Submission No 68

INQUIRY INTO BENEFICIAL AND PRODUCTIVE POST-MINING LAND USE

Organisation: Liverpool Plains Shire Council

Date Received: 12 July 2024

Liverpool Plains Shire Council

The Hon. Emily Suvaal MLC
Chair, Standing Committee on State Development
52 Martin Place
Sydney NSW 2001

12 July 2024

Via email: Officeof.MLCSuvaal@parliament.nsw.gov.au
State.Development@parliament.nsw.gov.au

Dear Ms Suvaal

Re: Liverpool Pool Shire Council Staff Submission into the Inquiry into beneficial and productive post-mining land use.

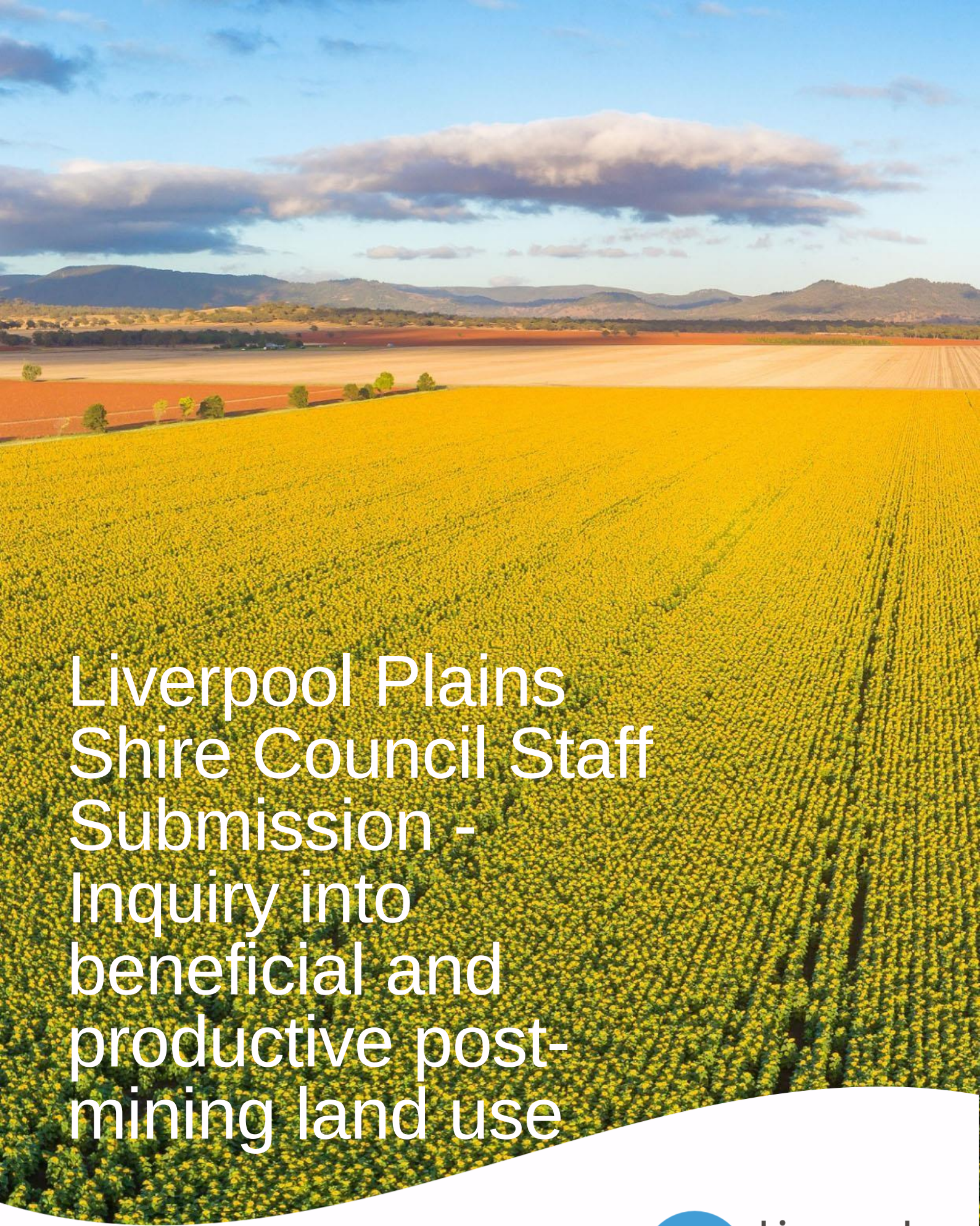
Thank you for the opportunity to provide input into this Parliamentary Inquiry and the extension you afforded the Liverpool Plains Shire Council to submit a staff submission.

