

**REPORT ON PROCEEDINGS BEFORE**

**STANDING COMMITTEE ON STATE DEVELOPMENT**

**BENEFICIAL AND PRODUCTIVE POST-MINING LAND USE**

**CORRECTED**

**At Lake Macquarie City Council Chambers, Speers Point, on Wednesday 21 August  
2024**

**The Committee met at 9:00.**

**PRESENT**

The Hon. Emily Suvaal (Chair)  
The Hon. Scott Farlow  
Ms Sue Higginson

**PRESENT VIA VIDEOCONFERENCE**

Ms Abigail Boyd  
The Hon. Anthony D'Adam  
The Hon. Greg Donnelly



**The CHAIR:** Welcome to the fourth hearing of the Committee's inquiry into beneficial and productive post-mining land use. I acknowledge the Awabakal people, the traditional custodians of the lands on which we are meeting today. I pay my respects to Elders past and present, and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of New South Wales. I also acknowledge and pay my respect to any Aboriginal and Torres Strait Islander people joining us today. My name is Emily Suvaal, and I am the Chair of the Committee.

I ask everyone in the room to please turn their mobile phones to silent. Parliamentary privilege applies to witnesses in relation to the evidence they give today. However, it does not apply to what witnesses say outside of the hearing. I urge witnesses to be careful about making comments to the media or to others after completing their evidence. In addition, the Legislative Council has adopted rules to provide procedural fairness to inquiry participants. I encourage Committee members and witnesses to be mindful of these procedures.

**Ms MORVEN CAMERON**, Chief Executive Officer, Lake Macquarie City Council, affirmed and examined

**The CHAIR:** Welcome to our first witness. Thank you so much for making the time to give evidence and for hosting us here today at the wonderful Lake Macquarie council chambers. Would you like to start by making an opening statement?

**MORVEN CAMERON:** Thank you for the opportunity to talk to you today, and welcome to Lake Macquarie. I believe that among all of the functional aspects of servicing a city, like maintaining roads and managing waste, it's the role of a local council to be part of telling the story of the area, and to understand what's happening and where the social, environmental and economic challenges and opportunities are in a city or an area like ours. Lake Macquarie is the largest city by population in the Hunter region, with approximately 220,000 people living here. Our city generates an annual economic output of more than \$30 billion. We are home to two operational underground mines and, of course, Eraring Power Station.

Coalmining and coal-fired energy generation directly employ an estimated 1,800 people, contributing approximately 15 per cent of the local economy. These industries have been stable supporters of high-income jobs and local supply chains in the city for more than 100 years. In 2013 mining, power generation and manufacturing made up 40 per cent of the city's total output. Last year those industries only made up 19 per cent. That is a significant shift in a relatively short space of time. The city's economy is, quite literally, changing in front of us. This is not unusual, and many cities and regions in the world have gone through similar economic shifts.

What makes Lake Macquarie's story different, and something that I am very proud of, is that during that same period of economic diversification, our gross economic output as a city has grown by 67 per cent, or over 6 per cent per year. This is unusual. It would be expected and it would be usual to see an economy hold or possibly even dip during significant transition away from traditional industries, and we so far have managed to avoid that dip. In that same period, we've created more than 22,000 new jobs in the city.

Lake Macquarie is further through the process of mine closure and economic transition than many other communities in the Hunter region and, in fact, across the State. Our challenges are now. We welcome the work of the inquiry, but we do feel a sense of urgency to start testing and trying solutions to ensure that some of the sites that we have in our city can be actively used, and that the opportunity to re-use much of the critical infrastructure currently on those sites is not lost.

**Ms ABIGAIL BOYD:** Thank you, Ms Cameron, for coming along today and giving us the benefit of your expertise. The former CEO, I think it was, submitted a submission to our previous inquiry in relation to the remediation of coal ash repositories and in that submission was talking a lot about the opportunities for coal ash re-use at those coal-fired power station sites and creating new industries in coal ash. We turned that into a recommendation, at the end of the day. Can you tell me has there been any discussion so far with the Government in relation to standing up those new coal ash recycling and re-use industries?

**MORVEN CAMERON:** Discussions with the Government, not at a government—certainly not at a political level. We work with the EPA regularly. We have stood up—"we" being Lake Macquarie council—and Dantia, our economic development company, have stood up a Circular Economy Living Lab. One of the products it's focusing on is coal ash. At an officer level, we discuss regularly opportunities with government officers, but, no, not at a political advocacy level, if that's your question.

**Ms ABIGAIL BOYD:** One of the recommendations we made in that inquiry was that there be, basically, a taskforce established that would include local councils, business, the New South Wales Government and various agencies, with the intention of trying to get to this point of recycling 80 per cent of that coal ash, particularly the new coal ash and then moving to dig up the older stuff and process it. To my knowledge, that recommendation was not taken up by the previous Liberal Government. I was hoping for some movement in relation to the Labor Government on this. Is that something that you still think would be a worthwhile thing for us to pursue in terms of how we transition away from the use of those coal-fired power station sites?

**MORVEN CAMERON:** Yes, most definitely. I don't know the tonnage, but we have as much coal ash in this city as probably anyone else on the eastern seaboard. We absolutely believe that the sooner we can find it to be a resource to support a new economy, as opposed to a by-product of an older economy—still in existence but older economy—that would have really significant economic and environmental benefits for our city.

**Ms ABIGAIL BOYD:** We'll keep pushing for that to happen.

**The CHAIR:** In your submission, you mention outcomes-based conditions. What specific outcomes-based conditions of consent do you recommend for post-mining land? How would they incentivise future investment?

**MORVEN CAMERON:** I think "incentivise" is really the key. If I think of the successful example, we knew right at the beginning of that process what the outcome was going to be in terms of jobs, use of the land, areas of the land that could be used and couldn't be used, which also meant the intricacies of the care for the land in perpetuity could actually be managed and controlled and checked throughout the process. A huge learning out of that process was being able to answer all of those "but what if" risk management questions, because we already knew what the outcome was going to be. Undoubtedly, that was the thing that made that possible.

For us, the outcome really has to be about doing the strategic planning around the size of the site, what's possible, what's on the site—whether it's a number of houses, whether it's a number of square metres of environmental land, whether it's a number of square metres of employment-generating land, whatever that may be—and doing that very high-level use. Really, that needs to be almost on a site-by-site basis, bearing in mind these sites are large. It's the only way that we see that we were collectively able to achieve the approvals for the Black Rock site that has been approved. We think, certainly in our city for the next round of sites, really being able to start with what do we want at the end of all of this is the only way that the approval process will give comfort to be able to manage the risk.

**The CHAIR:** How do you propose monitoring or enforcing those outcomes-based conditions to ensure that they are met within that five- to 10-year time frame?

**MORVEN CAMERON:** I think that's a responsibility of both the State and the local government, depending on the point in the process. Again, I appreciate I'm referring back to the live, real example that's—I won't say finished, but is underway. Council have some responsibilities in making sure that the ongoing monitoring of that site occurs by the landowner, regardless of who that landowner is. But that's really at the very endpoint. I think up until that point, the size and scale of the kind of properties we're talking about—some of that would be a State Government agency responsibility and some of it would be council's responsibility to be part of the discussion but then also be, potentially, part of the approval process and the monitoring process.

**The CHAIR:** In terms of incentivising higher order land uses, which is another one of your recommendations to the inquiry, what specific industries do you believe should be prioritised for development on former mine sites, and why?

**MORVEN CAMERON:** I think there isn't a one size fits all. I think the successful site that we've got is high-end tourism. You can't have one of those on every mine site. It won't work. I think it has to be site by site. I think we have to really look at the infrastructure and the geographic location of the site. Lake Macquarie has 62 square kilometres of former mining and former power generation land on the western side of the lake. It goes between the lake and the M1, predominantly. The main rail line runs in close proximity to that land. There are obvious uses for that land around logistics, manufacturing and probably some residential on some parts of the land. A lot of these sites are massive parcels that weren't all impacted by mining. But, really, if you're considering those sites, they probably have very different uses to if you start considering sites in different parts of the State and parts of the region. The reason that our sites are nearer ready is because the mines are closed, but we also have population proximity and geographic and infrastructure proximity that some of the sites further up the valley, for example, simply don't have.

**The CHAIR:** In your submission you also talked about "leaseholders may lack incentives to deviate from established conditions of consent due to the associated risk". I'm keen to understand whether you have any thoughts around how we as a government could possibly incentivise this or make it more attractive or simple, because we have heard all about that in the inquiry.

**MORVEN CAMERON:** I think you'll hear from probably more specialised people than me who can give you the detail on that. We're obviously still doing a "lessons learned" exercise around the Black Rock Motor Park, but our experience very firmly was that the mining company who was the landowner were actually disincentivised to go through the process and relinquish the lease or the licence. Therefore, it was very difficult for them to prioritise that. I understand that they're a massive organisation, and a very small parcel of land in their landholdings didn't necessarily carry the importance that it carried for us as a city or for the proponent. But there was definitely no incentive and possibly even a disincentive for them to focus on that and make it a priority to go as far as actually relinquishing the lease and being able to transact on the land.

Anecdotally, we hear from other landowners in this city that the risk of suggesting to do anything other than what their current mining requirements are is just considered too great. Even the willingness to come to government—including us, and we are saying, "Please do something different"—and have a conversation about what might be possible is perceived at a boardroom level as too great a risk of the potential of "We know we quantified and we valued what we need to do at this point in time. If we even suggest talking about doing something different, we currently can't quantify that risk." As a prudent board member, that's a concern.

**The CHAIR:** In terms of your consolidated recommendations, I have many questions but for now I have one final question around the recommendation to "establish a mechanism to capture excess land value gains", which I found quite interesting. What such mechanism would you proposed to capture this? Who is best placed to do that?

**MORVEN CAMERON:** I think the State Government is, potentially, best placed to do it. What we are referring to there is really the idea that particularly our land, with its geographic proximity to all of the major infrastructure, has the ability to become very valuable land. We know from the inquiries that we get about looking for industrial land, looking for employment-generating land on that western side of our city. There's a lot of talk about value capture, and I'm not sure that anyone in Australia has really come to grips with it. I'm not sure if anybody has really come to grips with it.

We think there's a real opportunity, particularly on some of the parcels in the north-west of our city that are immediately adjacent to current government-owned land, for the Government to do some of that big strategic planning about what's possible and then capture the uplift of both the mining land and the land owned by the Government in order to capture the value and put the learnings and put any value that's captured back into this. I sort of envisage a machine that I don't think would ever be self-sustaining but can certainly be self-energising and self-financing to a degree if the Government used its own landholdings that are in such close proximity to the mining landholdings.

**The CHAIR:** How could we ensure that that value capture went back into the community and directly benefitted the public that it came from? That's one of the concerns that we heard through the inquiry about the impact mining has on communities and making sure the value goes back to them.

**MORVEN CAMERON:** It depends on what goes on the site, but if on these sites we were able to have very high economic values, very high environmental values and social values of employment, housing and recreation—it's really a piece about communication and telling the story about this is what the community will get by that value capture.

**The Hon. SCOTT FARLOW:** First of all, Ms Cameron, thank you for hosting us here at Lake Macquarie. In terms of your submission and some of the conversations we had the other day, there's some frustration when it comes to council and being able to unlock sites yourselves but then getting into other processes. We heard the story that people thought the council processes, perhaps, and the planning system were hard enough, but when you get to the relinquishment of the mine licence, that becomes even more difficult. To pick up from the point of the Chair when it comes to the incentives that are there for anyone to do something—an alternative use of the site—you've got the challenges of a local community that wants to see activation, potentially, on a site; you've got somebody else who's come to the party, who doesn't own the site and doesn't have the rights or control; and then you've got the party who owns the site has an obligation to fulfill in terms of the remediation of the site. How do you see that three-way interest, so to speak, when it comes to a future use, a community interest and the current holder of the site who has obligations? How do you see a funnel, so to speak, that will work out those competing interests for each site? You've got a few in your area.

**MORVEN CAMERON:** I don't want to sound flippant, but that's sort of what the local government does every day. That could be somebody demolishing a house and rebuilding a new house in the community round about being nervous. It could be us demolishing an old community building and building a new one, or it could be us doing a land use plan. In Lake Macquarie they're often for entirely new suburbs, again, predominantly on the western side of the lake but not always. There are subdivisions happening in our city all the time. Some of them are 2,000 or 3,000 new residents moving into what was either a brownfield or a greenfield area. That community consultation, long-term strategic planning, what's possible conversation, both with existing landowners, usually existing landowners who are motivated to do something different and something new—that's probably the differential in the scenario you just put to me. But local council all the time—our day job is to consult with our community and to work with our community to envisage and imagine what the city needs and can be, and then to deliver that.

The biggest frustration we find, or we have found historically, in Lake Macquarie is that we do a lot of that strategic planning and our community tells us what they want and what matters to them, and then there's a lag or a delay while industry and the economy catches up. Often when you then go to do what the community had been involved in envisaging five or six years before there's kind of a forgotten "but remember five or six years ago we had this conversation". Recognising that, Lake Macquarie sort of keeps those conversations alive, even if the economic input isn't happening or if the development isn't occurring at the time. I think we're a lot better. As we learn, we're a lot better at keeping active the conversation about what the future city is going to look like. We're required every four years to consult with our community and then to set a ten-year vision for our community.

It's a standalone project to do it with a site of the type that you're referring to, but it's what we do and it's really what we do every day.

**The Hon. SCOTT FARLOW:** To that point, there have been calls in this inquiry for a concierge effectively to bring together all government agencies and to try to navigate through the approval pathways. Is that something that is redundant and that could be done by local government?

**MORVEN CAMERON:** No, absolutely not. It's absolutely essential. Even now, and we heard at the site visit on Monday, there are still regulatory hurdles to jump over on the site. There is only so much that local council can do, and so much of the approval process for complex sites like this are State agencies. A concierge service which local council can be both part of and accountable to, I would have no problem with at all.

**The Hon. SCOTT FARLOW:** You've also outlined the need for some of the funds—and Royalties for Rejuvenation in particular as one of the programs you've highlighted. What has been the experience of Lake Macquarie council—and potentially the proponents of Black Rock as well—with being able to access funding through that grant program?

**MORVEN CAMERON:** We haven't and they haven't been able to access grant funding. To my knowledge, the Royalties for Rejuvenation Fund didn't ever give out any funds. They certainly didn't give out any in Lake Macquarie. The proponent of Black Rock will speak later. They were encouraged numerous times to put grants in. They were job-related grants, and they weren't at the point to make the commitment to deliver the jobs within the time frame while the approval process was ongoing. By the time the approval process was through and they were on site—there are jobs there now—those grants no longer existed. Then in the Royalties for Rejuvenation process, I spoke at least once with the expert panel that was funded, but no funds were released. There might have been some funds released to the department of planning to do a high-level early study, but I'm not aware of any other funds being released.

**The Hon. SCOTT FARLOW:** We of course visited Black Rock and we have talked about that site quite a bit, but there are other sites you have as well within the local area government. Do you want to run us through some of those and some of the options you may see for those sites into the future?

**MORVEN CAMERON:** There are many. Probably the most ready, if that's the right way to put it—and I say the most ready because the company is well advanced, and I feel this is my perception. I'm not speaking on behalf of the company and it's very important that I say that. But the company is well advanced in its remediation. But their current licences or conditions require them to remediate the site, which involves including—it's 1,100 hectares of site. Our early estimations, we think there are about 550 hectares that would be useable for another purpose other than environmental, which leaves almost half the site able to be environmentally remediated.

The thing for us, and I guess the urgency for us, around that site is that it is between here and the M1, it has the main north-south rail line passing immediately adjacent to it, it has its own private rail loop, it has water, it has sewer and it has the basis of—I have road envy—phenomenally constructed roads because they were built to cater for coal traffic and not suburban traffic. Our urgency is really that currently the coal company is required to remove all of that infrastructure to remediate the site. For us, we see both its geographic proximity and the fact that all of that infrastructure is there as something that we would feel very sad that that's lost to our city as an opportunity, whether it's for homes, whether it's for employment land. We believe it's most suited for employment land because of the geographic location and the proximity to the heavy rail line.

**The Hon. SCOTT FARLOW:** With respect to that, I guess there is a community expectation that mining is a temporary land use and that, effectively, it gets rehabilitated, so to speak, so that mining was never there. There is a bit of a challenge when it comes to what might be other uses. Would it be fair to say that the contrary to that is that effectively you would have to find that land somewhere else within the local government area if it wasn't potentially made available for employment there or infrastructure or the like?

**MORVEN CAMERON:** Yes, I think so. We know in Lake Macquarie that we have enough housing lots, either already approved or on the plan, strategically planned to cater for our population growth, even at a high-growth scenario out to about 2050. Most of that we're hoping will be infill. The majority of that we will bring will be infill development. But what we also know is that we currently have a deficit in industrial land. But if you broaden the definition just from industrial land to employment-generating land, within the next eight years we will have a deficit of employment-generating land in our city.

