines can be repurposed, minimising new or additional impacts elsewhere.

For example, solar farms which require large tracts of land could be concentrated on formerly disturbed mining land as opposed to sterilising unencumbered farming land. In some circumstances mine voids will be suitable for use for pumped hydro projects.

A number of NSW mining operations have either obtained approval or are proposing large scale renewable energy projects, including pumped hydro facilities and solar farms. Renewable energy projects can deliver:

- Renewable energy directly into the network; and/or
- A renewable energy source to existing mining operations to reduce greenhouse gas emissions associated with mining operations; and/or
- A beneficial renewable energy source to support the operation of pumped hydro projects.

There is likely to be increased interest in further opportunities for renewable energy projects, but only if the regulatory policy settings are appropriate.

[5] Page 3 - Future Jobs and Investment Authorities | NSW Government

Experience by mining companies to date has highlighted complexities within the existing regulatory framework, particularly in relation to enabling other land use opportunities and/or associated changes in landform to support renewable energy projects in the most efficient way possible.

Challenges

Despite the significant potential opportunities associated with the beneficial reuse of former mine sites, the current regulatory framework for post mine land use is very complex and uncertain.

It's currently less complicated for a mining company to return land to pastoral land or woodland consistent with the original development consent and mine lease requirements, compared to examining other land use opportunities.

For developers, the complexity and uncertainty is likely to direct investment elsewhere where there is less risk and greater certainty around a return on investment.

This view is consistent with stakeholder feedback the NSW Government received in coal mining regions, including from community groups, when consulting on its Future Jobs and Investment Authorities Issues Paper. The Paper notes there are "opportunities to consider how the planning system can enable flexible options for post-mining land uses and should establish clear and effective pathways for repurposing land".[6]

To capture any new land use opportunities when they become available, the regulatory framework for post-mining development of former mine sites must be made simpler and more certain.

Strategic challenges

Attracting investment

Once operations cease, many mining companies are likely to have a limited role in developing successive land uses on their mine sites.

Making it attractive for other parties to develop former mine sites will be necessary if it is intended to achieve the scale of economic activity that will deliver meaningful outcomes in a timely way, and to replace some of the lost economic benefits caused by the closure of a mine. Delays and regulatory burden will diminish the commercial value of the site and reduce the relative competitive advantage that mined land may have over other unmined sites, particularly for low margin developments.

In **Case Study 1: Muswellbrook Clean Energy Precinct** below, the mine's owners, Idemitsu, have partnered with others to propose pumped hydro and solar projects. Without investment and management by the mine's owners, a third party proponent of this new development would be unlikely to be incentivised to deal with the delay and regulatory burden faced by the project.

Mining companies and developers are currently disincentivised from investing in alternative land uses on former mine sites given: complex requirements to obtain multiple approvals under multiple pieces of legislation; inflexible modification application requirements limiting the ability to change land use and landform outcomes; complexity around rehabilitation sign off; and uncertainty around long term liability responsibility, along with exhaustive approval timeframes.

Failing to address the current regulatory complexity and uncertainty will mean the intended outcomes foreshadowed by governments and other stakeholders will be difficult to achieve in the expected timeframes.

Suggested improvements to attract investment include the State government taking responsibility for approving development on former mine sites, simplifying approval and modification processes, as well as addressing mine lease flexibility and significantly reducing approval timeframes

[6] Page 3 - Future Jobs and Investment Authorities | NSW Government

Coordination of resources, funding and planning

There is a significant level of interest from all levels of government seeking to manage the "transition" of coal mining regions such as the Hunter Valley, Illawarra, Lithgow and New England/North West. The discussions are focussed on attracting economic investment to replace lost economic activity associated with mine closures, by capturing suitable new opportunities for the successive reuse of former coal mine sites.