We look forward to attending the hearing on 19 August 2024 should there be an opportunity to do so.

Yours sincerely

Gary Murphy

General Manager



Liverpool Plains Shire Council Staff Submission - Inquiry into beneficial and productive post-mining land use

Liverpool Plains Shire Council

liverpoolplains.nsw.gov.au

LPSC Submission into the Inquiry into beneficial and productive post-mining land use

TERMS OF REFERENCE
That the Standing Committee on State Development inquire into and report on beneficial and productive post-mining land use, and in particular:

(a) the benefits of having multiple successive land uses including the positive benefits for local communities and the economy, business, industry, and the broader state
(b) changes in land use potential and demand in established or traditional mining areas, particularly those generated by the decarbonised economy, renewable technology, manufacturing, defence, skills, and training
(c) opportunities for investment and growth in training and skills in established or traditional mining areas, including:
- *(i) the need to reskill and or retrain current workforces*
- *(ii) the impact and effectiveness of existing and new education, training, and skills providers for mining communities*

(d) opportunities to encourage innovative post-mining land uses including:
- *(i) the planning and implementation of essential supporting infrastructure for future site use*
- *(ii) the development of solar farms, pumped hydro, and other clean energy industries*
- *(iii) the compatibility of post mining land sites with commercial projects*
- *(iv) the potential of unlocking surrounding land for residential dwellings, amenities, environmental and educational facilities*
- *(v) potential exploration of former and legacy mining sites with modern mining technology to explore deposits in tailings and closed sites*
- *(vi) the development of sites for use for advanced manufacturing, commercial and industrial use*

(e) how to ensure the benefit from innovative post mine land uses are shared between the community and mine operators
(f) the expectations of mining communities in relation to post-mine land use, and how to balance this with innovative reuse of existing infrastructure
(g) the need to develop a robust independent regulatory framework to maintain and advance best practice in this area, and
(h) any other related matters.

Thank you for the opportunity to make a submission and to the concession granted to make a late submission.

Executive Summary

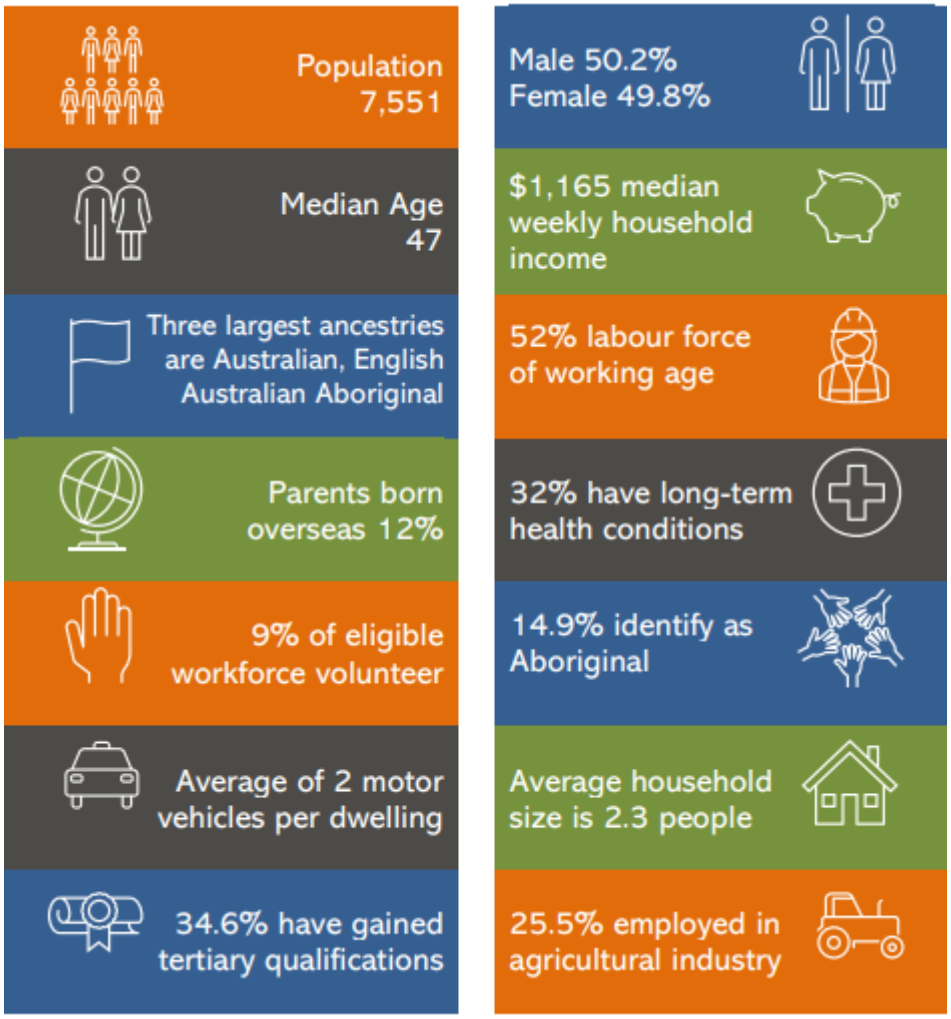
It should be acknowledged that mining is a temporary land use. Greater consideration needs to be given to the “whole of life” for the land and early identification of suitable and appropriate repurposing of the land post mining is essential.
There is often a tension between the rehabilitation and remediation requirements post mining and what may be required for repurposing of the land. Striking a balance between the environmental restoration and the future social and economic needs of the land and host community is key.
There needs to be greater clarity surrounding the regulatory environment and the development of a robust framework would provide much needed certainty for future investment into post-mining land.
Creating a future fund to allow for the continued and ongoing use of mining lands is prudent.