Our residents tell us always, every time we consult with them, that their top cares are they care for the environment, and they love the city, the lifestyle and the natural environment in the city. They want jobs in the city; they don't want the sense of commuting far away. We're not super parochial about inside the city boundary, but they want local jobs, they want local houses and they also care about getting the balance between the

environment and future development right. For us, the idea that there's a site that has all that infrastructure, has had a previous heavy industry land use on it, is fully remediated back to natural area—I need to say at all times we believe that probably close to half of it can be remediated back to natural area—when we know we have a deficit of land for employment generating is not consistent with what our residents in our city tell us they want to see happen.

If that's really remediated, we will continue to receive interest and expressions of interest and applications from our community for other parcels of land that are currently heavily treed or currently natural environment. We tend to defend those very strongly. If these are areas of high environmental value, we do our best for that not to occur. We're pretty proud of our environmental management reputation at Lake Macquarie, but it seems counterintuitive to have an area that's perfectly suited here, that's being required currently to go back to natural area, and have this other pressure on our community about jobs and employment land pushing up against the organisation and the city at the time.

**The Hon. SCOTT FARLOW:** This is a growing community as well, isn't it? In the car on the way up the other day I heard that in the recent regional report Lake Macquarie is leading the charge when it comes to tree changers and sea changers looking for a new area to live in. With that, they also look for jobs, and jobs locally. I think that's one of your ambitions, isn't it, to have less people leaving the LGA for work?

**MORVEN CAMERON:** Yes, and certainly leaving and travelling afar. That's an interesting statistic. We have been very deliberate. Our population is at 220,000. We currently grow at over 1.1 per cent, which is quite high. But we have been very specific in the past six or seven years. If you looked at the demographics of our population about 10 years ago, we were a good 1 per cent or more above the State average for population over the age of 55. We recognised—as well as this economic transition that was going to happen—that we needed to be a population that had a more balanced demographic spread of young families and young working people in our city if we were going to be a sustainable city.

We were very specific in saying that we wanted to attract people of working age to come and live in the city—younger people who are going to stay here. We had a real problem with young people growing up here and leaving. We wanted to make it a city where people would want to grow up and want to stay. You can only do that if there are not only jobs but also a perception of a lifetime career of jobs or a progression of jobs. Also, we have been very deliberate at running advertisements and trying to attract young families—to suggest that they could come and live and enjoy the lifestyle in Lake Macquarie. It's working because we are continually in the top five Regional Movers Index. But, interestingly, we are in the top five for the 24- to 35-year-olds, which is the population that we have been very deliberately trying to attract, because it makes for a more sustainable city.

**Ms SUE HIGGINSON:** Ms Cameron, it's good to see you again. Thanks for giving your time. It's clear that the council has a very considered view about and value for biodiversity in the LGA. On the books at the moment, in terms of mine rehab, let's say we have a certain balance on the budget sheet. If we were to then decrease that, in terms of rehab obligations back to biodiversity lands, where else do you think that deficit could be best shifted to or balanced by? I'm not saying geographically but conceptually.

**MORVEN CAMERON:** It depends on where you start your 100 per cent. If your 100 per cent is the entire 1,100 hectares going back to natural area, that's a very different equation, in trying to find a balance, to saying currently about 57.5 per cent of our city is treed and has tree cover and natural area. We monitor that every year and measure that and take very seriously making sure that that number doesn't diminish. Therefore, we set that benchmark on what's currently on those sites, as opposed to 1,100 hectares back at natural area, which would be a significant increase in that percentage of the city that is treed. The other thing that we are doing more and more of in Lake Macquarie—because we are a growing population, we sit right at the fulcrum of balancing all of these—is really focusing on the ecological value of the environmental land that we have or that is created or generated in the city.

More and more in the city we are finding that, with new, modern practices, we are able to improve the biodiversity value and the quality of the existing land and the newly created land on some of these sites. So there is a value equation that isn't as simple as a square metre here to a square metre there. In trying to sit at the centre of balancing of all those different needs for our city, we have spent a lot of time focusing on not diminishing our percentage coverage but, more importantly, focusing on, within that percentage coverage, what are the biodiversity qualities that exist. So council, in the past seven years, has generated two crews or teams of people who now spend their time looking after our bushland and making sure it has much higher value.

Bushland can be a bit set and forget. We have taken a very definitive approach to say that we are not going to do that. We are going to lose as little as possible and, for the land that we do own that has biodiversity, let's really maintain it. I am an eternal optimist, but I do think there is a fulcrum where we have a lot of natural area land in the city, and taking better care of it is one of the options available to us to try to find that balance. If



we do a square foot for a square foot—I'm showing my age and my heritage—or a square metre for a square metre, it will be very difficult. But if we talk about the quality and the biodiversity outcomes, I believe we can maintain those outcomes.

**Ms SUE HIGGINSON:** You mentioned the disincentives, using Black Rock as the example. Could you give us some examples? I get it conceptually, and we have heard quite a bit about the risks around that in terms of contemplating doing something but having the mining lease obligation hanging over. Are there any other more nuanced examples of disincentives that we should be aware of?

**MORVEN CAMERON:** Anecdotally, what I hear is that the biggest one is that fear of "We can currently quantify the risk of what's in our mine closure plans and in our licence requirements, and if we contemplate anything different, how do we quantify the risk?" I think State government agencies and the mining companies are all grappling with how to quantify the risk, particularly when that long-term responsibility piece is not known. I think that's probably the biggest nervousness from the coal companies that I anecdotally hear—just about being able to quantify. A quantifiable risk versus an unknown causes the nervousness. The other thing I will say—and I think you will hear it later as well—is the process is so cumbersome and so difficult, and it's only cumbersome and difficult because it has not been done regularly.

It's not a criticism in any way, shape or form. It's just "We're going to do this" and then everybody went, "It has been a long time since this has ever been done." The incentive to the coal company for a parcel of land that is no longer producing or generating income for them—really, to go all the way to the end of the process and finish it or tie a bow on it, for want of a better way of putting it—just isn't there. It's easier to just slowly but surely keep ticking away at it. Really, Black Rock only became a reality because the proponent was absolutely dogged in saying, "This is the parcel of land I want. This is the location on the eastern seaboard of Australia that I want to be in. I'm going to keep chipping away." There was no incentive; in fact, there was a disincentive for the coal company to do that. That's not a criticism of the coal company. I need to be clear about that. I understand exactly: It wasn't their priority. It's a tiny little mine. It had stopped producing 50 years ago. It wasn't high on their boardroom's visibility of what was important.

**Ms SUE HIGGINSON:** Finally, in terms of that conversation that is being had about any further benefit and how you capture that economic benefit that may, ultimately, end up in the mining company pocket through re-use—I think Mr Farlow raised that—we have a submission and we are hearing from people later, but there are views that coal companies should receive no more benefit in terms of the re-use of land, and that that now must all fall to communities. Is that a view that you hear in terms of local government and your constituents? Is it a lens that you're thinking through? How does that work for you?

**MORVEN CAMERON:** No, it's not a view that we hear. When I say "that we hear", I don't hear it from the coal companies or from the community. There is a really balanced view in Lake Macquarie residents around this idea of needs and balance. Even in the coal companies, there is a degree of frustration with the coal companies that I talk to. These are generally informal conversations. People who just work in the industry, they're actually keen to try and do something different. They understand this concept, and we use a little headline in our own heads around it: if there were 5,000 jobs on that site at its peak, we want 5,000 jobs back on that site. But with modern technology and everything else, those 5,000 jobs could be in a footprint that's a fraction of the size that was previously needed. They understand that passion and that drive, and they want to be part of finding that solution. I don't see or hear any one group in our community or in my network of people I speak to saying it's binary, one or the other.

**Ms SUE HIGGINSON:** Would you appreciate that that could be different for the communities further up the valley, where they are seeing potentially more physical impact of the mine operations and the big open cuts compared to here? It is potentially quite a different scenario for communities as you progress up through the valley.

**MORVEN CAMERON:** Absolutely, and I wouldn't for one minute speak for them. I know you're speaking with others later about that. Yes, there is no doubt about that, and I think I started by saying almost every site—these are large sites, but almost every site needs its own solution. The one thing I will say about Lake Macquarie is that a lot of our sites are—there are miners who will quake in their boots—a little bit easier because they were underground sites, predominantly. That brings its own challenges, but it also makes envisioning what's possible a lot easier. Our geographic location and our proximity to population makes it easier. I'll finish where I started. Because these mines have been closed for quite a period of time and are well-advanced in their remediation, there is an urgency for us. I'm a firm believer that we can all learn from what we learn in Lake Macquarie. A lot those learnings, while they might be different, can be transferred up the valley. This will sound a little bit dramatic but, in reality, if we can't solve the problem on a couple of the sites I've talked about here with

their proximity to infrastructure, those challenges up the valley are much harder. We need to start here and start to solve the problem.

**Ms SUE HIGGINSON:** With that, each site is very specific. Yesterday we heard, literally, that we have got one company that is not intending to remotely finish until 2048, so it is a very different scenario to what is happening here. Again, coming back to biodiversity because, naturally, it is a big deal, given that was the commitment at the outset, do you think that it is wise to be looking at the biodiversity outcomes site by site and LGA by LGA, or do you think there needs to be a strategic overview for all of these mine sites and the biodiversity outcomes for the State? Does your council and do your communities appreciate that that is, essentially, a national issue but at least a statewide or regional issue as well?

**MORVEN CAMERON:** I'm known for this, but I think the answer is that we have to have both. As a nation and a people, we're smart enough to solve that problem at both levels. It's not for me to speak on behalf of my community, but my impression of our community and Hunter community is they're absolutely smart enough to understand both. That outcomes-based planning at a local level is essential if there is ever going to be an adaptive re-use but, at a much more strategic State-level—and I think it was Mr Farlow's question about is it local government or is it State—the answer is both. The local outcomes have to be driven at a local level, but that global order of the biodiversity outcomes in the Hunter Valley as a result of this transition will take 60-plus years to happen. But, let's face it, it's taken 150 years to occur, so 60 years is not that long—not that I'll necessarily see it, but you take my point. We can do both. It's not without the powers of the collective local governments and then the State Government to actually have two levels of oversight occurring at the same time.

**Ms SUE HIGGINSON:** I have asked other councils this in previous days: In terms of council's capacity—clearly, you are an incredibly capable council—with this specific tranche of work, do you think there needs to be any assistance in terms of council's capacity to focus on this specific thing to drive it with the urgency that you are saying and, if so, should the companies be assisting in terms of that capacity?

**MORVEN CAMERON:** Yes. Lake Macquarie is in a very fortunate position in that we're a very large council. We have the ability to divert resources in a way that smaller councils don't. We've actually formed a partnership with seven other councils and we would be by far the largest—all mining-affected councils—with that view to sharing capacity across the councils. That very much is Lake Macquarie, first of all, saying, "We're at the front. This is now for us. You can all learn from us because it's here and now," but also recognising we have the capacity. Do I think that the companies should contribute? Absolutely, but I think it needs to be a partnership or a collaboration with government and the companies.

We've talked a lot about community trust and community sense. If it's just the coal companies, there is a risk of the community confidence being diminished. In my opinion, and only my opinion, I think the State Government really needs to take the lead and bring the coal companies to the table, and local council and State Government should take the lead, rather than the coal companies be seen to be leading. That is simply about community trust and community confidence in the outcomes.

**The CHAIR:** Thank you very much again for making time to give evidence to the hearing today. Our Committee secretariat will be in touch with you if there are any supplementary questions.

**(The witness withdrew.)**

**Mr MARTIN JOHNSON**, Manager, Strategic Planning, Cessnock City Council, sworn and examined

**Ms JENNY MEWING**, Senior Strategic Planner, Cessnock City Council, affirmed and examined

**The Hon. SCOTT FARLOW:** Welcome and thank you for being here today and representing Cessnock City Council. Would either of you like to make a short opening statement for the benefit of the Committee before we start with questions?

**MARTIN JOHNSON:** We have prepared for the inquiry a summary of our submission, but I am assuming all members have read our submission, so it is open to you. We can go straight into—

**The Hon. SCOTT FARLOW:** We are very happy for you to provide an opening statement.

**MARTIN JOHNSON:** I will just provide a summary—it is really a summary of our submission. Firstly, thank you for the opportunity to provide a submission to hear our position on the inquiry. Council's views and submission relate to the experience the Cessnock local government area has had with mine closures, both historically and more recently and ongoing. For contextual purposes, the Cessnock local government area is located in the Hunter Valley, surrounded by the Singleton, Hawkesbury, Central Coast, Lake Macquarie, Newcastle and Maitland local government areas. It covers an area of approximately 1,966 square kilometres and is home to a population of approximately 70,000 or 71,000 at the moment. The resident population is expected to increase to 115,000 over the next 20 years. Cessnock council is one of the fastest growing councils in the State.

In terms of industry, the local government area supports one active coalmine, one mine in the process of closure and decommissioning and a number of extractive industries operating. The export value of this is approximately \$726 million. At the height of the Lower Hunter mining boom during the nineteenth and twentieth centuries, there were over 30 underground operational coalmines in Cessnock. These mines were the foundation of what we call our villages or our settlements within the Cessnock local government area. Cessnock is based on villages. There are 20 or 30 little villages based on historical coalmines.

Council's submission raises matters relating to the legacy issues these historical mining operations have produced, including subsidence and related sinkholes, land sterilisation due to subsidence and contamination and environmental pollution such as acid mine drainage and the impact on local waterway health. Council's submission also establishes that the legacy sites have strengths which could be leveraged for adaptive re-use opportunities, including under-utilised existing resources like the land itself, electricity, telecommunications, road, rail et cetera. Some of them are cleared of biodiversity issue constraints, which is a big issue for Cessnock. They are connected and proximate to both local, regional, interstate and national cities and infrastructure.

These factors support redevelopment of the sites for purposes beyond the standard rehabilitation for agricultural, recreational or renewable energy activities. Obviously, there is extensive cost, time and effort included in making the sites suitable for alternative land uses. Also identified in council's submission is the opportunity for alternative re-use that highly depends on the remediation standards applying to the respective sites. Opportunities for higher use need to be considered, preferably during the initial mine planning phase, and in consultation with relevant authorities, including local government. This is essential to ensuring that the requisite strategic planning framework is in place before mines close to promote a streamlined transition to post-mining land uses. With council's anticipated population growth and the State Government's targeted housing requirements, and knowing the land use constraints, such as flooding, biodiversity et cetera, land use opportunities like future urban housing should be and are being explored for these sites.

**The Hon. ANTHONY D'ADAM:** Thank you for your attendance today. What do you think the main environmental issues are associated with the historic underground mines in the Cessnock area?

**MARTIN JOHNSON:** A lot of the historic mines have been gifted to council, so council actually has management and ownership of a lot of the older mines, going back the last couple of centuries. That includes historical mining sites where housing is located, and council is now managing the contamination related to those. There are still residents in these dwellings. So there are those legacies, like contamination—*asbestos* contamination. We have legacy issues and constraints on mine sites relating to flooding. Biodiversity is a big issue, and it is broader than just the mine sites. It is a big issue across Cessnock particularly, but also the broader Lower Hunter.

We have environmental legacy issues from those mines in terms of water quality in our major streams. There is a financial legacy issue for council in terms of managing the sites. A lot of these sites contain heritage infrastructure, which has either been gifted to council or they were regional pieces of infrastructure which are now transferred into local infrastructure, so council has a responsibility to maintain and upkeep the heritage

infrastructure on these sites. There is quite a bit of heritage infrastructure on these legacy sites, which council needs to maintain at its cost.

**The Hon. ANTHONY D'ADAM:** Can you tell me about the issue around sinkholes and how the council handles that question?

**MARTIN JOHNSON:** I know of two sinkholes. There are both benefits and issues with the sinkholes. There is one in south Cessnock—in a closed mine in south Cessnock. It is a very significant sinkhole. It actually protected the city from more significant flooding during the *Pasha Bulker* storm because a lot of the stormwater went into the sinkhole itself. It assisted in flooding.

**The Hon. SCOTT FARLOW:** I was wondering what you were going to say about the benefits of a sinkhole.

**MARTIN JOHNSON:** A huge amount of water went into the sinkhole. The other sinkhole that I am aware of is in north Cessnock. I have seen evidence of animals being washed into the sinkhole. They are all located within the confines of legacy mine sites.

**The Hon. ANTHONY D'ADAM:** How big are we talking about in terms of the sinkhole?

**MARTIN JOHNSON:** Dimensions?

**The Hon. ANTHONY D'ADAM:** Yes.

**MARTIN JOHNSON:** Maybe Jenny can help there.

**JENNY MEWING:** As to the exact size of it, obviously if it is big enough to support or resolve a flooding issue during that 2007 storm, it is quite large. But we do have smaller sinkholes within the LGA as well, which might form around—if we have a sign put in or something like that, you can actually see that it will at some point form a sinkhole. It's not huge; it might just be maybe half a metre by half a metre, but it's evidence that there is that working underground that's starting to fall away.