Government initiatives include the establishment of the Commonwealth Net Zero Economy Authority, the NSW Government establishing a Future Jobs and Investment Authorities for four coal mining regions to grow future jobs and industries[7] as well as implementing regional strategic plans (e.g Hunter Regional Plan 2041) , and various local council initiatives in coal mining regions investigating strategic planning for post mine land use planning.

Some local councils have also established their own future funds with money contributed by mining operations in the local area. These funds will be used for, amongst other things, planning and investigation of new economic opportunities within local areas. Examples include the Muswellbrook Shire Council Future Fund Policy[8] and the Singleton Community and Economic Development Fund[9]

These various initiatives must be coordinated to ensure resources and funding are not wasted through unnecessary duplication, bureaucracy and administration.

Regulatory challenges

Overview of approvals

Rehabilitation and mine closure are regulated under both the EP&A Act and the Mining Act.

Many of the barriers to developing new and innovative post mine land uses are a result of the need to obtain multiple approvals under the separate legislative frameworks.

Obtaining these separate approvals takes significant time and resources. The extended time frames to resolve issues limits the ability to capture new opportunities quickly, such as renewable energy projects, where there is substantial demand pressure in the short term.

Table 1 below indicates the complex set of approvals required to approve a new development on a mine site.

Table 1 - Overview of approvals	
Outcome	**Application**
Resources Regulator - Rehabilitation and mine closure approval to relinquish the mining lease	Completion of rehabilitation and relinquishment (Mining Act) Note - If the rehabilitation, land use or land form outcomes are different to the original development approval, a modification application must be approved to enable the Resources Regulator to certify that the new rehabilitation is complete and for the mining lease to be relinquished.

[7] Future Jobs and Investment Authorities | NSW Government

[8] *Future Fund Policy*

[9] *Singleton Community and Economic Development Fund*

Department of Planning, Housing Infrastructure (DPHI) - Change the original mine operation development approval to enable rehabilitation and mine closure approvals	Modification Application (EP&A Act) - A modification application of the existing mine consent to change the rehabilitation, land use and land form commitments reflecting the requirements of the proposed new use such as final landform and land use outcomes. Note: A modification application can only be approved where it's substantially the same development, otherwise a full State Significant Development application would be required
Environment Protection Authority - Changes to the EPL	The mine operator would need to vary their EPL to remove any new development area from the EPL which is in place over the mine site.
DPHI - Approval for a new successive use of the former mine site	A new development application is to be lodged for required for the new land use which confirms operational, landform and environmental outcomes. The application will be lodged with either the State Government if it meets State Significant Development criteria (large scale wind farm or solar farm), or the local council if it's local development (industrial or commercial development)
Local Council - Lodgement of a planning proposal (rezoning application) to change the land zone to allow for alternative land uses post mine closure	Lodgment of a planning proposal for rezoning (EP&A Act) - Assuming the new use is not permissible in the relevant zone under the local environmental plan or an applicable State environmental planning policy, a rezoning application/ planning proposal would need to be lodged with the local council to enable the new use

Obtaining these separate but interrelated approvals under different legislation and different government organisations is complicated, and takes significant resources and time to navigate.

The cost, delay and complexity means that development of mined land is often not competitive with non-mined land.

Many of the complexities are highlighted below in **Box 1 : Developing a Solar Farm on Rehabilitated Mine Land** and **Case Study 2: Redeveloping the Former Wallerawang Power Station Site**.

A simpler and more streamlined relationship between the EP&A Act, Mining Act and other approvals is required to facilitate alternative new land uses on former mine sites.

Multiple approvals required - complex interaction between the EP&A Act and Mining Act

Mine site closure requires separate but interlinked approvals under both the EP&A Act and the Mining Act. Both Acts regulate the land use planning and approval of mine sites, rehabilitation outcomes, relinquishment and mine closure requirements, and long term liability. The mine operation approval, including the conceptual final land use, rehabilitation and mine closure outcomes are confirmed through the conditions of a development consent issued under the EP&A Act.