Recommendations:

1. ***It should be acknowledged that mining is a temporary land use and that the potential for repurposing should be considered at the earliest opportunity so that co or repurposing projects can begin without lag in a structured manner.***
2. ***Final land use plans should be developed in consultation with government and local communities to strike a balance between the need for rehabilitation and remediation and future social, environmental, and economic considerations in line with local and state priorities.***
3. ***Final land use plans should be implemented in parallel with existing mining operations so as to avoid the lag and the associated economic and social disruption between the mining activity ceasing and the new repurposed activity commencing.***
4. ***That adequate funding be made available immediately through programs such as Royalties for Regions to support opportunities for innovative post mining land uses.***
5. ***That a robust independent regulatory framework be developed for the effective lifetime management of mining land.***
6. ***That the framework address issues such as but not limited to:***
    a. ***Safety of the land in terms of stability, contamination and discharges to the environment***
    b. ***Appropriate risk management or risk transfer***
    c. ***Timeliness of transition from one use to another***
    d. ***Promotion of innovative post mining land use to maximise its potential***
    e. ***Balanced environmental, social and economic outcomes based on location***
    f. ***Ensuring that host communities are beneficiaries of any post mining land use in terms of local employment***

Liverpool Plains Profile

Located in the New England North-West Region of NSW, the Liverpool Plains Shire extends across the traditional lands of the Gamilaraay (Gomeroi) Aboriginal people. The Liverpool Plains sits at the junction of the New England and Kamilaroi Highways, approximately 350 kilometres north of Sydney, 250 kilometres north-west of Newcastle and 60 kilometres south of Tamworth.



Source: [2022 to 2026 LPSC Delivery Program]

2 - About Liverpool Plains Local Government Area

Liverpool Plains Local Government Area is located 260 km north of Sydney CBD.

Population
7,551

Total Gross Value of agricultural commodities[1]
$343.28M

Area
5,082 km²

Total employment related to agriculture
641

Agricultural commodities produced[2]
24

Total agricultural businesses
324

Agricultural commodity diversity[2]
35% of 69 agricultural commodities produced in NSW

Area used for agricultural production
4,509 km² (89%)

1. *Farm gate Gross Value at 2020/21.*
2. *Based on reported Gross Value of agricultural commodities over $5,000 at 2020/21.*

Source: [AgTrack - Agricultural and Land Use Dashboard (nsw.gov.au)]

Werris Creek Coal Mine

While predominantly an agricultural region, producing over $343 million of value per annum, the Liverpool Plains is home to the Whitehaven Coal Mine at Werris Creek.

This open-cut coal mine is located 4km south of the town of Werris Creek.

The mine overlays and intersects the former Werris Creek Colliery which was a bord and pillar underground mine operated by the Preston Coal Company from 1925 to 1963.

Up until June 2024, the mine produced both thermal and pulverised injection coal (PCI) coal with low to medium ash, low sulphur, low phosphorous and medium to high volatility.

The coal from Werris Creek was transported directly by rail to the Port of Newcastle and then exported to Asia.