**MARTIN JOHNSON:** The large sinkhole I was referring to in south Cessnock is 10 metres by—it is quite significant.

**The Hon. ANTHONY D'ADAM:** How long does it take before a sinkhole stabilises? Do they remain unstable?

**JENNY MEWING:** I guess that's dependent on how you fill it and how well you fill it. Usually, from the advice I've had from our works people, we will go out and try to fill the sinkhole. It may be successful, or it may not be, because there is no real way of quantifying how big it is when you are just doing a small job. It may resolve the issue, but in time it may actually become part of a larger area.

**The Hon. ANTHONY D'ADAM:** So that creates an ongoing expense for council?

**JENNY MEWING:** Exactly.

**The Hon. ANTHONY D'ADAM:** What about repurposing former mine sites? Can you talk about Cessnock's experience in relation to that?

**MARTIN JOHNSON:** For sure. Because our villages, as I call them, were based on the settlements of the former coalmines, the area around those villages was the area where the coal was extracted. If you look at Cessnock—and I will use Cessnock and Kurri as the main examples, because they are our major strategic centres. There is a lot of area around immediately adjoining our existing areas in Cessnock, particularly, which are old legacy mine areas, both underground and on surface, which still have the remnants of the coalmining activities on them. But if they could be remediated to a certain level, they could be used for expansion of the existing urban area and housing and employment opportunities.

We have raised that with a number of the coalmining owners and operators. They're open to that idea. Some of these sites go back 100 years, so it's very hard to follow those up. The ones that we are in communication with, yes, they're open to the idea, but getting traction and getting movement—how long is a piece of string? It can take decades to get that work done to a point where we can use it for recreation or residential or industrial. At the moment the growth of Cessnock town centre itself, the urban area, is constrained because of legacy mining surrounding it. If we could address that issue, we would have a huge opportunity for expansion and growth to the city area of Cessnock.

**The Hon. ANTHONY D'ADAM:** What can the State Government do to assist council in terms of supporting remediation of legacy mines?

**JENNY MEWING:** I think one of the matters that we've raised in our submission is the opportunity of grouting funds. That has been something that has been delivered for Newcastle council and, more recently, Lake Macquarie City Council. Both of those councils are similar to Cessnock in terms of the historical mining activity that has taken place and both those council areas have received a grouting fund.

**The Hon. ANTHONY D'ADAM:** What is grouting? Can you just explain that?

**JENNY MEWING:** Basically filling the voids left by mining with cement.

**MARTIN JOHNSON:** Can I add to that? There's a legislative framework around this as well. You've got the legislation relating to coalmines and remediation of coalmines, and then you've got the planning legislation and other relevant legislation. They don't necessarily read together and the process for remediation of coalmines is totally separate to strategic planning legislation. There needs to be some sort of connection between the relevant legislation. If that were to occur, there may be opportunities to both streamline the process and also improve the time frames for remediation, because it can take a number of decades. We're talking two, three decades to get some of these former mine sites remediated to a suitable level. That's the advice I have from coalmine operators.

**The Hon. ANTHONY D'ADAM:** How is Cessnock preparing for displacement of workers from the mining industry as the mining industry winds down in Cessnock?

**MARTIN JOHNSON:** Cessnock is a little bit different to the Upper Hunter valley in the sense that the mining activity has effectively left Cessnock. There is only one operational mine. The other one closed in 2012. Astar is in remediation at the moment. Council is obviously very focused on employment, but it's broader than just mining employment. We're looking at a broader range of employment opportunities. Can I use an example of, say, the Hydro Aluminium site. That's not a coalmine. It's obviously a smelter, but in the decommissioning and investigations for future land use there, the council, the company and the community were very focused on ensuring that the people that lost their jobs through the closure of that smelter had opportunities for employment through the future use and rezoning and development of that site.

We're at a point now where the land has been zoned for employment and business, where in the future those job opportunities will be there. Now, they won't be the same as what historically—they're not mining jobs. We're focusing on what new types of jobs are likely to be required in the future when we're looking at our land use zoning. We're a little bit different to Upper Hunter. We don't have a lot of mining employees in Cessnock because the mines have closed. Obviously we have a population which reside in Cessnock that go up to the Upper Hunter and commute up to the Upper Hunter to work. But we're focusing on ensuring that we are providing—at least from a land-use point of view—future employment opportunities that may arise in future decades.

**Ms SUE HIGGINSON:** Is there anything that you think the State Government could be doing to assist in this LGA in terms of that job transferral and that skills transfer in terms of education, certificates, TAFE, that sort of thing? Have you identified any need or any capacity for increased support? Is that something your council has looked at?

**MARTIN JOHNSON:** Our council and through the joint organisation in particular, as a group, that's a big focus of that group particularly. Yes, Cessnock council has that focus of employment. My focus is ensuring that we provide the land suitable for those future uses and for that employment. But as an organisation, yes, and as part of the lower Hunter and the JO, we are very focused on ensuring that we provide the range of employment opportunities, particularly education. Cessnock is one of the lowest educated communities—in the Hunter at least. We're focusing on providing those education opportunities in the Hunter for our residents. That's really a State Government focus. There is very little local government can do than advocate. But I know that the council, through its mayor, is advocating along those lines.

**Ms SUE HIGGINSON:** Are you able to extrapolate a little bit what is the vision in terms of the needs analysis in terms of education and training? With your vision and prediction of the land uses and those employment opportunities, I'm curious what identified gaps may have arisen already or what that advocacy looks like and if there's anything this Committee could be informed about that we could assist with in terms of State Government.

**JENNY MEWING:** I might just mention here that we are in the process of undertaking an employment lands strategy at the moment reviewing the current employment lands. That will look at the current complement of employment lands that we have within the LGA, the type of industry that is using those lands and the workforce that uses those lands as well. That will give us a better idea of any gaps that we have in terms of employment land supply, the population that we have within the LGA and the needs that we have to then fulfil to provide responses to those gaps. At the moment, as Martin mentioned, our population isn't hugely affected by the mining closures. I think only around 8.6 per cent of the resident workforce population works in the coal industry or the mining industry. Manufacturing is the highest employer within the LGA. There is some opportunity for skills transition

there. But then, when you look at our other higher employers, like health care, social welfare and the like, the skills aren't easily transitioned between those employed in the mining industry and those higher employers.

**Ms SUE HIGGINSON:** Is increasing manufacturing capacity one of the things that you've identified as a potential future land use and growth area?

**JENNY MEWING:** That's something that will probably come out of the employment lands review.

**Ms SUE HIGGINSON:** In the strategy, yes.

**MARTIN JOHNSON:** A lot of our population commutes outside Cessnock. They go to Newcastle and Maitland and other areas. Our focus, at least from a land use point of view—we don't want to become a dormitory suburb of Newcastle or Lake Macquarie. We want our people to live and work and recreate and enjoy the lifestyle of Cessnock. We're trying to plan so they can stay, work and live and be housed in Cessnock rather than having to do the big commutes that they do at the moment, whether it is up the Hunter to the coalmines or to Newcastle or wherever.

**Ms SUE HIGGINSON:** Finally on this line of inquiry, does your council have a relationship with Newcastle university in relation to education programs, training and that sort of thing? Is there a formalised or an informal relationship?

**MARTIN JOHNSON:** I'm happy to take that on notice and we can give you an answer to that. The council itself is very focused on—in the program, we're employing graduates so we're training people, but that's within the council itself. But broader than that, I'd have to get some advice. I can take that on notice. I'll speak to our economic development manager. I'm sure there are programs that the council is following through. We regularly discuss matters with the University of Newcastle, but I'm not aware of any programs, off the top of my head. I'll take that on notice.

**The Hon. SCOTT FARLOW:** With respect to the legacy and historical issues that are conscious in Cessnock, the recent mine closure, I think, was Austar in 2012. Is that right?

**MARTIN JOHNSON:** That's right.

**The Hon. SCOTT FARLOW:** Is that site fully remediated now, or is that still progressively being undertaken?

**MARTIN JOHNSON:** I've been involved in two or three meetings with Austar owners. They're in the process of starting to decommission—i.e. starting to demolish—infrastructure on that site. They are talking to council about the long-term future uses for that site, whether that's housing—and even potentially some short-term housing, if we can get some of the site remediated. A big problem with the site is, as you know, because it's underground mining, the surface area used for coalmining is relatively small but the lease areas are huge, so there's a lot of biodiversity constraints on these sites. They're matters that we need to work through with the coal owners. From memory, Austar has a plan for remediation at least up until 2036, so we're talking at least another 12 years through the remediation process and the—

**The Hon. SCOTT FARLOW:** Ceased operation in 2012, remediation process until 2036—so 24 years, effectively?

**MARTIN JOHNSON:** Yes.

**The Hon. SCOTT FARLOW:** Wow.

**MARTIN JOHNSON:** And they've been talking to council for around the last four years, I think.

**The Hon. SCOTT FARLOW:** Any terms of alternative uses as part of that program?

**MARTIN JOHNSON:** Yes, in terms of their processes and potentially for alternative uses.

**The Hon. SCOTT FARLOW:** What has council's position been with respect to those alternative uses? Is that something that council welcomes?

**MARTIN JOHNSON:** Yes, we see it as a huge opportunity. At the current position, where we have very little opportunity to expand outwards from our strategic centres because of these legacy mine sites, if we can work with an active coalmine which is remediating, we see there are huge opportunities for urban expansion subject to some of the constraints being addressed, including biodiversity. I was interested in your previous discussion of biodiversity.

**The Hon. SCOTT FARLOW:** With respect to that, you said that biodiversity is a big issue when it comes to Cessnock. Is there a particular reason why it's a bigger issue in Cessnock than it is in, potentially, an area like Lake Macquarie or Muswellbrook?

**MARTIN JOHNSON:** Where do I start? We've been a rural council really not affected by the urban expansion of Newcastle, Maitland and Lake Macquarie until recently. We're really peri-urban, so we have a lot of retained natural vegetation. To the south and to the west we have the big national parks. The problem is, if you look at the biodiversity values maps, Cessnock is one of the most—if not the most—constrained local government areas in terms of biodiversity in the State. I'm not exaggerating. Because of the type of vegetation, the type of threatened species and the legislation as it exists, it is very, very difficult to get traction on looking into new investigation areas for urban housing in Cessnock. It comes down to the absurd, where individual trees are identified for protection in a future urban area. It impacts on terms of your yield for housing and that sort of thing.

We have recently written to the planning Minister and the relevant Minister for the Environment outlining this issue. I'm aware the planning department executive directors are aware of the issue because we do have these housing targets. Unless we can find land we can develop—it's not like Maitland, where the trees were removed 100 years ago and they've just got grass paddocks with cattle running around them. Our investigation areas are constrained by biodiversity, particularly, but also flooding and other matters. It's a big issue. A huge proportion of those legacy mine areas have got biodiversity over the top of them.

**The Hon. SCOTT FARLOW:** So there aren't too many options for you in terms of looking at accommodating additional housing in Cessnock LGA?

**MARTIN JOHNSON:** It's a frustrating process to try to find land that can be developed. Jenny can add to that, if she likes.

**JENNY MEWING:** One of the other issues we're facing in Cessnock is there's not a great deal of appetite at the moment for infill development, so the greenfield development really does play a major role in providing housing supply. We have done some feasibility analysis of why people aren't delivering infill development despite the fact that we have huge amounts of land zoned for high-density developments, multi-unit developments and the like. It clearly just isn't feasible. The market and the sale prices for these developments aren't—the Cessnock LGA is not ready for it yet.

**The Hon. SCOTT FARLOW:** As many developers say to me, when you've got to sell an apartment, let's say, for \$800,000 and you can buy a freestanding house for comparatively the same amount of money, people are choosing the freestanding home rather than the apartment.

**MARTIN JOHNSON:** Yes.

**JENNY MEWING:** Exactly.

**The Hon. SCOTT FARLOW:** With respect to some of those legacy assets you've got in the area, one of those is the Maitland to Bellbird rail line. I know there has been some appetite for that rail line to be transitioned to passenger services and the like. Is that something that council's interested in, supportive of or investigating?

**MARTIN JOHNSON:** Yes, we've been advocating for probably at least the last eight to 10 years that the main line needs to be preserved, with the potential opportunity for multiple uses, whether it's active or public transport or the reintroduction of rail along the line. That would assist us in Cessnock, particularly. There used to be a rail service to Cessnock back in the '70s. If that could be reintroduced, and reintroduced to the other villages along the line, it gives us a great opportunity, obviously, to plan for greater density and population around those centres as well as address the issue of a high dependency on cars. Cessnock is all cars because there's very little public transport.

**JENNY MEWING:** Apart from the bus services and taxis, there are no other public transport options available. We do have examples where part of the spur lines from that rail corridor are proposed for reactivation for shared pathways and the like so we can get some connectivity and active use out of them. But that major connection, whether or not it's full-on passenger services or light rail or similar, would give us some opportunity then to provide alternative transport into Maitland, where a lot of our population does go to work. It would free up the congestion on other roads, like Main Road, as well. There are a lot of opportunities and benefits that would be associated with reactivation of that corridor.

**The Hon. SCOTT FARLOW:** Who's the current owner of the corridor?

**JENNY MEWING:** It's privately owned by, I think, Aurizon.

**MARTIN JOHNSON:** Austar owns a bit of it as well. We've spoken to Austar through our few meetings and they're open to the idea of retaining it.

**JENNY MEWING:** We are also aware that the corridor is still considered by the owner as an active line, even though it doesn't run any major services. It's used for storage and the shunting of trucks and those sorts of things.

**MARTIN JOHNSON:** Yes, the council would really advocate for the retention and looking into what that corridor could be used for in the future.

**The Hon. SCOTT FARLOW:** That would assist you in unlocking future development potential and potentially being able to meet your housing targets.

**MARTIN JOHNSON:** Yes, and other areas as well. That's right.

**Ms SUE HIGGINSON:** In terms of the biodiversity constraints reality, that's a separate issue. It's not because of mine rehabilitation requirements or anything like that. I just wanted to clarify that.

**MARTIN JOHNSON:** No. It's not generated from the mine rehabilitation. It's a broader issue which the Government needs to deal with. If I could have an opportunity to follow on from Lake Macquarie, I think it needs to be looked at from a strategic landscape perspective rather than individual sites. It's something that the State Government needs to consider.

**The Hon. SCOTT FARLOW:** I have one last question. I think you've outlined in your submission that many of the issues go back to when there were different standards when it came to remediation and potentially legacy issues, but there are no funding mechanisms available to be able to undertake works and the like to fix some of those issues. Are there any recommendations you would like to see come about from the Committee with respect to some of those historical assets and legacies and the issues that they create for communities such as Cessnock?

**MARTIN JOHNSON:** Before I answer the question, I am aware that there are one or two sites which companies are interested in looking into because there is still a potential to extract, not coal, but some more material from the tailings, which would give us the opportunity to get those sites remediated. The two things I would say are, firstly, from a legislative point of view there needs to be a look at how the pieces of legislation work together to address the remediation issue, current and post. And I think there needs to be funding provided. I don't think there's going to be an owner going back 50 years or 100 years who's going to put their hand in their pocket to remediate a site because of the cost of it. I think there needs to be a funding source provided to encourage or assist in the remediation of some of these sites. Local government can't do it itself. It doesn't have the money.

**The Hon. SCOTT FARLOW:** I think that is all we have in terms of questions. Thank you very much for your attendance today. I note that you did take at least one question on notice, and the secretariat will contact you in relation to that in due course.

**(The witnesses withdrew.)**

**(Short adjournment)**



**Councillor SUE MOORE**, Mayor, Singleton Council, and Chair, Hunter Joint Organisation, sworn and examined

**Mr STEVE WILSON**, Director and Executive Officer, Hunter Joint Organisation, affirmed and examined

**Ms KIM CARLAND**, Advocacy and Government Relations Lead, Hunter Joint Organisation, affirmed and examined

**Ms SHARON POPE**, Director, Environment and Planning, Muswellbrook Shire Council, affirmed and examined

**The CHAIR:** Welcome to our next inquiry participants. Thank you so much for making time to be here today and give evidence to the inquiry. Would any of you like to start by making an opening statement?

**SUE MOORE:** Thank you, Madam Chair. Yes, I would. Welcome and thank you to the Committee for this opportunity. It is very exciting and we sincerely say thank you for this inquiry. An overview of the Hunter JO is that we represent the 10 mayors of the region, being the Hunter region, which includes MidCoast Council, of course. We are really thrilled, as I said, that the Committee is investigating the re-use of mine land, which is an important opportunity for our region, and we welcome this opportunity to provide this evidence to you today. The re-use of mining land is a top priority for the JO, given the important role it contributes to the region's economic evolution beyond coal. Importantly, taking a strategic, regionwide approach to this opportunity will provide the certainty and confidence needed to attract new investment to drive the economic evolution of the Hunter into the future.