The development approval, which can be modified through a formal application process, is obtained years before mine closure and other possible alternative land use outcomes are considered.

The mining lease provides for the rehabilitation to be undertaken to fulfil the development consent requirements. The mining lease can only be relinquished where the Resources Regulator is satisfied that the rehabilitation works (including final landform and land use) have been completed consistent with the conditions of the development consent for the mine which is linked to the mine lease.

If there are differences between the development approval requirements and the rehabilitation outcomes, the mine operator must either modify the existing development consent or obtain a new development consent before the Regulator can approve mine closure applications and relinquish mine lease areas.

A new development is also likely to require a form of development approval. Although that development might replace some of the existing rehabilitation, it does not supersede the mining consent or the mining lease conditions. This is appropriate as a development approval is only a permission and not a guarantee that the new project will be developed. It is important to note that it is likely in many instances that a new development would only occur on parts of the site and that the original rehabilitation will continue on other parts of the site.

Box 1: Developing a Solar Farm on Rehabilitated Mine Land

The following example highlights the current regulatory complexity associated with managing the multiple separate planning approvals, as well as managing rehabilitation obligations between planning approvals and the mining lease.

Project: A renewable energy company seeking to develop a solar farm on part of a rehabilitated mine site where the mine operator has commitments to rehabilitate the site to pasture and native vegetation.

Planning approvals: Two planning approvals are required – one being a modification application of the existing mine consent to change the rehabilitation commitments, and a second development application for the solar project being a new and separate land use.

Timing for determination of applications: The planning department would likely require the applications to be lodged concurrently so they can determine the applications at the same time, or determine the solar farm application first to ensure that the two separate consents are aligned in terms of rehabilitation and final landform requirements.

Ensuring rehabilitation of the mine site: The modification application by the mine operator would be seeking to change its rehabilitation obligations (e.g landform shape, bringing the land back to a particular land class and/or achieving certain standards in respect of native vegetation) to align with the solar farm operation proposal. In terms of ensuring eventual rehabilitation of the mine site, it's likely the consent authority would link any conditions relating to a change of rehabilitation commitments under the mining consent to the physical commencement of the solar farm project, meaning if the solar farm did not go ahead, the mine would still be required to comply with its original rehabilitation commitments including final landform.

Ongoing obligations for the mine operator: Once the solar farm operation commenced, the mine operator would seek to remove exposure to any further rehabilitation of the site after the eventual cessation of the solar project (which could be many years). This could only be facilitated where the mine operators' planning approval requirements have been changed to align with the solar farm approval and/or transferred to the solar farm operator, and updated mining lease rehabilitation requirements have been signed off to align with the modified development consent for the mine. Note the solar farm would also have certain decommissioning and rehabilitation requirements in its development consent

Severing the solar farm from the mine lease area: Once the solar farm is physically commenced, the mine operator could seek to sever the solar farm area from the mine lease area which would enable the transfer of sale of the land to the solar farm operator.

Severing the area requires the mine lease to be relinquished over the part of the mine site where the solar farm is located.

As noted above, for the relinquishment to be approved the development consent for the mine must be modified and the rehabilitation objectives and completion criteria requirements under the mine lease updated,and subsequently signed off. If the Resources Regulator does not agree to cancel the mining lease over the solar farm land, the mining lease would have to remain in place - the mining lease would likely be unable to be transferred to the solar farm operator.

Ongoing liability: The Mining Act contains powers that can be used to compel a former mine operator (responsible person) to address any adverse impacts the operation may have on the environment. This liability remains in place even once a mine lease has been relinquished. If the mine operator was seeking to transfer this responsibility to the solar farm developer, the solar farm developer would need to agree to enter into contractual arrangements as part of the sale.

Challenges: The above example highlights the challenges and uncertainty that are faced by both the mine operator and a potential future developer of a mine site where uses are proposed that differ from the typically approved pastoral land and woodland outcomes.