Operation	Werris Creek mine
Ownership	100%
Commenced operations	2005
Location	4km south of Werris Creek, 15km north of Quirindi
Type of operation	Open cut coal mine
Operating hours	24/7
Production approval	2.5 million tonnes run of mine coal per annum
Stage of operation	In operation
Workforce	150

Source: Werris Creek Mine - Whitehaven Coal

The future land use nominated for the mine is "*an integrated landscape that is safe, stable, non-polluting, and sympathetic to surrounding landforms. Revegetation will provide for a combination of sustainable grazing, woodland vegetation, and habitat corridors. Detailed mine closure planning will identify infrastructure that is to be decommissioned and removed as well as infrastructure that will be retained to support the final land use (such as dams)*. "

Source: WCC- Rehabilitation Management Plan.pdf (whitehavencoal.com.au)

Mine Repurposing

Mining has long been the mainstay of the Australian economy with over $455 billion in metal ores, minerals and coal products exported in 2023 – over 50% of our export revenue.

Source: Mining delivers record $455 billion in export revenue in FY23 - Minerals Council of Australia

However approximately 82% of Australian mines may require rehabilitation requiring a significant economic, environmental, and societal challenge into the future.
NSW has the highest number of inactive mines at 26,953.

Source: Minerals | Free Full-Text | A Geospatial Database for Effective Mine Rehabilitation in Australia (mdpi.com)

It should be noted that mining is a temporary land use. While some mines like the Werris Creek mine have been in operation for almost 100 years, all have a useful life dependant on the available (and economic extraction of) resource.

Traditionally, there are transition activities that occur such as rehabilitation, remediation, regeneration, and reclamation up to and at the end of the useful life.

While current practice is focussed on returning mine sites to their previous or original condition, this is often unrealistic.

The 5th R or repurposing involves utilising elements of the existing mining infrastructure (which could be roads, water, sewer, power, housing, operational buildings and so on) for a different activity post closure.

Repurposing focusses on the continuing beneficial use of the land at its highest and best use.
In their paper, "*Mining as a temporary land use: A global stocktake of post-mining transitions and repurposing*", miningasatemporarylanduse.pdf, the authors observed that there were very few examples of repurposing relative to the number of close mines.

Less than 8% of the mines closed had progressed to a form of repurposing.

For those that had progressed, the most common category of repurposing was "community and culture" such as museums, historical precincts, or event spaces.

The next most common uses involved wildlife habitat, carbon offset, wetlands, parks and open space, hiking trails and so on.

The key findings from this research which may be beneficial to the Inquiry are summarised below:

- Location of the site to existing infrastructure, such as roads, railways, energy networks was important
- Stakeholder and community engagement, particularly a "beyond the gate" approach was important
- Industry led repurposing was dependent on mining companies with long life mines and established attachments with the local region
- Regional repurposing was led by the state
- Leadership with vision, commitment and local solutions to fit local circumstances were key
- Economic rehabilitation in the form of re-mining previously uneconomic tailings is short term and finite and not sustainable in the long term. Non-mining rehabilitation allows for innovation and new forms of investment
- Economic repurposing projects may reduce liabilities by earning income on cost generating land
- Repurposing projects are unlikely to completely replace the mining economy
- Defining mining as a temporary land use reframes the way we should understand mining legacies including responsibilities to local communities and sustainable development
- Questions still remain about whose priorities for land use should be given precedence. For example, should the option for repurposing be open to the private

sector, the company or the local communities' decision? Where do First Nations considerations feature in the decision making?

- What land uses are preferred -sustainable development, economic or company benefit (for example to reduce liability or improve reputation)
- One major barrier to repurposing is that supportive government policy does not exist across the board to allow multiple or non-mining use of mining leases
- Ongoing liabilities for contaminated sites and the governance thereof is another challenge
- Most companies manage mine closure by developing closure plans at the outset and updating them as the mine progresses. Potential for repurposing should be considered at the earliest opportunity so that co or repurposing projects can begin without lag or at least innovative options are not ruled out

Turning to the specific terms of reference, we respond as follows:

(a) the benefits of having multiple successive land uses including the positive benefits for local communities and the economy, business, industry, and the broader state

As noted, mining is a temporary land use activity, and it is essential that future uses are considered.

Using the Werris Creek mine as an example, we understand that the mine workforce was 150 people, over 45 million tonnes of coal was produced over the life of the mine with an economic output of several billion dollars.

According to the company's figures they have paid $234 million in royalties to the NSW government and invested over $3 million in local charitable initiatives across the Liverpool Plains.

They contribute 5% to the Council's total rate income.

As noted above, the final use of the mine is planned to be grazing, woodland and habitat corridors.

While the company claims that most of the workforce will be absorbed within its other operations within NSW, the direct loss of 150 jobs to the Liverpool Plains and associated multiplier effect will not be replaced.