**Ms ABIGAIL BOYD:** Thank you to our witnesses for coming along today. In the terms of reference for this inquiry, there was reference made to the potential for defence industry activity to come into areas that are experiencing a transition away from coal. I note that you refer in your submission to the potential for advanced manufacturing, which is often code for weapons manufacture. Is this something that there is appetite for within the Hunter region—to attract more investment from weapons manufacturers?

**STEVE WILSON:** I think smart manufacturing, in terms of the submission that we made, was more around capitalising on the competitive advantages in manufacturing and the skill sets that we have in the region already, whatever that focus may be. There is already a push for more defence industry around the Williamtown airport, particularly, but we haven't been specific, I don't think, in our submission. It's saying that this land presents the opportunities for a multitude of industries that meet the competitive advantages that the region has in terms of skill sets and opportunities.

**Ms ABIGAIL BOYD:** There has been some concern expressed in other areas of the State that there are a number of really talented and skilled people currently working within mining and within the coal-fired power stations as well and that if we could harness those skills, perhaps with some upskilling or retraining, we could deploy them into green renewable technology fields. But there's some concern that the push for weapons manufacturers is going to steal some of those people or attract some of those people away. Is that something that you've given any thought to as well? Is there any audit of skills or any focus on where you would prefer to direct people into?

**STEVE WILSON:** I think it's fair to say there's no aligned position of the boards on that particular issue. The mayors of the JO focus on those issues where there's consensus and alignment across the board. Particularly for weapons manufacturing, those sorts of issues are there. You may have heard more specifically from some of the member councils who have been here, in terms of local issues. I think, more broadly, in terms of that skills development opportunity, the board of mayors sees this re-use of mining land as one component of that much broader economic evolution that is needed in our region. Inherent to that is skills development and change and making sure there are jobs for people employed in industries now, again, to move across—we're fairly agnostic at the moment on what those industries are. It's about finding the best new industries for our region that can utilise the mining lands, for example, as well as other attributes that we have in the region. We haven't made any specific judgements on what those industries are at this point.

**Ms ABIGAIL BOYD:** The issue of coal ash re-use and the potential for industries to, basically, on the same sites as those coal-fired power stations develop re-use and recycling industries to turn coal ash into pretty exciting new products in terms of concrete substitutes and tiles and a whole bunch of other things that they're doing overseas—is that something that you have had any particular focus or investigations into?

**STEVE WILSON:** At a broader level. The circular economy is a really strong focus of the JO. We see it as a new industry for the Hunter that not just creates jobs for people but also helps us on that transition to net zero, moving forward, as an industry. I'm pleased to raise that. Part of our submission talks around circular economy being one of those potential industries in the region. The sort of work that we've been doing is looking at the creation of precincts for industries to co-locate—so actually to create that circular ecosystem and support

each other in that space. Coal ash could be one of those industries where you may actually create a hub with other industries doing that recycling or generating other products that then support each other to achieve the mutual objectives of those industries. Mining lands, particularly where it's in industrial land proximity to those kinds of sites, would make sense from a circular economy precinct perspective to be able to support that kind of initiative.

**SHARON POPE:** I may add that at Muswellbrook we have been in discussions with a company that is investigating the use of coal ash to create a building product, an inner building product. Our council's perspective and, as Steve mentions, the Hunter JO's perspective is there is a lot of contaminated material sitting in the landscape and it will be a legacy for the future. If no-one uses that material, it will sit in the landscape and need to be maintained, and we'll need to be monitoring to see if there's ongoing pollution in waterways and aquifers and so forth. We strongly support the re-use of the ash. If the technology is as good as it's been explained to us, it could actually then move onto the mine sites because all the mine sites also have legacy contaminated areas from coal washing and just generally waste that they've had to generate on their sites. We certainly see it as important, removing a possible problem for future generations.

**Ms ABIGAIL BOYD:** It's a sort of a win-win, isn't it? I have one final question about the recent revelations around the amount of PFAS and PFOS in waterways, particularly around the Hunter region. I know that a lot—well, all—of those coal-fired power stations have been using those chemicals and that there is contamination at those sites. I suspect there are further sites that you're aware of that have had particular exposure to those chemicals. How concerned are you about the current revelations, and what do you anticipate doing to work out the extent of that water contamination?

**STEVE WILSON:** Again, I think that's a difficult one for us to provide an answer to. We are the representative body of the mayors, and we haven't had the opportunity to review that information, to this point.

**SUE MOORE:** It's not something that the JO or the mayors would have a controlling aspect on. We could certainly advocate and put forward any submission, should a proposal come forward in that way in relation to anything that would concern the community in regard to our waterways.

**The CHAIR:** I might continue on now with a couple of questions. Just following on from some of Ms Boyd's line of questioning and going to more general questions for whoever wants to respond, what do you see as the biggest barrier or impediment currently to progressing some of the vision for the region that is shared in this submission of yours?

**SUE MOORE:** Steve?

**STEVE WILSON:** I think there are four key elements to our submission, but I think the one getting to that question is probably around the complexity of planning. There's no clear policy or planning pathway for a potential investor or developer to re-use that mining land. You're navigating a number of different agencies and planning requirements at both State and Federal levels. I think, from our member councils, that's probably the clear message that we're hearing. Sharon, from a local perspective, whether you would like to—

**SHARON POPE:** Yes, I would agree with that. There's no responsibility allocated to an individual agency. Each agency has its own slice of the pie, but no-one is making the complete pie, and it's hard for councils and the JO and even the community to know who you're meant to be approaching, who you talk to or who you make submissions to because all of them are willing to accept information from us, but then they'll go, "Well, that's not our responsibility."

**STEVE WILSON:** If I could just add to that, Sharon, one of the challenges about that, too, is that it's often at the moment a site-by-site assessment, when what we really need is a clear strategic view over these former mining sites in the region—looking at their relative advantages and disadvantages for various industries, what the proximity to workforces are—and actually taking that more helicopter view across the region and having a broader plan, because, as we said before, it will be a key part of the region's move towards net zero, that we're able to utilise these lands.

**The CHAIR:** How will the proposed changes to legislation and policy that you're proposing in this submission specifically address some of the economic challenges to the Hunter region as it transitions away from coal?

**SUE MOORE:** I see it more as the mines are restricted by their mine plan. Currently they can't move outside that mine plan, and their rehabilitation for that mine plan is set in place as their approval allows. We see that that would free up that mine plan, so that it can then look at the best use today of that land once it has been rehabilitated.

**The CHAIR:** Do you think it's that they can't or that they won't? One of the things that's been put to us, certainly in the Government submission, was that there is a pathway to alter conditions of consent around partial

relinquishment, all of that sort of thing, but that at the moment there's no appetite for proponents. Do you think it is—

**SUE MOORE:** Yes. It's probably twofold. I think the mines have been nervous to reopen their consents to allow—because they could effectively end up with their consents quashed and not be able to continue their operations for whatever length of time those operations allow. But it doesn't mean that they would simply be able to not rehabilitate the land. That money for rehabilitating the land could be used to leave it in the best interests for the future use of that land. Whereas there might be some concern that they would be just walking away and leaving it like a dust bowl, that wouldn't be the case if it's done properly.

**The CHAIR:** In the submission you talk about a planning process needing to provide reassurance to investors and landowners in terms of altering development consent conditions. Do you have a view around what that would look like and what the processes should be or what assurance should be given?

**STEVE WILSON:** I think our submission doesn't go into the specifics of what that would look like but the first thing we're recommending is the review of what's in place now to then inform that process. To that and to the previous point too, it's around the confidence in attracting people to the Hunter. We're competing with Queensland, we're competing with Western Australia and we're competing for international investors in this region. If it's easier to go to those other places, then they will probably go to those other places if there is uncertainty around whether they'll even get an outcome in the Hunter. So I think those planning processes need to provide a clear vision of sight that it is possible to utilise these lands and to invest there.

**SHARON POPE:** I would also suggest a lot of the older consents only envisaged that the sites would be rehabilitated back to a similar land use that existed before the mine commenced, so that would often be farming, agricultural or biodiversity. So much has changed since those approvals were issued. They need conditions in their consents that actually push the mines to contemplate the social and economic issues surrounding closure and to look at other alternative land uses on those sites if the sites are suitable for them. There does need to be an incentive in their consents to do that. Certainly in our discussions with the Resources Regulator, they've indicated that a new development application could be lodged for specific parts of sites to re-use them. If that is approved and the new use looks like it's going to commence, they wouldn't require rehabilitation of that site to a biodiversity or an agricultural outcome.

At the moment it's much easier for the mines to do the rehab back to biodiversity or to agriculture because that's what they've been doing now for a while. On most of the mine sites, as they're doing progressive rehabilitation, that's what they've been doing. They've got staff who know what they're doing. To open a site up to alternative uses means moving into an area they're not familiar with. They need to become developers; they're not developers. They need to know how to attract new people onto their sites. From our perspective the transition needs to happen before the mine even closes, so there are also those issues about how do you have two uses occurring on one site. This is where I think we need leadership from the State Government to help all of us.

**The CHAIR:** In terms of the concurrent uses that you're suggesting, and we have heard this in other evidence given to this inquiry, could I confirm your view is it should be the State Government that creates the pathway to allow that to happen in terms of the legislative framework?

**STEVE WILSON:** Most of the planning matters are State Government jurisdiction, it'd be fair to say. There is Federal legislation like the Environment Protection and Biodiversity Conservation Act, for example, that has overlays, but I think the Federal Government doesn't have the same level of planning oversight that this issue requires.

**The CHAIR:** Are there specific changes to State legislation that you're proposing, or what specific changes are needed to remove these barriers to adaptive re-use of lands?

**SHARON POPE:** It really needs a thorough deep dive to understand all the separate bits of legislation that might need to be changed, but the Mining Act would have to be one of the primary ones that needs to be reviewed. This concept of allowing relinquishment of mining leases on sites even though they haven't fully rehabilitated, they haven't fully removed all of the infrastructure—we need some mechanism to be able to, in my mind, reserve some of the funds that they would've spent on rehabilitation and infrastructure removal, have that invested. We can relinquish the mining lease. They can leave the site if that's their intention. Then if over a period of time—whether that's 20 years—we've been unable to find a new use for that site and for that infrastructure, and we admit that it's time that that infrastructure now needs to be removed, there's a source of funds to do it. There needs to be certainty for the community that we can be flexible, but while we're being flexible we're not going to impose significant potential costs on future communities. It's complicated.

**STEVE WILSON:** If I could add to that, we spoke before around a strategic approach not a side-by-side approach. Often in the planning legislation it's about the approvals for a site, disconnected from other sites.

So the opportunity to strategically plan across the region, to look at those, and then look at the mechanisms, as Sharon says, that can activate that or look at the compensatory measures, the offsets and those sorts of things across different sites, that would add a lot of value to the bigger strategic vision that mayors have for the region.

**The Hon. SCOTT FARLOW:** On that point, every site is different, though, isn't it? It does still need a site-by-site analysis—

**STEVE WILSON:** It does, yes.

**Ms SUE HIGGINSON:** It's not either-or.

**The Hon. SCOTT FARLOW:** —whether it's open cut or underground. I think we've seen that in terms of some of the evidence we've received before the inquiry so far—that certain sites lend themselves to different uses. For instance, pumped hydro in some sites because of the topography and the like. We've gone and seen Black Rock here, for instance, and its topography. The site is very much perhaps determinant of what may happen in future on that site. I'm just interested in your thoughts. In a strategic sense, the *Hunter Regional Plan 2041* made some recommendations along those lines, effectively, as to re-use. I know that the Chair is quite favourable to the Hunter regional plan. Do you think there's value in an audit of every site as to what are some potential opportunities for all of them, considering their unique characteristics as well as potentially some of the strategic uses that you speak of too?

**STEVE WILSON:** One of the elements of our submission encompasses that, really. If you're doing that strategic assessment, you might start with the desktop-level analysis of where the sites are; what the timeline of their closure is; and what attributes are on those sites, particularly around the infrastructure, the water services, the proximity to skilled workforces and the transport infrastructure that's already going in there. Yes, as you said, you would be looking at attributes but looking at them in a bigger picture as to how these can work with each other across the region to achieve some of those broader objectives that we have for new jobs and growth in the region.

**The Hon. SCOTT FARLOW:** In your submission you make the case about the Hunter's economic contribution, as the largest regional contributor. Every conversation I have in the Hunter is always about, necessarily, "our fair share" and that the Hunter doesn't seem to get its fair share over the years. Do you think there is an opportunity here for perhaps investment back into the Hunter to be able to show that there is a future for the Hunter outside of coal and the Hunter can continue to be the economic powerhouse that it has been for so long?

**SUE MOORE:** Absolutely. I think we're already seeing that with the changes to the port and with the international airport. We're already a powerhouse with the coal. We can definitely turn it around and be a powerhouse in a whole different way and power the State in a whole different way. The opportunities with mine sites is one aspect of that, turning them into employment lands in a different way than what they are employment lands now. To answer your question, yes, definitely.

**The Hon. SCOTT FARLOW:** I guess they are part of the puzzle, so to speak, in terms of when we talk about a transition away from coal or a transition away from mining in the area, we have to look at new employment uses. Why not have them on existing employment land, so to speak?

**SUE MOORE:** Yes, very true. It is not solely about the fact that these lands have already been destroyed by mining. It's about what can be the best use of that land now moving into the future. Some of those lands may have infrastructure on them, which is what Sharon spoke of. Some of them may have infrastructure on them that is appropriate for that to stay there, so their conditions of consent currently would require that infrastructure to be removed. It wouldn't make any sense if you've got a railway line there and that railway line can be reused for other purposes that could bring employment into that land that would actually continue the opportunities for the Hunter.

**The Hon. SCOTT FARLOW:** How excited are community—I shouldn't say excited. I'm trying to pick up on the right word here, but it is effectively hope in a sense, isn't it, with the transition that there is something beyond coalmining, that there are new jobs that can be coming into the community, that it is something that is tangible that the community can actually see being deployed and seeing that there is a future here in the Hunter and that it's an exciting future as well.

**SUE MOORE:** I'd step back to the JO and say that initially the JO saw this as a Singleton and Muswellbrook problem because that's largely where the coalmines were. But very quickly realised that it was a whole of the Hunter problem. When you talk about problem, I like to look at it as an opportunity. Coalmines are an opportunity, not a problem. Okay, they've got a use now but they can have so much better use in the future if we get working on it right now.

**STEVE WILSON:** If I could just add to that, in terms of the focus and the enthusiasm I guess across the mayors, the strategic plan for the joint organisation is drawn from the local community strategic plans of all of our member councils. So the sentiments and directions and the support for these things actually represent all of our communities. They are community-driven plans at the local level so there is a strong interest and support and a lot of really exciting activity going on in the Hunter in that space.

**Ms SUE HIGGINSON:** I think we met with Ms Pope yesterday, but just following on from that, the actual logistics around the State Government's role assisting each council and the joint organisation of councils—and we've consistently put these to witnesses that have this role. Is your desire to have that one-stop shop discussion? I'm just trying to get that on the record, and your views and whether you've thought about that. With every council that is dealing with a particular mine in their LGA and those discussions that may or may not yet have started, is the desire to have that one-stop shop from State Government that's not red tape or another black box of chaos that you go and get thrown into but that advocates for you on the front line of State Government, that then goes behind the wall of State Government and does all that discussion with Environment, with the Resources Regulator, with Water, with Transport? Is that something that would be helpful and should that be happening already?

**SUE MOORE:** I would say, yes, largely, because that's beyond each council's ability to be able to do that. That's not our role as councils. Not every council has a mine in its local government area. I think probably half of our councils have a mine or an ex-mine. Of course Mid Coast has mines at Gloucester that are very close to closing. Of course Cessnock has much older type mines. It is very much beyond councils or the JO to control this. It sits with the regulators and sits with the compliance. Maybe it needs a separate body to actually control this, but it's definitely beyond councils. It's something that the JO has picked up because it's definitely one of our top priorities as a JO.

**STEVE WILSON:** If I could add to that, at a slightly broader level, one of the longstanding advocacy positions of the board is for a regional entity to coordinate the multiple different efforts, not just on mining site developments but in terms of the region's evolution moving forward. There's a lot of really good activity being done by agencies and industry and community groups across the region, but there is no real strategic approach to bring that altogether and actually get everyone rowing in the same direction so to speak.

There is progress in terms of the Future Jobs and Investment Authorities that have been announced and the Net Zero Economy Agency at the Federal level. We will get to see how that transpires, but very much having a level of influence over other agencies or being that concierge conduit to actually provide councils with the kind of assistance that you mention would be very valuable on a number of fronts, not just in the development and assessment phase but in terms of the jobs, and training and development opportunities, and those sorts of things as well because there are many, many different agencies involved in this space.