- Coordinating separate development applications by separate parties for the mine site and the new use.
- Separate government agencies coordinating approval outcomes between the two separate development applications and rehabilitation obligations under the mining lease.
- Lack of clarity around timing issues associated with the modification of the mine development consent to vary existing rehabilitation requirements and the approval and certainty of commencement of the new project would work. Also how the Department would condition the mine consent so the varied rehabilitation obligations and any excise of the developed land from the mine consent would only apply if the new project was commenced.
- Lack of clarity if the Planning Department and the Resources Regulator would contemplate transfering rehabilitation obligations (including final landform) from the mining company to the new developer. For example, the Resources Regulator may wish for a mining lease to remain in place over the land so that a security deposit may be maintained for final rehabilitation of that land which could take many years.

The Mining Lease

Although it is possible to modify a mining development consent to change the final land use outcome, for part or all of a site to that of a proposed new development, the nature of the mining lease means that the title will remain in place until that new development (now the new rehabilitation), is finalised and the Resources Regulator is able to certify that the rehabilitation is complete and relinquish the mining lease.

This makes the development of the site (or part of the site) very complex and unattractive for many reasons:

- Third party investment and development are required, but there is no certainty that the mining lease will be relinquished.
- The mine operator will need to continue to hold the mining lease, while a developer is developing the site.
- The mining operator continues to be liable for the site, while works are carried out potentially by third parties.

- The mine operator needs to maintain the security deposit for the mining lease, which now will have a significantly different set of risks. It is not clear how this is viewed by the providers of surety.
- The mining lease brings with it a particular set of work health and safety standards that non-mining developers and contractors will find onerous to meet. It might be possible to excise statutory responsibility for the area, but it is an added complexity which will be a deterrent to new developers.

The development of the Muswellbrook Clean Energy Precinct **(Case Study 1)** highlights many of these challenges.

The mining industry operates under the Work Health and Safety (Mines and Petroleum Sites) Act 2013 and Work Health and Safety (Mines and Petroleum Sites) Regulation 2022. These are dedicated legislative instruments to deal with the specific hazards associated with mine sites and it would be inappropriate to apply these to non-mine sites or other types of development.

Further, the NSW Resources Regulator is the specialist regulator that enforces this legislation in the mining industry. The NSW Resources Regulator is not equipped to regulate non-mine sites and is funded through a cost recovery model by the mining industry. The application of this legislation and expansion of the role of the NSW Resources Regulator outside of the mining sector is inappropriate.

For all of these reasons, development of a mine site, by a third party developer, has high financial costs and lengthy delays making it unattractive compared to utilising other non-mined land. It also presents a high level of risk to the mine operator, and very little incentive to look at final land uses outside of the traditional pasture or native vegetation rehabilitation.

Case Study 1: Muswellbrook Clean Industry Precinct

Idemitsu Australia's Muswellbrook Coal has been operating since 1907. It mined its last bucket of coal in 2022, which was followed by last haulage from the site in March 2023.

Plans are now well underway to take advantage of the large natural potential of the site to continue to contribute to the Muswellbrook and Hunter Valley economy, and the overall energy needs of NSW. The Muswellbrook Coal site has abundant natural attributes which make it attractive for redevelopment as a Clean Industry Precinct, which includes 2,390 hectares of rehabilitated and buffer land, and close proximity to transmission lines and the town of Muswellbrook.

The Opportunity

In addition, the Muswellbrook Bypass and the Santos Gas pipeline, once developed, will both run through the property. Idemitsu is working with leading industry partners, the local community, state and local government, to take advantage of the attributes of the site to develop renewable energy generation and storage on the site.

This includes the development of:

- A pumped hydro project, in partnership with AGL, which would generate 400MW/8hr long duration storage (a total of 3200 megawatt hours of electricity); and
- In partnership with OX2, the development of a solar farm which would produce an estimated 135MWac on 352 hectares of land which is not within previously mined areas.