Grazing, woodland, and habitat corridors while noble, will not replace the lost economic activity.

It is highly likely that through the change in land use, the rating classification will change resulting in the loss in rates (5%) being re-distributed across the 4,333 ratepayers in the Liverpool Plains.

While we understand the obligations that the company must rehabilitate their site, there is a tension between the need to meet the regulatory requirements and not sterilising the land for a future use.

It could be argued that the closure plans are too heavily weighted towards environmental rehabilitation and remediation with little weight given to social and economic considerations.

It is argued that grazing is not the highest and best use for this site.

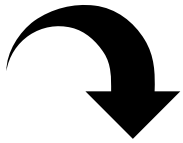
The site is 4km from the town of Werris Creek. There are 20 hectares of zoned, vacant industrial land adjoining the intermodal. The Werris Creek intermodal is unique in that it is capable of handling 1,200m long trains without any shunting and up to 1,800m long trains with shunting. This combined with a turning head to the southwest provides access to the Inland Rail from Tamworth and Armidale.

Over 110,00 tonnes of containerised grain is exported from this intermodal to South East Asia via the port of Newcastle.

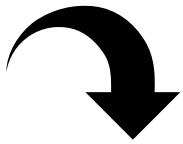
This provides a prime opportunity to co-locate an intermodal and a distribution centre.

The current process is linear – that is:

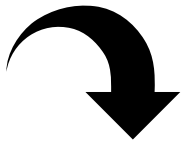
Mine approvals and planning



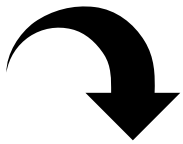
Mine development



Mine operation



Mine closure and rehabilitation



Potential future use

This process requires the completion of all mining lease rehabilitation activities, which can take decades before a new land use can be developed.

This does not create a ripe environment for investment given the time lapse and uncertainty.

There is also the steady erosion of jobs, one family at a time.

Ideally, there should be a process whereby as one economic activity (mining) tapers, a new economic activity can ramp up in parallel.

Recommendations:

1. ***It should be acknowledged that mining is a temporary land use and that the potential for repurposing should be considered at the earliest opportunity so that co or repurposing projects can begin without lag in a structured manner***
2. ***Final land use plans should be developed in consultation with government and local communities to strike a balance between the need for rehabilitation and remediation and future social, environmental and economic considerations in line with local and state priorities.***
3. ***Final land use plans should be implemented in parallel with existing mining operations to avoid the lag and the associated economic and social disruption between the mining activity ceasing and the new repurposed activity commencing.***

(b) changes in land use potential and demand in established or traditional mining areas, particularly those generated by the decarbonised economy, renewable technology, manufacturing, defence, skills, and training

The Liverpool Plains is an agricultural area producing food and fibre for the nation and overseas. It cannot be classified as a traditional mining area although our single coal mine has been in operation for almost 100 years.

While not the subject of this Inquiry, we also have two zeolite mines in the Liverpool Plains producing a range of products for both domestic and overseas markets.

Given that we have a single coal mine, and we are outside of the Hunter New England Renewable Energy Zone, it would seem that the apparent favoured transition pathway from fossil fuels to renewables for post mining operations may not be advantageous in our case.

As noted above, it would seem sensible to build on our strengths in terms of existing infrastructure and the potential to add value to our existing industries.

Council has granted approval for a local cotton gin and the Namoi Regional Jobs Precinct has identified opportunities for intensive agriculture operations such as chicken rearing and egg production.

(c) opportunities for investment and growth in training and skills in established or traditional mining areas, including:

(i) the need to reskill and or retrain current workforces

(ii) the impact and effectiveness of existing and new education, training, and skills providers for mining communities

Mining and associated industries produce high-value, high income jobs which translates to typically greater disposable income that can be spent locally.

As noted above, over time the Liverpool Plains will see the loss of 150 direct jobs. We have been told that while some workers will remain in the local area and commute to other mine sites, there will be a loss of local employment. We are not able to quantify the potential loss of indirect jobs because of the mine closure in the areas of service industries.

Currently, there are no plans in place to replace those loss of jobs and economic activity.

For us, therefore, there is no apparent need for re-training of displaced workers because they have moved on.

The traditional farming model of passing the baton from generation to generation may be disrupted with higher production costs and declining market returns.

It is likely that we will see more corporatisation of farming, increased automation, and an overall reduction in the agricultural workforce.

The Liverpool Plains is blessed with fertile soils, sufficient water and good climatic conditions that are conducive to high per hectare yields of cereal crops.