**KIM CARLAND:** If I could also add, looking at that brokerage aspect of the role, so where you are actually encouraging. Once you've done the audit and have changed that legislation and made that much more simple, from that strategic level where State can take a leadership role of all the different mines and their different infrastructure and assets that they have available, you can go out and do business attraction and when you're speaking to different businesses, taking more of that State-level aspect of all the different sites that are going to be closing. What assets suit, what businesses that you're having conversations with could be a real benefit for the future?

**Ms SUE HIGGINSON:** That's interesting. It has literally just made me recall when some of our government DPI reps would go overseas and talk about how good our coal was and broker it on behalf of the State. I'm just curious about how you are potentially contemplating navigating the discussions around mines that are saying that they are going to keep mining until 2048 and they are approved to do that—they are quite a long way down the lens of even commencing their closure plans—and mines that have already closed and are well and truly beyond halfway through their rehabilitation. Do you have any concept about there being a prioritisation of how we look at this and timing?

**SUE MOORE:** I think initially it's the legislation that allows those mine plans to be adjusted, and that would pick up the ones that are already into those mine plans. Obviously they're more urgent because what they're doing now is actually impacting on the future, whether that is planting trees, for example. If they're planting trees, that might be not the ideal position for trees; that might be an ideal mine site for solar panels or wind turbines. It doesn't make any sense to rehabilitate it as to the previous mine plan. We need to look at the current mine plan.

The ones that are further down the track that are potentially mining until 2048, that is much more further setback obviously—the need for that—but it's still something that needs to be planned now. It doesn't mean that you let them off the hook now and say, "Okay, we don't have to worry about them," because we need to actually adjust mine plans that they have now so that we can be doing that bird's-eye view of what that mine might be

suitable for at the end of 2048 or at the end of 2040 when they're starting to think about their rehab plans. It needs to be done as a whole-of-scale activity.

**SHARON POPE:** I might add that some of the mines that are very close to existing towns—and Singleton and Muswellbrook have those—their buffer land might actually be useful today even though they're not intending to close until 2048. Again, if we have that overarching strategic vision of the sites that are going to be suitable for urban purposes or employment purposes or the sites that are more suitable for biodiversity corridor creation, we can start looking at the buffer lands that the mines hold and even repurpose them now even though they're planning to mine for a long time.

**KIM CARLAND:** One of the things that we have included in our submission, and this is something the 10 councils are advocating for, is a whole-of-government plan. We are hopeful that we will have that Federal Net Zero Economy Agency and the State-level Future Jobs and Investment Authorities. We are hopeful that there will be that plan that does the audit of all the different mine sites that will be closing their infrastructure that are available, the workers that are going to be impacted, and what is that long-term time line of where all of these moving parts are going to need to be factored in and planned for, and so we can work back from the closures. We're really hopeful that we can lean on the State Government to work with the Federal Government as well as the councils to have that whole-of-government plan, so that we can see what is happening and when we need to be planning for things.

**Ms SUE HIGGINSON:** Finally, I think it was in some of the individual councils' submissions about how, whatever we need to do, we need to be embracing a nature-positive component in how we drive this all forward. If we were looking at going to buffer lands et cetera, do you think it's a fair proposition to say, "There should always be some safety nets in there around how whatever we do has to be nature positive" and "Now is not the time to be going back and double dipping into offset schemes that have been the ones that have been set aside at the moment"? Do you think that is something we would need to take a very focused lens on in order to achieve that nature-positive approach for the whole region?

**STEVE WILSON:** I think that reinforces the absolute need for that strategic approach again. It's very difficult to get that overall nature-positive outcome or nature-negative outcome if you're looking at things in a piece-by-piece approach. You need to look at that strategic level and put those principles into the plan you're trying to achieve in terms of the broader use of those sites.

**SHARON POPE:** Some of that buffer land is being held just so there is distant separation between the mine and other receivers that might be sensitive to noise or dust or lights. A lot of the buffer land is agricultural land. It's not being kept for biodiversity offsets as such. This was probably my point yesterday: The Hunter Valley was settled from the 1820s onwards by Europeans. There was logging, to begin with, and then a lot of clearing for agriculture. I think the mines could be doing a lot more with their current buffer lands to create a nature-positive outcome even before they have finished mining.

They could have been restoring some of these sites to a far better environmental outcome, rather than just continuing to hold them as agricultural land—provided it's not prime ag land. Clearly, some of that land has irrigation capacity. It should be growing crops; it shouldn't be lying fallow. But other parts—again, I'm going to bring up the Hunter River because it's something that I think has deteriorated so much in the time of European settlement. There could have been so much work done already to plant riparian zones along the Hunter River. A lot of the mines own riparian land adjoining the Hunter River.

**KIM CARLAND:** If I could also add, having that strategic approach allows the land that is currently undeveloped that may be looking to be cleared for industry or for future developments—we can be looking at these mining sites as an opportunity to avoid a future clearing of land which, in turn, if you take that strategic approach, could be nature positive if we take that view.

**Ms SUE HIGGINSON:** Yes, we heard that earlier from Lake Macquarie City Council. It was very much a strong appeal.

**The CHAIR:** I have one last question about the strategic approach or lens that you're talking about needing to be applied to the adaptive re-use of mining sites. One of the issues that we have heard a bit about this morning and across the course of the inquiry is around how to incentivise the private companies that own these mining leases to do something different. We heard this morning about a mining site that was in the final stages of rehabilitation but, for the parent company that's a global, multinational corporation, a tiny little mine site in Lake Macquarie doesn't rate quite so high as it perhaps does to us. What recommendations do you suggest we make to the State Government in that regard?

**SUE MOORE:** Very good question. I can't think of an answer at the moment. It is definitely a good question because it totally does happen. Why would they want to be bothered with that tiny speck of a mine when all they have to do is plant trees and then they can walk away and get their tick?

**KIM CARLAND:** Is there an opportunity to co-design the recommendations with the mining companies and with potential businesses coming in to really understand how to work through some of those challenges and also to incentivise some of those businesses coming in? What are their challenges and barriers? Maybe an engagement piece is still to come, and that's what your recommendations include.

**Ms SUE HIGGINSON:** Does that include the community as well?

**KIM CARLAND:** Yes.

**SUE MOORE:** It's interesting when you say "community" because sometimes we, as leaders, have to be ahead of the community. They don't see where they want it to be; they just see what's now. They don't have the foresight. It's our role to be prepared for what's coming, and then it doesn't just happen—obviously. Yes, definitely with the community in mind, but maybe not community led.

**The CHAIR:** What opportunities do you see, as the JO, for leveraging the existing transport infrastructure in some of these mines to support new and emerging industries in the region?

**STEVE WILSON:** Many of these sites have the road infrastructure, which is of a very high standard, and they have rail infrastructure, which is of a very high standard, and it is connected to a line that is then connected to the Port of Newcastle and existing infrastructure there. I don't know which particular industries; that's where we look at the competitive advantages of those sites and, again, the broader plan and what the industry development process is. It's not just transport; there are also water and sewer services—those sorts of things. The ones closer to town would have that connectivity with the workforce and the urban environment around it. As I said in my submission, the fact that these sites have these attributes—and, as Sue said before, the last thing we want is to see these very expensive pieces of infrastructure being pulled up only to then try to recreate that for industries down the track.

**The CHAIR:** There is also a potential market and a possibility, would you agree, for this issue that we are all facing—which is obviously not isolated to us here in New South Wales or in the Hunter—and that is the adaptive re-use of mine sites, whether it's here in Australia or globally. Is that something that the Hunter JO has considered or done any work on?

**STEVE WILSON:** I'm not sure I understand the question, I'm sorry.

**The CHAIR:** The need that we are going to have to address this issue more globally. There is obviously an emerging market for innovative solutions to post-mining land use.

**SHARON POPE:** The Hunter JO has brought people to the region to do presentations to the councils. There was a gentleman recently who came and did presentations after he had a Churchill scholarship. That opened the eyes of various staff and elected representatives about what is happening outside of the region and outside of Australia, and that other places around the world have achieved certain outcomes on former mine sites. It does give inspiration.

**STEVE WILSON:** From that work, one of the findings was that that regionalism, whether it's a formal government or not—certainly we are not a layer of government at the JO level. That regional approach in those transitioning regions overseas was really important because, again, you're not trying to replicate everything out of a very local government level. Federal governments are often at such a broad level that they can't get the level of engagement locally. The JO very much is around intergovernmental collaboration and setting those priorities with our member councils and with agencies. I think that's the role we can play in terms of, as Sharon said, bringing the right people together and collaboratively doing some of the co-design work that Kim talks about on those issues that are important to our communities.

**The CHAIR:** That is all we have time for this session. Thank you all very much for making the time to be here and give evidence to the inquiry and for your submissions. The Committee secretariat will be in touch with you all about any questions taken on notice or supplementary questions.

**(The witnesses withdrew.)**

**Ms SOPHIE NICHOLS**, Hunter Renewal Outreach Officer, Hunter Renewal, affirmed and examined

**Ms KIMBERLEY CROFTS**, Individual, before the Committee via videoconference, affirmed and examined

**The CHAIR:** Welcome to our next inquiry participants. Thank you for making time to give evidence to the inquiry today and for your submissions. Would either of you like to start by making an opening statement?

**SOPHIE NICHOLS:** Thanks very much for having Hunter Renewal here. We have been working in this space for coming up to eight years now, working with volunteers, communities and industries. In the next 20 years 130,000 hectares of mine will become available as 17 mines close. That will be including 25 final voids, 50,000 hectares of buffer lands and 40,000 hectares of offsets. We don't have a regional-scale plan to address any of these concerns as of yet. We've been waiting for this inquiry for quite some time, so it's wonderful that it's happened and that we can get started on making a plan for what happens in the future.

**The CHAIR:** Ms Crofts, did you have an opening statement to make as well?

**KIMBERLEY CROFTS:** Not today, thank you.

**The CHAIR:** We will move straight to questions, then.

**Ms SUE HIGGINSON:** You have both made very strong submissions about—and I will just put it in this context because it is consistent with another submission—the nature deficit, the cultural heritage and cultural access to lands for First Nations deficit in terms of the Hunter Valley, and the compromise and sacrifice that has been made in terms of mining for these two other very important purposes in terms of biodiversity, nature protection and access for First Nations communities to land. Are you able to elaborate on that a little bit more in the context of some very strong submissions in which we heard about the need to re-use existing mining land, particularly for social and economic growth and purposes in the region? Your submissions are excellent, but I would love, if you are able, for you to give us a bit more depth to that kind of concept.

**SOPHIE NICHOLS:** Our perspective is that we need a rigorous prioritisation of public interest. The domination of mining in the Hunter is very much apparent. We have offset lands. We have buffer lands. We have water licences. These are all privately owned and, to be attractive for new industry and to be confident in new industry, you're going to have to be fighting to get a lot of that back. The land owned by mining, the water owned by mining and the biodiversity corridors are all privately owned now. For the restoration of the Hunter, it's going to take some time to work on getting cultural landscapes back. A lot of the cultural heritage is owned by mining. A lot of cultural heritage of Wonnarua people has been recorded by mining companies. If you type in Wonnarua, the claimant group, you come up with Glencore, Yancoal or BHP, and this is all their heritage which was recorded by mining. That is because we have had mining for quite some time now and it has really dominated the valley. So Hunter Renewal, with the work of Kimberley, have put together this blueprint, which is, to date, the only regional scale that looks into voids and looks into cultural heritage. That was put together by Hunter Renewal with the help of Kimberley.

**Ms SUE HIGGINSON:** Is that a document that you would like to table with his inquiry?

**SOPHIE NICHOLS:** Yes.

**Ms SUE HIGGINSON:** Thank you.

**The CHAIR:** Great, thank you.

**SOPHIE NICHOLS:** We've titled it *After the coal rush, the cleanup: A community blueprint to restore the Hunter*. To unlock the opportunities of the future we must address the legacy of the past, and restoring the Hunter is the largest restoration Australia will ever face in terms of post-mining landscapes. There is nothing in comparison. There is nothing in comparison in any other place in the world. Of course, we compare it to the Ruhr Valley, but the voids in the Hunter are substantially deeper, and the aquifer interference—particularly its closeness to the Hunter River, which services the whole valley—is something that we really need to address. Those are the points I would make. Do you have anything else, Kimberley?

**KIMBERLEY CROFTS:** Thanks for the question. I would say those things aren't necessarily mutually exclusive, that you asked. Treating local people as stakeholders in their future, I think, is important, and many of the speakers previously in these hearings have talked about that. I think if you brought an engagement to ensure that all of those people—the community, the environmental advocates, the people who own local businesses—are involved, then you can come up with a strategic plan that actually includes all of those things. It's not an either-or situation.



**Ms SUE HIGGINSON:** You have spoken about the engagement you have undertaken, and it seems quite novel. You have done doorknocking and all sorts of things. Can you talk a little bit more about that method of engagement and some of your findings around that engagement?

**SOPHIE NICHOLS:** Most of the people we've doorknocked have been excluded from the consultation process, pretty well generally, and we've found that, if we hosted events, we get the same people that attend, basically. You see that with a lot of community groups. So we decided that we would go to them. Recently we did 300 doorknocking surveys in Muswellbrook. A lot of that was in Muswellbrook South, which was—I have to admit, I was shocked. I have lived in Singleton—I'd be the fifth generation to live in Singleton, so I'm quite aware of the area, but the lack of opportunity, particularly in places like Muswellbrook South, was shocking. In our submission, we put in the wealth that BHP's Mount Arthur has generated, and that has definitely not trickled through. There are a lot of issues on the socio-economic side of things, and if we do not get the post-mining landscape and industries brought in post-mining, it's difficult to imagine what will happen to those places. The only comparison would be in the Appalachian area of the United States, where you see mass unemployment, huge health issues and you see the rise in right-wing politics. I think that's a scary thought. That's why we take the approach that we will go to people and we will ensure that their voices are heard. Some of the people that we deal with—let's say in Singleton—we have farmers that are dealing with discussions on closing mines. Let's say one farmer I discussed with last week, he has the discussion of the mine closure, the discussion of a mine extension, the discussion of the Hunter transmission line and now the discussion of a solar farm.

A councillor said that Singleton has some of the highest State significant developments in their LGA. There is no clear pathway. We are pushing towards renewables. We are also pushing for mining extensions and we are also pushing for mining closures. So how are people in Singleton and Muswellbrook—what are they thinking? Are they thinking all at once, "Do I support a solar farm? Do I support a mine extension? Do I support a mine closure?" This transition is quite confusing. We work with these people—eight years. A lot of the volunteers that we work with are multi-generational. We work with the PCWP as well, the claimant group, to plan this because there has been a lack of planning on all government levels. We hope to ensure that an independent statutory body that looks over this large scale—as I said, we haven't seen this repair challenge ever in Australia's history—to really get this transition right for the benefit and for the sustainability of communities like Singleton and Muswellbrook in the Upper Hunter region.

**Ms SUE HIGGINSON:** Do you think there is something more specific or a framework of sorts that the State Government, along with councils, should be driving in terms of more engagement? I mean, you have gone doorknocking. Is there more that our governing bodies should be doing to be better engaging? Have you got any vision what that looks like that this inquiry could hear about?

**SOPHIE NICHOLS:** I'll throw that to Kimberley.

**KIMBERLEY CROFTS:** There are lots of different things that can be done. In fact, these hearings are a good example of some of that. You have gone to community to ask them questions and to generally ask for their local expertise on things. I think that is a really important part of it, that early on in any planning process you are going to community to say, "What do you know that we should know?" Instead of thinking of them as adversaries about final ideas, you think about them as experts that can help those ideas be more robust in place. Using a mix of different styles of engagement is also really important. That is a pretty fancy room you are in at the moment, and not everybody is going to be comfortable in that room.

**Ms SUE HIGGINSON:** We felt that too, actually, when we walked in.

**KIMBERLEY CROFTS:** The gold curtains are quite something.

**The Hon. SCOTT FARLOW:** I think it is wood, actually.

**KIMBERLEY CROFTS:** Oh, okay. The doorknocking that Sophie talked about is one thing. People are in their homes; they immediately feel comfortable. Workshops in community halls are another way that you can do it. For this report that Sophie has tabled, we did a series of engagements first with local academics from the University of Newcastle to sense check a range of recommendations that we had found from over 100 different expert reports. Once those ideas had been raked over by the academics, we took them to the community and asked them to be a peer review panel on those ideas. We did five workshops on different areas—that's in the blueprint in the centre page that you can see those recommendations. We asked the community then to go, "Okay, what should we know about these ideas?" Then we also had a survey. You can see there is doorknocking, there are workshops, there are surveys—there are lots of different ways that different people might like to be engaged and to share their expertise. I think that is the most important thing to consider—consider the local people, like the ones that you have engaged during these briefings, as experts in the context that these ideas will be placed in.

**Ms SUE HIGGINSON:** I can't remember in which submission, but there is a strong point that we shouldn't be focusing on what is good for the mining companies right now. I want to know where that comes from and why that is important. You could take it as a very superficial stance, but I thought from the way I read it that it actually had a lot of informed meaning behind why that is a necessary part of the approach to how we consider post-mining land use.