Both of these projects are advancing through development activities and government approvals before a final investment decision is made. Other clean industries that are being explored for the site include a facility for the production of green hydrogen and a training and industrial precinct.

A key element of the overall strategy is to attract new industries to Muswellbrook, particularly those who are looking to take advantage of the significant benefits of the green energy which will be available on the site.

These energy development and industrial area projects will complement the existing mine rehabilitation requirements of the site to provide a biodiversity corridor and return other land to pasture.

The Challenges

While the site presents many opportunities, there is no fit for purpose pathway to gain the various approvals necessary to facilitate the new development on previously mined land.

All existing infrastructure except the access road (which is not part of the current consent) is required to be rehabilitated and this is currently on schedule for completion in 2026. The latest modification approval allows for the infrastructure to stay, as long as there is another development consent or other acceptable arrangements in place. This is unlikely to occur before most of the renewable projects will achieve full approval (exception at this time being the solar project). To change this would likely require changes to the development consent conditions with regard to mine rehabilitation and associated mining lease conditions. These processes are lengthy, costly and the outcome is uncertain.

Prior to the period when the new developments commence, the mine site is required to continue with rehabilitation. This will mean that on areas of the site considerable resources will be expended on rehabilitation, which potentially will then be disturbed by the new development. For instance, the pumped hydro project requires access roads, a workshop and lay down areas within the lower reservoir. These will be built over an area which has already been rehabilitated, requiring clearing of the rehabilitated area.

Approval of relatively minor matters can take long periods to be resolved, such as paper roads on site which are required to be extinguished by Crown Lands, and currently this has an impact on the solar project footprint. A transfer request has been in process for approximately five years in relation to paper roads, related to some areas of the open cut footprint. There have been more recent discussions regarding paper roads extinguishment related to the solar project areas.

Numerous challenges arise in relation to the Transport for NSW (TfNSW) New England highway bypass and the associated mining lease area. Muswellbrook Shire Council consent modifications have been approved taking into account the TfNSW New England highway bypass alignment. The relevant key stakeholders such as Resources Regulator, TfNSW and Muswellbrook Shire Council are engaging in relation to TfNSW addressing mining related impacts to the bypass and requirements moving forward. This includes further Resources Regulator assessment and subsequent approval in order for TfNSW to take on all relevant responsibilities. While these discussions have progressed positively it has taken some time to get to a mutually satisfactory outcome for all stakeholders involved.

There are Workplace Health and Safety (WHS) challenges which arise due to the mining lease. The current situation with geotechnical drilling in the area of the lower reservoir of the pumped hydro project, involves an open cut mine void and WHS responsibility in relation to non-mining development within the current mining lease. While Muswellbrook Coal will continue to have WHS statutory responsibility under the regulatory responsibility of the Resource Regulator this arrangement could become an issue, which will be required to be resolved for the pumped hydro project which is a non-mining related development. Further discussions and engagement will be required with the Resources Regulator to resolve future requirements and determine who will be the regulatory body in the future when the former mine voids are no longer considered a mining activity.

Case Study 2: Redeveloping the Former Wallerawang Power Station Site (closed in 2014)

Whilst not a mine site, the following example outlines some similar challenges that are currently being faced by mining companies, particularly the ability to provide enough certainty to capture other land uses in a timely manner. It's noted this project doesn't have the added complexity associated with requirements under the Mining Act which mine operators are exposed to.

This example is located in the Lithgow coal mining region which is experiencing power station closure and flow on impacts on mining operations. There is a genuine need to realise alternative opportunities quickly to limit the loss of economic activity associated with mining and power generation.

Project: Redeveloping a former coal fired power station site into a multi-use precinct comprising a range of uses including industrial, commercial, tourism/recreational, environmental and residential. New industries that could be supported include advanced manufacturing, logistics, hydrogen production and other forms of energy generation and storage.

The power station was closed in 2014 and is approximately 620 hectares. The site was acquired by the current owner in 2020.