Opportunities exist in transport and logistics because the markets are far from the source and potentially value adding processing and manufacturing.

Work opportunities for our youth are limited. While we do have a local TAFE, most young people are forced to travel for tertiary training and education.

Once they have left, they usually do not return unless they choose to raise a family in the bush.

The issues of training and work-related experiences in areas of economic activity not yet established locally are extremely challenging.

(d) opportunities to encourage innovative post-mining land uses including:

(i) the planning and implementation of essential supporting infrastructure for future site use

(ii) the development of solar farms, pumped hydro, and other clean energy industries

(iii) the compatibility of post mining land sites with commercial projects

(iv) the potential of unlocking surrounding land for residential dwellings, amenities, environmental and educational facilities

(v) potential exploration of former and legacy mining sites with modern mining technology to explore deposits in tailings and closed sites

(vi) the development of sites for use for advanced manufacturing, commercial and industrial use

(i) the planning and implementation of essential supporting infrastructure for future site use

Having supportive infrastructure in place for future site use pre-supposes that the future site use is known and well understood.

As noted above there are often tensions between the mine operator needing to rehabilitate the site and what may be required for future repurposing.

New industries require accessible, zoned, unconstrained, serviced employment lands

.
New businesses need certainty of timeframes to make investment decisions.

Unfortunately, there is a lag between the finalisation of the rehabilitation and remediation process and when a new activity can commence. That lag and the investment window may not coincide resulting in some businesses looking elsewhere.

There is also a lack of certainty of any residual liability and who carries that risk.

Infrastructure such as roads, railway lines, power, water, sewer, stormwater controls presently exist on many mine sites. Such sites present a development advantage (from a servicing perspective) compared to greenfield sites.

What appears to be needed is the necessary regulatory framework to provide investment certainty.

(ii) the development of solar farms, pumped hydro, and other clean energy industries

While the substitution of one energy form to another, that is coal to renewable energy makes sense from a policy perspective, it may not make sense from a host community economic benefit.

If the mine site was converted to a renewable energy production facility and connected to the grid, while there will be benefits accruing to the state in terms of renewable energy, the host community will derive little economic benefit. Apart from a few short term jobs during the construction phase, the ongoing operation of a solar farm requires very few local jobs – certainly nowhere near the 150 jobs lost in the case of the Werris Creek Mine closure.

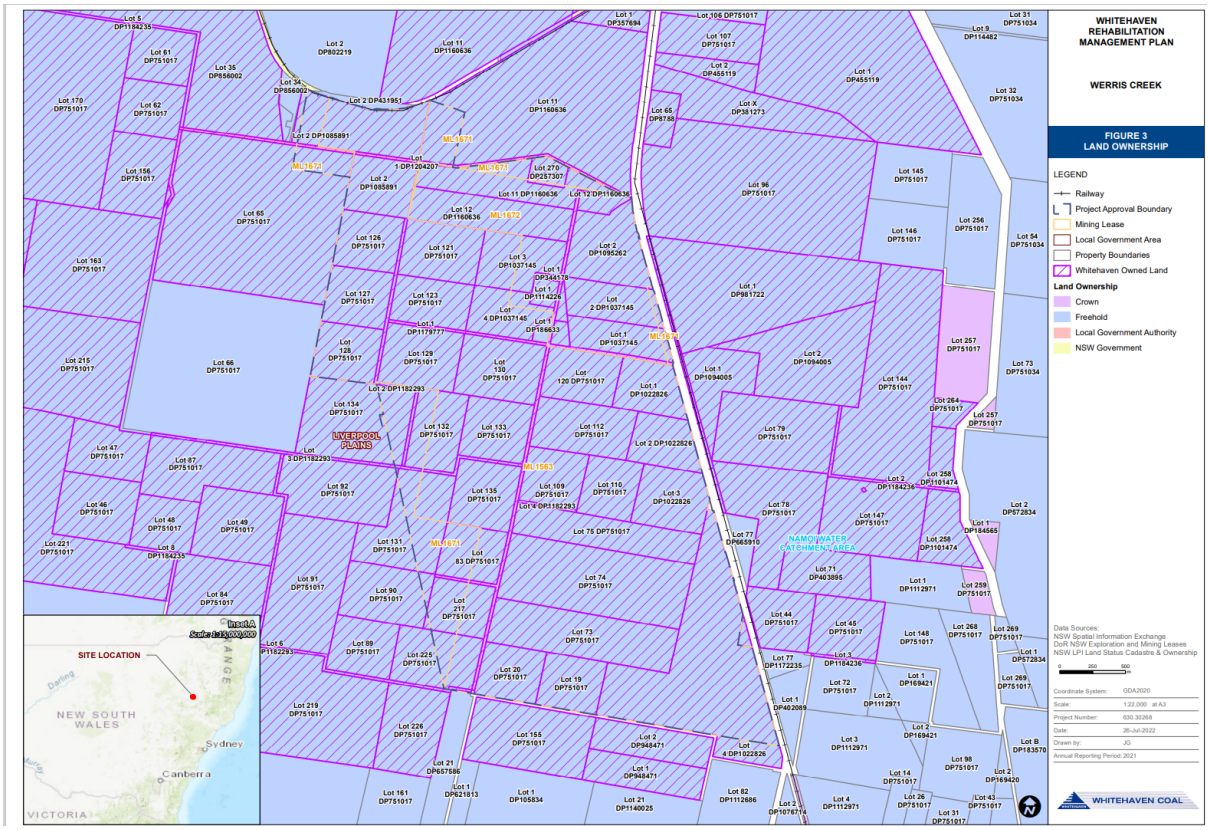
As noted in our case, with a single coal mine, there may not be the scale required for a green energy hub such as could be the case in the Hunter with coal fired power stations being closed and available transmission lines.