**SOPHIE NICHOLS:** Yes, I was looking at previous talks. There was all this talk about the high-quality coal that the Hunter produces in that discussion. The Hunter does produce high-quality coal, but we ship it all out. There was a really interesting argument that was put forward to me. It was that we have shipped every part of this high-quality coal out. We didn't even use it in our own power stations. The power stations were left to use the poorest quality coal, which has led to them having—there is an argument that that has caused the wear and tear of some of our own power stations. We didn't even use it ourselves.

A lot of what the Hunter has produced, we have just shipped overseas and we haven't had enough of that profit back into the community. There is a huge sense that we got from Kimberley's work and with the surveys about the Hunter, the air quality, the lack of services and yet we generate this high-quality coal that we sell for such a high price. There is a discussion. There is talk that it just gets spent in Sydney and doesn't come to the regions. That is what leads to a lot of distrust of government: that we produce it but we don't see the rewards. I think that's the point that we tried to make. We need a prioritisation of public interest rather than multinational companies. Yes, we need to talk with industry, but it should really be the voters, the community members, whose interests are first and foremost in this post-mining planning process.

**KIMBERLEY CROFTS:** In the terms of reference, (e) is about how to ensure the benefits from post-mining land use is shared between the community and mine operators. I point to the panel that given that Mount Arthur mine makes about \$1.8 million in profit every year, maybe they are doing okay and that it is time to bring some of those profits back to community. For example, there is a great article in *The Conversation* this week from Dr Simon Wright, who is a colleague of mine. He says that ownership and the ability to shape the local energy system are the key drivers for community participation. He notes that in Denmark, in their renewable energy Act, since 2009 at least 20 per cent community local ownership for all new wind projects has been put in place. I think looking at some of those sorts of mechanisms where community actually owns the economic benefits of post-mining land use should be seriously considered.

**Ms SUE HIGGINSON:** Would you be able to provide that to the Committee—that article or the research that underpins that? Could you provide us the material around that joint community ownership and the Denmark situation?

**KIMBERLEY CROFTS:** Yes.

**Ms SUE HIGGINSON:** That would be very good.

**The Hon. SCOTT FARLOW:** Ms Nichols, I think you raised the issue of the future for the Hunter. What does Hunter Renewal see the future of the Hunter being?

**SOPHIE NICHOLS:** First and foremost, we want to ensure that all commitments that have been made through the mining boom are met. There are all the commitments with the bafflings, the offset—the Government doesn't even have a register of said commitments. We don't even know what lands were committed for buffer or were committed for offset. That's just one example. We are not fully aware of the aquifer interference of the final voids as they sit on a regional scale. That's another point. We want the commitments made during the mining boom to be transparent and laid out within a regulative framework so that becomes publicly available. That is first. That goes back to the fact that you have to clean up the past to ensure the future. I think once you have that transparency, the Hunter becomes substantially more attractive for industries.

If you look at industries, I think the water licences—any industry that's going to come into the Hunter, I believe, will have to have some type of water infrastructure. How much of water licences are owned by mining companies currently? There are high security water licences owned by AGL. What will happen to those? Will they just go onto the market to be sold or does the State Government then think that they should come back to them? Will the State Government buy them? Once we kind of get into that and we start to make ourselves more attractive in the sense that you become more transparent about what's available in the Hunter, what land can you use, what is not an offset, what land has not been mined and can be used for agriculture, what water licences are available on that land, what percentage of the rail network can be given to new industries—at the moment that rail loop has to be packed up by the mining companies. Are they going to leave it there? Or are they going to pack it up? It's unclear.

Surely, Mount Arthur by now should have a clear understanding of what they're going to do with said infrastructure. They're talking about pumped hydro and Muswellbrook council, through Martin Rush—there was

only two voids that are available. Surely BHP by now should know if their void of 700 hectares is available for pumped hydro. We're coming to the end. We need more transparency from mining industries to attract other industries basically. If I was an investor right now and I was looking at Muswellbrook, I would want to know if my parcel of land—is that going to be mined? Will a mine next door be opened? Dartbrook, for instance, near Aberdeen, was in care and maintenance for 18 years. Now it has reopened. If I was an industry—let's say I go to the tourism industry and I bought the land next to Dartbrook, I'm going to be pretty annoyed that that has now reopened. The Hunter is very well set up for industries, with the connection to the port and to the roads. But we need to be more clear, in terms of this transition pathway, on what's going to happen.

If you're going to get international investors to come in and buy, let's say, 20,000 hectares, what is happening around them? What is going to be the state of the Hunter River in the sense if we get mining extensions until 2040 and they're still dumping their saline water through the Hunter salinity trading scheme into the Hunter River? There are lots of questions about the legacies of mining and how long they will influence new industries coming in and if the commitments that they have made will continue into the future. The Hunter salinity trading scheme is the perfect example—Australia's first emissions trading scheme. That was when it was high flow, mines would dump their salt water into the Hunter River.

Who is going to manage that? Who will be managing dams on post-mining lands with saline water? Currently there's the staffing there for when there is high flow. You pump it in, you can get rid of it. That's the trading scheme. But who is going to manage that in 10 or 15 years time? Is it going to be left on the landscape as you see in Cessnock? But the issue with Cessnock is that these are old mines. Yes, they are damaging, but the new mines—I mean, a 700-hectare void at Mount Arthur. The Muswellbrook Coal that's going to be a pumped hydro is 62 hectares. You've made this point a lot. You can't necessarily compare each site. There definitely has to be a site by site, but they all need to be connected in a regional plan.

To get new industries, you have to be attractive. And how to be attractive is to be transparent and to fully commit to the promises that were made by mining on offsets, on their water commitments and so on and so forth. But it is a difficult place. The domination of mining and the privatisation of water, of land and a lot of infrastructure will be difficult. We are going to have to buy a lot of that back unless they give it to us. Is BHP just going to give us the water licence? Is AGL just going to give us the high security water licences? They're worth so much now. On one river system—the Hunter River services everything all the way down to Newcastle. It starts in Goulburn and goes all the way down. It supplies everything. We have to ensure that the legacies of mining don't influence the new industries that we're trying to attract into the region.

**The Hon. SCOTT FARLOW:** So Hunter Renewal then supports part of the land being used for new industry—or the existing land?

**SOPHIE NICHOLS:** Absolutely.

**The Hon. SCOTT FARLOW:** As part of that piece of the puzzle, you're advocating that the community needs to be at the heart of that decision-making and what they want the community to look like in the future. Your criticism is that that consultation is not going down, so to speak, in terms of the communities you've doorknocked. Is that correct?

**SOPHIE NICHOLS:** Consultation is taking place. Is it broad enough? No. It's just not reaching as much people. And maybe Hunter Renewal is best placed to do that and then we take that information from there. Kimberley did that workshop and we now have that report, which we share as much as possible. Yes, it definitely needs to be broader and it definitely needs to include a much broader range of industries as well. Consultation is taking place, but I don't necessarily think it is targeting every area that it could.

**The Hon. SCOTT FARLOW:** Have any of the mining companies engaged with you as part of their remediation plans or post-mining land use?

**SOPHIE NICHOLS:** Yes. I've been to a fair few mines. We've been discussing what to happen next. It's kind of somewhat overwhelming—the size and scale of this. But, yes, we are in discussions. BHP, being the one that is closest to closing, has probably engaged with us the most. But are we getting as much information back from them? I'd say no.

**The Hon. SCOTT FARLOW:** With respect to information back, you've made a criticism in terms of the concrete plans and where the pumped hydro element, for instance, is going to happen on the site. Is that the sort of information back you're talking about? Or are you just putting inputs in and not getting any feedback? What is the criticism?

**SOPHIE NICHOLS:** There is even criticism calling them final voids. They're a final void until there is something else. I'm happy to call them pumped hydro when they're pumped hydro. There's even pushback from

the language. They are a final void until they're something else. That's something to really put on. We would love for more transparency about—we heard from BHP saying they're looking into pumped hydro. Show us. Promote it. You need to attract that. Idemitsu and AGL have with Muswellbrook Coal engaged with the PCWP and we've had discussions. But at the stage now most of them are going to be—are currently saying most of them will be a void until they are otherwise. And how long does it take until they're something else?

There is lots of, like, "zip-lines", "bike tracks". You heard from Grahame Kelly that he wants people to keep the same wage—that miners should be able to keep these high wages in new industries. If you're going to have to keep those same wages, you need industries, not just one tourist zip-line company. To get 150, 180, you need large industries where you can get promotions to maintain those wages. At the moment I'm just not seeing that. We're not seeing it. Even this notion that someone will take it on and industry will take it on—that's very vague. What industry? What company?

We heard from BHP that they want—the term was "someone". BHP was on the market for a very long time. Hunter Renewal was told that a large miner in the area that had the capabilities of taking on Mount Arthur—and not many people can take on a mine site like that. They don't have the expertise. They don't have the tools. They don't have the wherewithal. They went in, did the due diligence on Mount Arthur when it was for sale and thought no, and they got out. So who is going to take it on? What industry? What industry do you think has the capabilities of taking on a void that is 700 hectares in size? It'd have to be a large—presumably—multinational industry to take on all those rehab requirements if they're not going to make them if they sell. You have to start to think, "Who?"

**The Hon. SCOTT FARLOW:** On that void point, isn't pumped hydro proposed for that? Isn't that part of the solution?

**SOPHIE NICHOLS:** We don't know. There is no firm commitment. Do we know that the Mount Arthur void in itself is economical to become a pumped hydro? You saw with Martin Rush that they say two and he said Muswellbrook Coal and a smaller one, which I presume is Mangoola and that doesn't include Mount Arthur.

**The Hon. SCOTT FARLOW:** So you're sceptical that Mount Arthur will be used as a pumped hydro?

**SOPHIE NICHOLS:** Extremely.

**Ms SUE HIGGINSON:** Is it the case that you think, if it was the big shining, we would have heard about it? Is that where your submission takes us?

**SOPHIE NICHOLS:** Yes.

**The Hon. SCOTT FARLOW:** But that was BHP's evidence before this Committee—that it was being looked at for pumped hydro and the like. It's not like this is just some pie in the sky kind of proposal, is it?

**SOPHIE NICHOLS:** That's for them to prove.

**Ms SUE HIGGINSON:** Do you think that the discussion around being able to maintain the wage level, the job capacity—do you think that we should be taking some more realistic responsibility about that, in fact, being possible and that we are actually traversing some potentially misleading, dangerous territory? Because you can only have a mining boom once, can't you? There's only so much under the ground to pull out. There are only so many holes you can make that deliver like that. Yes, we're looking at all these future industries, but your submission about maintaining that many high-paid jobs—do you think we should recalibrate that as a matter of public interest and responsibility?

**SOPHIE NICHOLS:** It's difficult to say that we're not going to continue that wage. But from my perspective it's highly unlikely, unless you get another industry in there that can also reap said rewards. What industry would that be? There's all this "someone, industry, manufacturing"—but what? What's going to generate that type of level of wages? The shame is that you can't study—if you look at the Scone TAFE, the Muswellbrook TAFE, the Singleton TAFE, perhaps where you could get retraining and you could get the specialisation to get higher wages, it's not necessarily available. That was the point within the rural valleys that they went down that educational pathway. But the amount of money that that transition put into education was vast.

My point is that we need to be more realistic that perhaps those wages aren't going to continue. But if they are, they're going to have to be on the basis that we retrain. In an open-cut mine, most of them are dump truck drivers. They're not highly skilled; there is a percentage who are. For a dump truck driver you just need a normal licence. You don't even need a HR licence. You're going to have to then get a lot of people to be retrained if they're going to be truck drivers. The position is that dump truck drivers become truck drivers, but they have to still get that licence.

I'm not sure if the miners themselves are training their workforce to then, once that mine shuts, be at the peak of their capacity in terms of technical education or training to then get another highly paid job. I don't necessarily think that's happening. Technically, BHP should be running every one of their employees through a TAFE course right now, whether that be electrical engineers so they can work on residential or whether that be dump truck drivers and they can have a HR licence to do truck driving. That needs to happen so they have the capacity to earn as much as possible post-mining.

**KIMBERLEY CROFTS:** There's another report that I did alongside Hunter Renewal in 2021 that is worth looking at. I can send that to you.

**Ms SUE HIGGINSON:** Yes, please.

**KIMBERLEY CROFTS:** During the workshops with community, one gentleman said that he can imagine the Hunter as having lots of little industries everywhere. That was his vision. Part of that is also considering beyond the current mine workforce, that there might be, in community, people who would like to be retrained as well to develop their own entrepreneurial spirit. I'd like to call on the panel to think beyond the mine workforce to the resources that sit more broadly in community. That might be training people in landscape restoration, which is going to be one of the biggest challenges. If the Hunter Valley can get that right, they could become a global leader in mine rehabilitation, which would set up a lot of people for industries into the future.

**The CHAIR:** That's a very interesting point. Your submission talks about the integrated landscape restoration plan. Could you provide some more details on what that proposed plan would entail or what it should have?

**SOPHIE NICHOLS:** When we started doing the blueprint and some of the research, we actually bought land titles so we could figure out what was going on. We need to have public access to a lot of the information. In terms of the landscape, what areas were committed for offsets? The 50,000 hectares of buffer lands, the voids, the impact on the alluvial groundwater, what percentage of the Hunter River is owned, allocations—whether they're high security or not. We need all the information to be transparent that would involve the landscape. We were hoping to have more GIS mapping so you could go onto a site and you could look at what was happening, so it was much more visual. New South Wales has got the SEED Portal now, but that relies on mining companies putting that information in. You are relying on them being truthful and honest in their submissions.

Something like that type of mapping, where we can see what's been mined, what's mine owned, what's still under lease—those types of queries are still unknown in this space. I think that could, first and foremost, be the parameters of the regional scale. Then you'd look at places—how does Gloucester fit into it? How does Wollar fit into it? You could probably have it all over New South Wales. Obviously, Hunter Renewal is just focused on the Hunter, but those types of things that remain unknown, even to those of us who are in this space and, some of us, paid to research. That would be the first port of call: What areas are in care and maintenance? When we were hearing from Cessnock council, even with those legacies it's still a little bit unknown where those shafts are and all that. Maybe that could fit into it as well—as much information as possible that's publicly available.

**The CHAIR:** In terms of the data that is available, are you aware of the data that is available through MinView? Is that something that you're saying is not sufficient? You want a higher level of detail? What is it that's lacking in the data that exists? This is obviously quite a comprehensive new database. What is it that you think we need to add to that?

**SOPHIE NICHOLS:** The thing is the cumulative—we want to look at the large scale, and for it to be easily accessible. When we were doorknocking, a lot of people didn't even realise any of this was available. Yes, what you were discussing is a really good start, but adding to that and really promoting it more—I don't think anybody knew that the SEED Portal went live. Would they go there? I'm not sure. Something on that level of mapping, which includes all of the commitments—sometimes the commitments, I think the mining companies forgot that they committed to something and then they're going to mine it again. Even the industry is unaware of said commitments. We need as much publicly available mapping that talks about water licences, land licences and what commitments have been made to biodiversity offsets.

**The CHAIR:** You say you bought titles to better understand. Can you give us an example of what, and why that occurred?

**SOPHIE NICHOLS:** Well, it just wasn't available and people were confused. The thing with a lot of the mining is that a lot of the landscapes have fallen into the space of extensions—that voids have been promoted. The new extension that will create overburden, that will just be shoved in the old void; then you just progress on with the mining extension. But we're now at the stage that there are mines that are closing that aren't progressing and people are still very unsure of what's going on. We have a void in Glendell, which is just outside Singleton,

that's been filled with water even though they have a mine extension. They've used their water allocation to fill it with water. Should a mining company be using a water allocation to fill a void? Is that the best use of water?

People are asking Hunter Renewal, "They've filled the void. What happens to that mining extension now?" We're like, "We're not sure." The purchase of titles was just to gain access to basic information about what's going to happen. We're working with landholders that are near mining, but I'd presume if an industry is going to come in they're wanting to know as much as what the neighbouring landholder does as well. To make the Hunter, as I said, as attractive as possible, all this information needs to be as public not only to the neighbour who's been there 50 to 60 years but to a new industry that's going to come in.

**The CHAIR:** Your submission talks about the importance of offset land and buffer land. In terms of buffer land, you emphasise the importance of incorporating that or recognising that in this integrated landscape restoration plan. How could this inclusion double the economic and employment potential of our region?

**SOPHIE NICHOLS:** The first point I made about offset land is that that also has been neglected quite severely. There's parts in the Upper Hunter where there are huge issues with wild pigs, so there's a lot of work that needs to be happening to conserve that land. In terms of the domination of mining it, we have lost a lot of biodiversity. For tourism, in particular, and for agriculture, having biodiversity alongside these industries—tourism and agriculture would probably be the main ones. Having biodiversity corridors and having these kinds of landscapes would improve industry, no doubt.