The redevelopment of the site is strategically positioned to facilitate this transition towards renewable energy while also creating new jobs and economic opportunities for the Lithgow region. It is estimated that the proposed rezoning could accommodate the delivery of 1,500-3,500 jobs and over 1,000 dwellings

Land Use and Zoning Challenges: Given the current zoning of the site and the limited permissible land uses, in order to repurpose the site to accommodate the various new uses they must apply to have the site rezoned (a planning proposal) by the local council.

A planning proposal for a site of this scale is lengthy, complex and costly and involves considerable resources including the engagement of numerous consultants and experts. The planning proposal is lodged and assessed with the local council before being referred to DPHI for gateway determination. The benchmark timeframe to determine a complex planning proposal (end to end) is currently 420 days (14 months), however it is quite common for planning proposals to take considerably longer, particularly if the local council has.limited resources and capacity to assess complex planning proposals.

Local Council Strategic Planning: The council has indicated that given the size of the development and the various land uses being proposed, a site specific development control plan (DCP) will need to be prepared prior to development occurring on the land. Any site-specific DCP will include detailed planning controls including in respect to building form and design, infrastructure and vegetation management. Local and State infrastructure contributions and/or voluntary planning agreements (VPAs) are likely to be required at the rezoning stage and for individual development applications. Each VPA will need to be individually negotiated with the council and/or the State.

Planning and Other Approvals: In addition to a rezoning of the site, the following approvals have been obtained, or will be required to be obtained in the future, for the purpose of the decommissioning, demolition, remediation and repurposing of the old power station site:

- Environment Protection Licence (POEO Act): Transfer and variation of the Environment Protection Licence applying to the site (noting that the EPL may be surrendered in the future given the power generation activities have ceased on the site.

- Development Approvals (EP&A Act): Development consents for current and future uses of the site, for example: demolition was conducted pursuant to a development consent issued by the council; and a State significant development consent was obtained for a Battery Energy Storage System (BESS) on the site.

Assuming the site is rezoned, numerous development applications will be made in the future for specific developments on the site. Other than those developments that fall within the categories of State significant development in the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP), each development application will be assessed by the local council , with either LCC or a local or regional panel determining the application. Given the intended uses of the site, it is likely that some but not all of the proposed developments will be State significant development. Therefore different consent authorities will be determining various applications for development of the site.

Regulatory Challenges: Whilst not a mine site there are similar challenges being faced by mining companies, particularly the ability to provide enough certainty to capture other land uses in a timely manner.

The above example highlights the challenges and uncertainty that are faced by the original energy company owner and a potential future developer who intends to deliver other beneficial uses that will potentially offset some of the lost economic activity. The multiple approvals required by various government authorities will take significant resources and time to finalise before any development is able to occur.

Given the importance of ensuring an efficient, respectful and successful transition of traditionally mining reliant communities, there are clearly opportunities to reduce this type of regulatory complexity

Potential solutions for investigation

The NSW mining industry agrees that any solutions proposed must ensure the following:

- Where there is a new land use proposed, there must be certainty that the new land use will be developed, or the original rehabilitation commitments will be completed
- While the new development is being completed, there must not be an increased risk to the state that the costs of final rehabilitation will not be met. A form of financial assurance must remain in place until the development is successfully completed or the original rehabilitation is undertaken

The proposals below are provided at a high level. They will require further consideration, investigation and development by the government including consultation with industry and other stakeholders.

State government policy, coordination and delivery

Delivering benefits through alternative uses on former mine sites located across multiple regions and local government areas is a matter of State significance. It's prudent for the State Government to manage the delivery of these outcomes.

The Government should consider implementing a specific purpose State level strategic and statutory planning policy designed to facilitate and manage the adaptive reuse of former mine sites. Such a policy should give the NSW Government authority to: change land use permissibility on individual sites, modify rehabilitation and landform requirements contained in the existing mine approval, as well as approve any new project on former mine sites. Ideally this would be able to occur through a single coordinated planning approval determined by the State Government.