A small scale pumped hydro project may be possible for Werris Creek given the topography, however the feasibility of this has not been established.

If however the renewable energy production facility was able to be utilised locally by an energy intensive manufacturing facility or say a server farm, this may create more local jobs.

(iii) the compatibility of post mining land sites with commercial projects
(iv) the potential of unlocking surrounding land for residential dwellings, amenities, environmental and educational facilities

As noted above, given the location of the Werris Creek Mine to the township of Werris Creek and the unique advantages of an existing intermodal facility and rail connections to major ports, there is indeed compatibility with commercial projects.



Land ownership map Werris Creek – source: [WCC- Rehabilitation Management Plan.pdf (whitehavencoal.com.au)]

However as can be seen from the above land ownership map, there are substantial landholdings adjacent to the mine site owned by the operator. This is not unusual as these landholdings are typically acquired for land use buffer requirements.

Future development will be dependent on the desire of the landowner to either develop or sell the land to potential developers.

Mining operators and companies typically are not commercial or industrial developers and that is often best left to others to develop.

For developers to want to develop, they will need to de-risk their investment especially in terms of former mining liabilities and certainty of the approval process.

The Special Activation Precincts appear to have been successful in the state government taking the lead in de-risking investment projects by carrying out the necessary studies and providing greater certainty around the approval process.

(v) potential exploration of former and legacy mining sites with modern mining technology to explore deposits in tailings and closed sites

As noted in the research paper cited earlier in our submission, economic rehabilitation in the form of re-mining previously uneconomic tailings is short term, finite and not sustainable in the long term.

While it may provide an interim solution during the transition for example creating bricks or substitute materials in the construction industry, by its nature it is not considered to be a long-term land use solution.

(vi) the development of sites for use for advanced manufacturing, commercial and industrial use

It would appear that former mining sites would be well-suited for advanced manufacturing, commercial and industrial use. As noted previously many sites would have the necessary supporting infrastructure in place and would also have seemingly adequate buffer zones to accommodate most industrial processes.

Subject to all the other issues raised earlier relating to the approval pathway, risks and liabilities, it would seem that the re-use of mining sites for these industries would be preferable to developing greenfields sites which would require some disturbance and potential environmental offsets.

The key, however, would be ensuring that there is a suitably skilled resident workforce to support such industries.

Again, it highlights the need for an early and ordered transition from mining to post-mining so that transferable skills are not lost and if training is required that can be done during not after the transition.

(e) how to ensure the benefit from innovative post mine land uses are shared between the community and mine operators

The underlying theme in our submission is that mining is a temporary land use and as such the whole of life of the land must be carefully considered and planned. Given the relative long life of mines, the returns generated and at the time the almost insatiable demand for coal, very little thought and even less planning was given to post mining other than rehabilitation at some stage way, way into the future.

During the mining stage of the land use, the mine operator through profits, state government through royalties, commonwealth through export earnings and local communities through royalties for regions and other distributions, enjoy substantial benefits.

In the post mining stage of the land use, there is the overall expectation that as a minimum there is no residual liability in terms of environmental impacts, but there should also be the expectation that any future land user, state government, commonwealth and community can continue to derive benefits (social, economic and environmental) from the land in some form.

To realise those future benefits, it could be argued that the costs to derive those future benefits are also apportioned appropriately. That is the mining operator is required to fund the rehabilitation and remediation for the environmental impacts caused and the state and or the commonwealth fund the necessary investment for post mine land uses whether that be supporting infrastructure, training and so on.