Farming needs to be included. If we talk about beef or sheep, having biodiversity with grazing cattle is essential. It's going to be more essential if we get a lot more weather events that you need shelter for. In terms of tourism, we could link in cultural heritage sites, and you could go through all these areas. We have the Baiame Cave, which is a significant place, and if we link that to other corridors in that area, it's really important. To re-establish a lot that has been lost would be much more attractive to industry with the offsets and buffer lands.

**The CHAIR:** You mentioned landscape restoration earlier as a potential industry. Are there examples of successful projects from other regions that the Committee could look at—for example, the Ruhr Valley that you mentioned?

**KIMBERLEY CROFTS:** Germany is used quite a lot as an example. There are some really inspiring stories. I saw yesterday that they're spending €45 billion over the next 18 years to transition their way out of coal by 2038. In terms of the scale of funding compared to what we're spending here, we need to be realistic about what is possible. There are some really good examples that I can send you some papers on, in terms of startup industries and that sort of thing, and allowing community to be involved in developing those new industries. I'd also draw your attention to the report that Lock the Gate commissioned from EY in 2023, which is called *Diversification and growth*. That has a lot of economic modelling in it for different scenarios for the Hunter, in terms of a different uptake of renewables versus different industries. It was that report that led to our restoration blueprint and to bringing the environmental lens and the community lens onto that. There might be some indications in the EY report that you could use.

**The CHAIR:** Yes, we did hear from Lock the Gate earlier in hearings and I recall them mentioning such a report. If you're able to provide that detail to the Committee secretariat, that would be gratefully received.

**KIMBERLEY CROFTS:** Yes.

**The CHAIR:** I have a final question before we finish up. In terms of the pace of coal industry decline, your submission suggests that the decline will be faster than what is currently being planned for here in New South Wales. What steps should the New South Wales Government take to prepare for a more rapid transition?

**SOPHIE NICHOLS:** The biggest fear is that, if it declines—and we've seen this in the Hunter. When I was at Vale—I think it was Vale—they got all their workers to the Singleton Showground and they sacked them. That could well happen if a mine closed. You'd just get the redundancies. At the moment, we saw when AGL closed, with Liddell, they just went to Bayswater. That was nice. People took redundancies and then other people took other work. If the industry starts closing in a total sense, what the Government needs to do is to ensure that the commitments that have been made are continued. That's first and foremost, for public interest.

It's difficult in the sense that a miner has every right just to leave. They're a private entity and they can just leave. The days of it all being State owned are well behind us. I would say that what we could do from Hunter Renewal's perspective is that—the Auditor-General put in place that the long-term environment risks in terms of the security bonds need to be addressed. If we do experience, in whatever case it may be, the residual risk of end of mining and, 10 or 15 years down the track, we are starting to see leachate of a certain mine, or a certain void is now leaking, or we are seeing large erosion, we can draw upon those security bonds to fix that. That would be

Hunter Renewal's first perspective—that one of the recommendations from the Auditor-General in that 2017 review be put in place.

The point is that we need to get as much money out of the boom now, before it is too late. Obviously, mining companies are making a lot of money. So, in some way, increase the Future Fund or increase the voluntary planning that Singleton and Muswellbrook councils get, and maybe organise with them to get as much as possible out now rather than when the mines close. When they close, it will be very difficult for people in Singleton and Muswellbrook. It will be difficult for a lot of people who aren't even in the industry. To ensure that we are ready for that, I think we need to ensure that the commitments for the environment and for the long-term sustainability of the Hunter are met first, and then to ensure that we have as much money as possible to support the community in that transition. Then that plays into the fact that we could well have a regulatory framework that looks into post-mining landscape that comes from this inquiry. That would be something that we would push for.

**The CHAIR:** That's all we have time for, for this session, unfortunately. Thank you so much, again, to both of you for giving evidence to the inquiry and for your submissions. Our Committee secretariat will be in touch with you with regard to questions that were taken on notice and if there are any supplementary questions from Committee members.

**(The witnesses withdrew.)**

**(Luncheon adjournment)**

**Ms AMANDA WETZEL**, Individual, affirmed and examined

**The CHAIR:** Welcome to our next witness and thank you so much for making time to give evidence to this inquiry. Would you like to start by making a short opening statement?

**AMANDA WETZEL:** I want to welcome the establishment of this Committee and thank all the members for the time and effort that they're making to look at this very complex issue. I'm a qualified urban and regional planner. I've been specialising in strategic land use planning and land use planning policy throughout my career. I moved to the Hunter in 2014, 10 years ago. Since then I've held a variety of roles across the public, private and research sectors. Through this experience, I've had the opportunity to consider the implications of mining as a land use in several different ways and from several different perspectives.

I made my submission as an individual, so I want to reiterate that anything I share today is not affiliated with any particular group, organisation or site. But I do take a particular focus on the Hunter because that's where my postcode and most of my experience comes from. The other thing that I want to say is that I think the key point from my submission is that, given the scale of its footprint and its legacy here in the Hunter, I have asked the Committee to consider efforts for post-mining land use as a matter of national significance and ensure that the recommendations that are made see that resourced appropriately.

I have, in preparing for today, collated a few extra figures that I'll table now. Mining is a temporary land use, but its impacts and effects are intergenerational and often can be evidenced far outside the red line boundary of any particular mine site. In that way, it has a habit of becoming part of the fabric of a place, and when it disappears or is threatened to disappear, it's often really difficult for communities to envisage any kind of future without it. In particular, here in the Hunter, the *Hunter Regional Plan 2041* has the potential to be a game changer for how we go about doing that, by bringing together for the first time a stated ambition for a multi-stakeholder approach to doing this. That plan was only published a couple of years ago, but mining and mine closure have been around this region for a couple of hundred years. So, firstly, we have quite a complex mess to untangle before we can move forward and, secondly, while we have very good intentions now, we don't necessarily yet have clear pathways and processes to get us there.

These figures help to supplement my submission in a few ways. The first one is an illustration that I find particularly useful in demonstrating the relationships between the various activities that take place and revenues that are derived from mining activities throughout the mine stage time frames. It allows us to see the disconnect between different stakeholders' awareness that there's even a possibility for something to happen on a mine site or for them to invest and change the uses in the spaces around the mine once the mining impacts cease to exist, versus what the revenue and resources are and where those are raised within this time frame to allow us to reallocate and fund those efforts.

The second, third and fourth figures then take a focus on the Hunter specifically. Figure 2 takes a map from the 1999 synoptic plan—I know that has been mentioned in previous hearings. Essentially, it shows what the planners in 1999 envisaged would be an integrated post-mining landscape in 2020. We've all seen *Back to the Future*, and we're much older than 2020 now, but I wanted to reiterate here that considerations for post-mining land use and some kind of a common vision for what that might look like aren't new, although the efforts have now been renewed. Figure 3 overlays the Upper Hunter regionally significant growth area that's identified in the Hunter Regional Plan, with that 1999 plan. It shows that we've surpassed what the scale of mining was envisaged 25 years ago.

Figure 4 finally overlays all of the different adjoining and overlapping regionally significant growth areas in that same stretch. It shows not only the post-mining land use regionally significant growth area but also the growth area identified for the Liddell and Bayswater power stations as well as the growth area identified for the Upper Hunter wine district. There are a lot of competing and sometimes contentious issues that need to be dealt with. How we go about sequencing whose decisions and interests get made first in this process will matter in terms of how we shape the future for that part of the Hunter. I'm happy to refer back to these figures as questions evolve or take supplementary questions on them after today.

**The CHAIR:** Thank you for providing us this additional information and also for your submission, which I was very interested by in terms of the amount of detail that went into it, in what appeared to be something that was made in haste.

**AMANDA WETZEL:** It has been in my head for a while.

**The CHAIR:** I think it spoke to the quality of what you would offer us as a committee.



**Ms SUE HIGGINSON:** All of this is incredibly insightful. In terms of your proposition that it should be a nationally significant effort, what does that look like in real terms? Does that basically mean we need Commonwealth resource support and intelligence? Is that what that does look like, or is it something a bit different?

**AMANDA WETZEL:** I think at some point or another every level of government has been involved in trying to plan for the Hunter. If you go back to when I first moved to the region, there was an initiative happening at the Federal level to look at what they called a regional sustainability planning, specifically for the Lower Hunter, and out of that came a lot of information and knowledge. I think in terms of considering it nationally significant, what I mean by that is ensuring that there is a sufficient amount of funding resources and personnel that is allowed to continue beyond government life cycles in order to see a long-term vision established and carried forward.

It also means enacting or, I guess, tapping into all levels of government to share the information that they have amassed over several decades in order that we don't have to start from a blank slate. A lot of what I've done through previous projects has been trying to wrangle all of the information that's out there to help inform decisions in this space. If you spent time doing that, you'll realise that you could spend the rest of your career just trying to bring together in one particular library all of the efforts that have been made in this space. Instead, we need to use and harness that information to actually start putting some of it to good use, including making it decision-ready. A lot of it is piecemeal or looks at a very narrow or niche aspect of this complex problem, and I think there's an opportunity now for us to start building off of that and putting it to good use.

**Ms SUE HIGGINSON:** Do you think that that could manifest as an exercise that is a portal of some sort, like the repository of all of this work that you're talking about? If so, what does that look like in terms of useability and purpose and utility? Does that mean that somebody has to also do a really clear analysis of all of that and then make that a click-through, accessible "Hey, this is what it looks like"? Does it look like building layers of material? I'm just curious about if you've clearly considered it.

**AMANDA WETZEL:** Yes. As a strategic planner, if there was a single way of putting a portal together that allowed every stakeholder that needs to use this information to make decisions, I would be a bazillionaire by now. Unfortunately, there is not. I think there are base layers that could come together that gives us a starting point or at least reduce the amount of duplication that happens in this space. Every consultant project that kicks off that has to look at post-mining land use will be repeating some of the same considerations around the same scenarios, trying to bring together a time frame or a time line for when each mine is going to close, and there's no definitive single source on that information.

If you look at strategic land use planning here in New South Wales, there are a set of common assumptions or common baseline assumptions. Even putting together a short series of those for this particular effort, I think, would be useful. I definitely think there's a need for some kind of a spatial portal. I referred to that in my submission with respect to the mine closure plans. One of my colleagues, in a previous role, had to go to every individual mine site operator's website to then find on the website somewhere where they had published their closure plans. It comes down in a PDF format, which means that you then have to draw it on whatever GIS or whatever other software you're going to use to try to envisage it. If you're a regional planner, like myself, you want to be able to see what those mine sites that sit next to each other are thinking and doing. That's a tedious exercise. That could be done and it could be made available without any real sense of political or future-intent use lens. That's baseline information. What is currently approved should be public information, in my opinion.

**Ms SUE HIGGINSON:** In relation to your point on the transfer of ownership component in your submission, we just heard some evidence from a previous witness about the amount of assets that really are held in private ownership now and how we look at that and whether we're going to need to create new forms of transfer of assets and requirements—for example, the water licence. I'm aware there are millions of dollars worth of water licences held in the Gunnedah, Namoi, Hunter et cetera, and then there's the land et cetera. Have you given more thoughts to frameworks and structures around what that could look like?

**AMANDA WETZEL:** I'll probably sound like a broken record, with things you've heard before. We'll need to have multiple vehicles and mechanisms to be able to have that occur fairly because a lot of that will be specific to each individual site. There was a project that I was involved in with Warrumbungle Shire Council as a consultant to them. This was in relation to the Cobbora coalmine, which was a mine proposed by the Government, so all of the land and water entitlements and everything were assembled for that mine to be developed. But it was never developed; the business case fell through, and there were additional investments that were required that ultimately saw all of those water entitlements and the private properties that had been assembled put back onto the private market.

It was a huge opportunity missed for council there. They tried to intervene before the water entitlements were sold to ensure that some of that was saved and kept for uses back in the community to help them kickstart

economic redevelopment and repopulation around the Dunedoo area, but there was no mechanism for those water entitlements to be held, and, ultimately, they were sold and all of the land was sold back. It was a huge strategic missed opportunity for the council in that respect, but it would be different, again—I know you're going to hear from the Black Rock proponent after me, and I'm sure that there are lessons to be learnt from how the transfer of risk was proposed and then ultimately handled in that particular site's case. Equally, I think previous submitters had talked about things like infrastructure, community heritage or heritage properties that are held on sites. How those get transferred back to community use will depend on whether it goes to council or a community group or the like.

**Ms SUE HIGGINSON:** As a strategic planner, obviously there's a bunch of philosophical underpinnings to the entire system of land use and property and private/public. In terms of sovereignty et cetera, is there an underpinning that we can find somewhere to justify, say, transfer of ownership of some of these privately held to public or community or government? Where do we look to find that in a system that is so limited in terms of its capacity to compulsorily acquire and those sorts of things?

**AMANDA WETZEL:** That's a big question. I don't know if I have a single answer for that one, I'm afraid.

**The Hon. SCOTT FARLOW:** Thank you very much for your attendance and for your submission. The *Hunter Regional Plan 2041* is a great document but, like all documents, it's only as good as what's actually happening as a result of it. On the ground are you seeing anything being implemented as part of the *Hunter regional plan*?

**AMANDA WETZEL:** Sure. The place plan or place strategy program has kicked off. There are examples of place strategies occurring in other areas. I haven't been directly involved in many of those—

**The Hon. SCOTT FARLOW:** Don't worry, we're not blaming you.

**AMANDA WETZEL:** —but anything that I would know would be entirely anecdotal and it would be unprofessional for me to claim that those are accurate truths. In my professional experience, when you change an approach and you introduce something like the place strategy program, until you prove that it works there's going to be apprehension and there's going to be a bit of suspicion. If you look at the history of planning here in the Hunter, there is reason for stakeholders to not necessarily have a lot of confidence that this is going to be the thing that gets us to the end. Personally, I prefer to see more adaptive planning approaches, which means that we don't put all of our resources towards creating a document, because as soon as we put the document—

**The Hon. SCOTT FARLOW:** Documents are great, though.

**AMANDA WETZEL:** They're fantastic. Maybe let's produce a series of documents and commit to that happening is where I would see this going. The reason for that is, usually whatever the first generation of the document is tends to be about 400 pages long and it's like a brain dump of everything that we have all learnt again for the first time in the last time period of putting it together. Going back and improving upon those time and time again is where the magic happens. It's the predictability of that process which means that stakeholders that were involved in the beginning get to come back; we get to try to test out certain approaches, theories or hypotheses and we come back and reflect on whether those have worked; and, if they haven't, what is our plan B and then what is our plan C and plan D. I think the best thing that could come of this Committee's recommendations would be some kind of effort that allows for that level of continuity. You can produce as many documents as you like, but—

**The Hon. SCOTT FARLOW:** We're going to produce one as well. We'll add to the pile.

**AMANDA WETZEL:** Fantastic, but just make sure that the things that we're putting into a document that suggest what we want to do in the future are backed up with continually checking in and improving it and implementing.

**The Hon. SCOTT FARLOW:** You talk about the Hunter being a test case in a sense, nationally significant, and I think—to some of the documents that you've provided us with today—you see the expanse of the issue when it comes to the Hunter and the challenges the Hunter faces but the opportunities that presents as well. From your previous work, and noting that is unfinished work, do you think there is appreciation that this is nationally significant?

**AMANDA WETZEL:** I think in certain circles, absolutely. If you look at it from a research sector, this is a highly studied area. And I'm not just talking about the area in the Upper Hunter that's in the Hunter regional plan. There are researchers from around the world that come here. If you search for case studies of post-mining land use, you'll find the Hunter. The irony is that we haven't solved the problem yet, right? But the scale of the opportunity here is globally recognised. I think if we were to open that up and genuinely put efforts towards the

planning side of things, that you'll find international talent will come here just to be working on what we have to offer in that space.

To singularly focus on opportunities for development for employment-generating uses in the traditional sense would be a missed opportunity. The potential for us to look at testing out new methods for rehabilitation and regeneration, regenerative farming methodologies—there's a diverse range of what is traditionally called rural land uses and they're often overlooked in terms of their value in employment and research opportunities. There's value in considering those as part of this package as well. Some of those might not be able to happen on a mine site in the time frame that we're looking for to achieve that seamless transition of "one job out, one job in". I think we would be naive to think that we'd be able to achieve that on every single mine site.

But what I've reflected on in the course of my various roles is that there is an influence of mining that exists outside that red-line boundary. If we take the Upper Hunter, for example, the entanglement of the Upper Hunter wine district with the Upper Hunter mines is a great case study. I had a project where I was involved in interviewing several of the vigneron and other rural producers that are located up there. They're waiting for mining operations to cease and have investment plans in their properties post that period. A lot of them, interestingly enough, are families who also work in the mining industry.