The EP&A Act will continue to provide the statutory framework for the necessary checks and balances such as environmental considerations, stakeholder engagement and approval processes, but the policy should ultimately provide the Government with the ability and responsibility to determine alternative uses on former mine sites in a more timely and certain way.

The Government should consider developing a State level planning policy specifically for mine rehabilitation and closure that:

A. Confirms the NSW Government has responsibility for changing land use permissibility on land that was previously used for the purpose of mining or associated downstream uses such as coal fired power stations (Mining Land); and
B. Confirms the NSW Government as the consent authority for development on Mining Land, as well as any related modification applications to existing development consents for mining operations required to enable any post mining land use.

Flexibility to reconsider and change development approval outcomes

In order to change the approved post mine land use, rehabilitation and landform outcomes over part or all of a mine site, the original development consent must be modified.

Obtaining a modification application involves additional time and resources, as well as introducing uncertainty relating to additional requirements being imposed by the government that are unrelated to the modification application.

Before a modification application can be approved, the consent authority must be satisfied the modified development 'is substantially the same development as the development for which consent was originally granted'[10].

[10] under s 4.55(2)(a) of the Environmental Planning and Assessment Act 1979 (NSW) (the EPA Act)

In some circumstances this requirement may limit the ability to easily change the original mine site approval (noting the land use outcomes were proposed many years earlier) to allow for an alternative land use.

In these circumstances the necessary approval pathway becomes further complicated as separate new development applications would be required to both: change the final landform of the mine site which would then enable changes to the rehabilitation requirements under the mining lease; and approve the new development - e.g a pumped hydro project.

In addition to introducing an overarching State level policy framework, the Government should consider other changes to the modification application regulatory framework as it applies to mine site approvals for the purposes of changing rehabilitation and land use requirements to allow an alternative beneficial land use.

- **The "substantially the same development" test** - Investigate whether the existing test provides sufficient flexibility to allow the necessary changes to rehabilitation outcomes in a timely manner where other more beneficial alternative land uses are proposed.

- **Improve flexibility to modify rehabilitation conditions** - Update rehabilitation conditions for new mine approvals (and existing approvals through modifications) which make it easier to respond to changes in land use / landform that arise as result of an alternative land use. The objective should be to minimise the need for new modification applications by allowing relatively smaller scale changes to be approved through updates to the rehabilitation management plan.

- **Streamline rehabilitation modification applications** - For modification applications which are required to amend the mine consent to enable alternative uses on a former mine site area, and/or facilitate approval of rehabilitation requirements under the Mining Act, there should be a dedicated and streamlined approval process put in place to process these applications in a significantly reduced timeframe.

- **Contain assessment consideration of rehabilitation modification applications** - The assessment of modification applications which relate to changes in the land use and landform outcomes should be contained to those matters only. These modification applications should not be used to reopen other conditions or impose additional requirements unrelated to the modification being applied for.

Investigate an alternative form of Mining Act tenure

The Government should investigate whether it is possible to develop a new form of tenure which could transfer the obligations under the mining lease for part or all of a site to the new developer where mining has ceased and the new development has been approved for that part of the lease.

Such a title would need to retain aspects of the mining lease, including:

- The provision of security for the costs of the approved mine site rehabilitation (being the rehabilitation required under the mining lease - to acknowledge that such rehabilitation remains a possibility until the new development is completed), noting that there could then be provision for the security deposit to be released upon completion of the new development.

- The requirement to undertake the original mine site rehabilitation if the new development is not completed within an appropriate time frame.

The objective of the alternative tenure would be to relieve the onerous factors which relate only to mining such as mining WHS standards. It would apply a 'fit and proper person' test relevant to the new development. Importantly the new form of tenure would allow a clean break between the mine owners and new owners of the land/developers, without any increased risk to the NSW government.