Currently those various roles and responsibilities are not clear which leads to uncertainty and hesitancy on the part of the private sector to invest in post mining activities.

Creating a future fund to allow for the continued and ongoing use of mining lands is prudent.

According to the discussion paper on the Future Jobs and Investment Authorities, a Future Jobs and Investment Fund would utilise existing funding currently allocated for the Royalties for Rejuvenation Fund. The funding allocation will be $22.5 million each year, consistent with the current commitment, with an additional $2.5 million allocated towards operating expenses supporting the Future Jobs and Investment Authorities.

The $250 million allocated to the Royalties for Rejuvenation Fund, we understand, equates to less than 2% of the royalties collected during that period.

In addition, funding under the program cannot be accessed until 2028/29 or until the fund reaches the $250 million mark.

With 39 active coal mines in NSW facing closures over the coming years, 15 before 2030, it is unclear if that level of funding is adequate or timely.

As we have argued, the transition to innovative post mine uses takes several years and for some mines like Werris Creek it has been left far too late.

Recommendation:

4. ***That adequate funding be made available immediately through programs such as Royalties for Regions to support opportunities for innovative post mining land uses.***

(f) the expectations of mining communities in relation to post-mine land use, and how to balance this with innovative reuse of existing infrastructure

It is considered important that the expectations of mining communities are acknowledged in a post-mine land use plan and that this is done well in advance.

Some mining operators do have community consultation communities where representatives are asked to endorse or otherwise the mine rehabilitation plan.

However, this is often constrained by either consent conditions or other regulations or the desires of the operator that it may leave little room for discussion about what might be possible and what other innovative approaches are available.

Ideally this would be an independently facilitated process so that the community is able to feel heard.

(g) the need to develop a robust independent regulatory framework to maintain and advance best practice in this area, and

Strong rehabilitation requirements are part of the regulatory framework to ensure mines are rehabilitated to achieve an approved final land use.

Strict conditions are imposed on mining leases to ensure disturbed land is left in a safe and stable condition. Rehabilitation of affected land should occur progressively and in phases during mining operations, and compliance with obligations is overseen by the Resources Regulator in the Department of Regional NSW.

Repurposing of the land requires separate approvals under the EP&A Act and will often require extensive studies, years of work and potentially millions of dollars of expenditure before the new development can proceed to construction and operation.

As previously noted, this lag and uncertainty is not conducive to investment.

While the advantages of a former mine site are that often the landform is already highly modified and there may be supporting infrastructure, this may be offset by the regulatory framework which is peculiar to mining.

A robust regulatory framework is one that ensures that the land is safe and stable but not so risk averse that the land is in effect sterilised for any future use beyond grazing or woodland.

Issues that need to be addressed by such a framework:

- Safety of the land in terms of stability, contamination and discharges to the environment
- Appropriate risk management or risk transfer
- Timeliness of transition from one use to another
- Promotion of innovative post mining land use to maximise its potential
- Balanced environmental, social and economic outcomes based on location
- Ensuring that host communities are beneficiaries of any post mining land use in terms of local employment and improved amenity

In addition to a robust regulatory framework, there should be an over-arching body overseeing the repurposing of mining land
.
It is noted that the proposed Future Jobs and Investment Authorities may serve this purpose.

Recommendation:

5. ***That a robust independent regulatory framework be developed for the effective lifetime management of mining land.***
6. ***That the framework address issues such as but not limited to:***
    g. ***Safety of the land in terms of stability, contamination and discharges to the environment***
    h. ***Appropriate risk management or risk transfer***
    i. ***Timeliness of transition from one use to another***
    j. ***Promotion of innovative post mining land use to maximise its potential***
    k. ***Balanced environmental, social and economic outcomes based on location***
    l. ***Ensuring that host communities are beneficiaries of any post mining land use in terms of local employment***

(h) any other related matters.

It is important to note that any economic activity whether new or in transition cannot be considered in isolation of community.

The Renewable Energy Zones have shown that simply focusing on the renewable energy projects as a means to an end is not sufficient. Consideration must be given to issues such as the supply chain and transportation, housing of workers in host communities already suffering from housing shortages and understanding the societal impacts on local schools, childcare and emergency services
.
While the transition to renewable energy as a state policy is acknowledged, it must be recognized that this transition is occurring in communities. The impacts of this transition are felt the most by the host communities and that cannot be dismissed.

Meaningful and respectful community engagement is essential for this transition to be successful.