So when I say in my submission that mining is entangled in the Hunter region, it genuinely is. Why should we be necessarily trying to expedite or fast-track activities on a mine site when they could potentially be then further stifling opportunities or delaying opportunities in the fabric around it? The multi-stakeholder approach that needs to happen here needs to include communities adjoining sites. We should open up our eyes to opportunities that exist in the widest possible sense and not just on the former mining assets or the former mining lands.

**The Hon. SCOTT FARLOW:** When you say "the widest possible sense", you mean not just the direct adjoining areas but also the townships and the like that might not be necessarily a great tourist destination if you drive through an open cut mine, for instance.

**AMANDA WETZEL:** True. Yet a lot of these areas do hold a level of tourism, nevertheless. Like I say, we've got touring researchers who are coming here, effectively to—

**The Hon. SCOTT FARLOW:** Studying the post-use, yes.

**AMANDA WETZEL:** Exactly, yes, to study and look at the mines. I had a great conversation with some colleagues around what do we mean when we say post-mining land use. You could interview 20 different people in the Hunter and you would get 20 different versions of what it means to them. If you interviewed a cafe owner on Singleton high street—"What does post-mining land use look like to you?"—they would talk to you about what a different customer base would need to be for them to survive. This is something that can't just be trying to expedite or make most opportunity just off of mine sites. It needs to be a whole-of-community exercise.

**The Hon. SCOTT FARLOW:** You've also talked about some of the duplication in the process. Part of it, in your evidence to my colleague Sue Higginson, was with respect to different sites effectively going and reinventing the wheel when you could have a database or some sort of common planning assumptions that underpin some of that work. I imagine some of the duplication you speak about is in terms of approval pathways and duplications that I think we might hear further on from some of our witnesses later today. Are there any specific ones that stick out to you that could be easily streamlined?

**AMANDA WETZEL:** I'll probably defer to those who've been involved in the development approval space. One of the benefits of focusing on strategic land use planning is I get to avoid DAs. But I do get to hear a lot from proponents of development applications when pulling together land use planning policies or strategic land use plans. There are issues that will come up through the DA process. There'll be multiple consultant reports that obviously need to support various applications, and I'm sure that there is duplication in that sense. But there will also be issues that happen outside of a development approval process. And this is probably taking your question further than you where you expected it to go or wanted it to go—

**The Hon. SCOTT FARLOW:** I appreciate that. That's fine.

**AMANDA WETZEL:** Another issue with the way that the strategic planning framework is set out, or the statutory planning framework rather, is that we have the State-level environmental planning policies and then we have local environmental plans that are the product of councils. The State environmental policies will override councils' efforts in that space. What that means is that sometimes land-use permissibility can be taken out of the hands of the land-use zones that have been set by council, and we can make things permissible either through a separate DA process or without a DA process altogether. A lot of the code complying and exempt developments that occur through a State environmental planning policy could, and some already do, have the potential to allow

development to occur on a mine site but not on the adjoining site. That may be at odds with where the renewable energy transmission lines or other infrastructure is being put next door.

What gets missed out here are things like scenic characteristics, scenic values and visual impacts, and they can often be at odds at the approval stage about whose priorities take precedence or they may never be considered through an approval process at all. In that respect, I share some frustrations with other strategic planners in this space, which is that we could do a lot of very good work to work with communities to identify what it is that they want to see, and that can often be completely overridden or never taken into account in approval or development without approval sorts of processes.

**The CHAIR:** You mention in your submission about a key project initiated by the CSIRO in partnership with UQ and the University of Newcastle. Given your strong recommendation that we request a briefing, I wondered if that would be something you'd be happy to take on notice and liaise with our secretariat about providing details of.

**AMANDA WETZEL:** Absolutely.

**The CHAIR:** In terms of the synoptic plan for 1999 that you've provided that picture of and it not being fully implemented, what were the key barriers to its implementation?

**AMANDA WETZEL:** That's a hard one for me to answer in full. One of my first roles when I moved to the Hunter, to Newcastle, was as the manager of regional planning for the then New South Wales planning and infrastructure agency I think—there were several names while I was there. At the time, it was a reference document that was cited in the Upper Hunter Strategic Regional Land Use Plan, and so it was one of those documents that has 134 different actions or thereabouts for various parts of government to take forward. I believe one of those actions was to utilise what was set out in that synoptic plan as an underpinning for planning going forward.

When I requested a copy of that plan, it was very difficult to source, even from within a government agency. There could be a whole range of reasons for that. To be fair, it was produced in 1999, and so whether the time frame and the sequential plans that had existed between then and the one that I was grappling with—we lost touch with what the detail of that plan looked like. I was also told that a lot of the elements of it had already been included into the Upper Hunter Strategic Regional Land Use Plan, and therefore in that way parts of it had already been implemented. I have never gone back and compared one with the other to see which parts were carried forward and which ones weren't, but by the time we got to the final Hunter regional plan—the version before the one that's there now—the reference to that document had disappeared.

**The CHAIR:** You touched on this bit earlier, but how do you believe that moving forward we can address these sorts of issues in the current and future planning efforts like the *Hunter Regional Plan 2041*?

**AMANDA WETZEL:** I'd go back to my previous statement about not just letting the production of a plan as a document be the final win. I think our definition of success in this case really needs to be the establishment of a culture and a vehicle for ongoing planning. We are at a time where there is considerable amount of change happening on every front that influences this effort, and not just in terms of how long mining will continue, what it will look like as it continues, who is going to be the last one standing, how do we overlay a new renewables economy on top of this, what does the future of work in the general sense look like and how do we ensure that young people have opportunities to move forward. These are things that keep people up at night and they are things that don't have a definitive answer.

If we think that our definition of success is to go back and recreate something like the 1999 synoptic plan, we'll end up in the same way that it has ended up, which is that it was great and people bought into it but it didn't find the hook that it needed to be resourced or implemented in full going forward, and someone will be searching for our document in another 25 years. In respect to your question, it would be to revert to a more adaptive planning or a sequential planning program that is resourced to continue and can be that single source of information for common assumptions and baseline information. That way when we're starting out and having to think about each individual site in a new way, we have a starting point to jump from or a common platform to jump from.

**The CHAIR:** In terms of approval pathways and site relinquishment, you highlight in your submission the sort of complexities and inefficiencies that exist in the overlapping approval process under the Mining Act and the Planning Act. Could you provide examples of best practice or a streamlined approach from other jurisdictions that might inform improvements that we could make in the process?

**AMANDA WETZEL:** I can take that on notice. I can provide examples of international frameworks that try and get us towards what they call a merit assessment approach. I think I've even annotated that—yes,

"merit-based access to land" on that first figure. The trouble I see in the approval space is that anyone who has ever done project management and is familiar with the term critical path, which means that something has to stop in order for the next thing to begin, right now, if you look at figure 1, where we pick up on how do we find an alternative use for this mine site is at the point of relinquishment or very close to the point of relinquishment. There are a few problems with that.

The first, and I'm sure that you'll hear this from the next time slot, is that very few mines ever actually achieve full relinquishment. There can be partial relinquishment. I think if you look at the S&P database globally, the fraction of mines anywhere in the world that actually get to that stage is minuscule. Again, if we set out to try and make sure that every mine site everywhere that's operating now is fully relinquished and transferred across, we're setting ourselves up to fail. Go bold, that's great, but manage expectations in that space.

What these international frameworks attempt to do is to provide guiding principles that allow, on merit, certain uses to be introduced prior to the relinquishment. To get us to that stage where we can have a framework that works that way, there's a whole process first. We need to understand what the risk is that the regulator is trying to manage. We need to understand what types of uses potentially could be inheriting what types of risks, and that will inevitably be site by site variability. But we can only but try, right?

**The CHAIR:** In fact, we have to.

**AMANDA WETZEL:** The international framework that I'm referring to I believe has actually been adopted at a Federal level, and it has kind of been up to the States to apply it. I would have to do a bit of extra work to look at how and when that has been applied, but I think it's something that is worth the Committee examining.

**The CHAIR:** That's very interesting and helpful. You mentioned also, and touched on it earlier, about a repository of data for final land-use plans, and we have heard through the inquiry about some of the challenges that the inability to access that information poses. How would you envisage that information being compiled and utilised by different stakeholders? What challenges do you see in us being able to pull together that information? How can we overcome those challenges?

**AMANDA WETZEL:** I think this is an easy fix, which is why I put it in the submission. There is already something called the mine closure portal, which is on the mining regulator's website. At the moment, from what I understand, and this is through conversations with various government agencies, every mining company is required to submit their information in GIS format to the regulator. That information, as far as I'm aware, already exists. I can't comment on the reason for it not being available now. There are a whole range of reasons why it isn't. But there has been a public promise to make that information available. I don't see any reason why it shouldn't be made available, but I certainly see the Committee being able to influence that happening sooner.

**The Hon. SCOTT FARLOW:** Recommendation one.

**The CHAIR:** That's very helpful.

**Ms ABIGAIL BOYD:** Thank you, Ms Wetzel, for coming along and giving us the benefit of your expertise. It has been a pleasure to listen to your answers. At the end of your submission, you talk about how we need to not repeat the mistakes of the past. As we're moving into new renewables projects, you say:

... there are important learnings in post-mining land use considerations that would be transferable to the emerging 'new energy' market.

Can you talk us through what those lessons are and how we can be planning better to not make those mistakes again?

**AMANDA WETZEL:** Absolutely. The first figure—I believe you've been provided with a copy online.

**Ms ABIGAIL BOYD:** I haven't seen it yet.

**AMANDA WETZEL:** I think the first figure is relevant insofar as the same stages that a mine site goes through, a renewables project will ultimately go through, but to a much different time frame. From what I understand, a solar farm's lifespan, rather than the two- to 100-year operational span that's shown here for mining, could be 10 to 50 years. There's an opportunity, in that case, for us to not get a full generational disconnect or a multigenerational disconnect between when the thing starts and when the thing ends. Taking lessons from what we've missed in terms of opportunities from mining and putting that into how we plan for and support renewable energy projects to be delivered would absolutely be a no-brainer, from my perspective, to help support communities. On top of that, it's worth recognising that in many cases the mining-affected communities that we're trying to support now will also be renewables-affected communities in the future. There's a justice point there, I think, that should come through pretty clearly.

**Ms ABIGAIL BOYD:** I've been travelling around and seeing different councils that are facilitating new wind or solar projects, looking at how they're approving those projects and getting them on board. What I'm hearing is that there is a real ad hoc approach to each council having to deal independently with a proponent of those projects. Each of them seems to be making up the way forward as they go along, whether it's working out what to do with huge numbers of people coming in for the construction phase but then leaving again once the project is up and running and only leaving a few people behind, or where you house those people when they're first coming in. Those sorts of planning issues, and also the discussion of what community benefits scheme is put in place—it seems like they're all acting independently. Do you think, given the pace of change and the pace that these things are moving at, that this Committee could also recommend a greater level of transparency or some other sort of portal for sharing those sorts of experiences as we're moving forward?

**AMANDA WETZEL:** I think the key thing there is to ensure that local government is allowed to retain its autonomy in that space. The best thing that we can do when we see multiple stakeholders or agencies trying to pull in the same direction is to point out that they're all pulling in the same direction and that perhaps they should share their insights and their knowledge. There is great benefit in coming together on an annual basis to reflect on learnings. There are communities of practice that could be established. Again, in this space there will be niche specialisms that might need to be supported or shared. One of the events that we held with the Institute for Regional Futures involved bringing together stakeholders from the Gladstone area with the Latrobe Valley area and reflecting on the commonalities and the differences between what's happening here in the Hunter and in those other regions.

While there were huge variabilities in terms of the time frames they were needing to deal with, the communities and the resources they had available to them, it was all common intentions and similar outcomes that we were striving for. Just the benefit of stakeholders, number one, realising that they're not alone in that space and, number two, hearing from others about what they tried and what worked and what didn't work, helped to keep the momentum and the enthusiasm and the scope of imagining what is possible alive. I think that's important, particularly when you're talking about issues that mean that whole communities are going to lose what they thought their future looked like. Like I said at the start, this is often a very high-stakes issue to deal with.

**The CHAIR:** Regarding legacy sites and their potential, you note that there are several historical and abandoned mine sites that aren't fully documented but that could be valuable for urban expansion. What strategies or methodologies would you recommend for mapping those legacy sites and what criteria should be used to guide decisions about bringing them back to a more purposeful use?

**AMANDA WETZEL:** As far as I know—of course, I'm trying to find a lot of this information out—there are a couple of online sources. There is a base atlas from mining, which has been the key source for me to find where the historical mines exist. There was a former New South Wales government website called Common Ground that mapped out where all the titles were. That was decommissioned a couple of years ago; my understanding is that the intent is for this new portal to take its place. There's a government GIS portal called SEED; I don't know what the acronym stands for. They would hold a wealth of information that might be useful in this space.

Bringing it together, in the first instance, to find out what the scale of mine-affected or mining activity affected locations looks like would be good. Where you go from there really is a piece of string. Each individual council will know what might potentially be an advantageous location for them to undergo more detailed mapping. The problem with legacy sites—again, where did the 1999 plan go?—is that some of these may never have been approved in the first place, depending on when they started, and others may have been approved so long ago that the archives are not reachable or available. To get to the point where we can fully understand and have detailed mapping of every risk and every type of historical land use on these legacy sites would be a very costly exercise, so there would need to be some sort of prioritisation process to decide which sites were worth investigating further and which sites we can leave as is.

**The CHAIR:** Given your experience and your observations, are there specific actions or structural changes that you believe are necessary to strengthen that leadership and regional coordination and governmental coordination to effectively manage the transition to post-mining land use in the Hunter?

**AMANDA WETZEL:** I know that there has been a lot of discussion in previous hearings and segments about the transition authorities and the authority model that is coming out. I see those as being absolutely essential to having a single point of contact. You've also heard from a lot of councils here in the Hunter which I think exemplify leadership in the local government space. Lake Macquarie, Singleton and Muswellbrook, for example, have gone far above and beyond their statutory remit to find the best outcomes for their communities. I think they've taken it as far as they possibly can, from a local government perspective. Structurally, there needs to be

some point of coordination with it at the State level. That needs to be, in my opinion, a single point of coordination. At the moment, you could probably name nearly every agency—

**Ms SUE HIGGINSON:** We heard 16.

**AMANDA WETZEL:** I am sure if you continued to scratch you would find more. Again, it just shows the extent to which mining and post-mining features are essentially the fabric of a place. If there is a way of not necessarily introducing or duplicating anything that agencies are already doing, but creating a forum that allows for that coordination and genuinely allows for individual councils and other stakeholders in the process to have a seat at that table, I think that would be a fantastic outcome.

**The CHAIR:** Thank you. That is all we have time for today. In terms of questions that were taken on notice, our Committee secretariat will be in touch with you in terms of answers to those. We thank you so much again for making time to give evidence to the inquiry and for your submission.

**(The witness withdrew.)**

**Mr TONY PALMER**, Chief Executive Officer, Black Rock Motor Resort, sworn and examined

**The CHAIR:** Welcome and thank you to our next inquiry participant for taking time to give evidence today. Would you like to start by making an opening statement?

**TONY PALMER:** Thanks for your time and focus on what I think is probably one of the most important issues, certainly in our backyard at the moment. It is also great to have a platform where I can share some knowledge. Really, my interest in the inquiry is to say that I am on the front line, and I have probably pioneered not just talking about doing something on a former mining site, but actually doing it. I hope by sharing some of those experiences and certainly drawing them out in the form of questions, it will help light a bit of a pathway to areas for learning and focus.

For the record, I want to state that the vision for Black Rock Motor Resort was actually quite simple. It was to build a world-class facility where people who like motoring can come and share their passion. When thinking about what the use looks like, think more like a ski resort or a golf resort. Imagine if you were pioneering the first ski resort in an alpine region, imagine the regulatory framework that you would have to work within to try to get something like that up and running when you don't have a pathway to follow. That frames a little bit of the background about what a big deal it is to be not just doing something on a former mine site but to be doing what I am doing. On a planning level, it is probably a level 11 out of 10.

Just to give some background, I searched all around Australia for a site to do this. I had a couple of prerequisites. It had to be near a significant population, near transport infrastructure and near a region that was undergoing some sort of transformation. That meant transformation in terms of jobs platform. We are looking at economies that are moving towards more of a professional services trajectory and moving away from primary production through a tertiary industry of tourism, predominantly. Lake Macquarie came up trumps. It was a bit of luck, to be honest, that we found the site that we did at Lake Macquarie. It is a unicorn; I won't deny that. Whatever I share today has to be taken in the context of this is not a one-size-fits-all approach.

This is really about trying to understand the process and trying to understand how an individual site sits within a community, sits within a greater region, sits within a State and sits within the country. Nothing can really be assessed on merit without looking at the bigger picture and also zooming in on some of the process issues. One of the issues we wanted to focus on was finding the site in October 2015. The very first person I appointed was a gentleman called Stephen Barr from Barr Planning. He is a town planner by trade. The first port of call was to come and meet council to see if there was a strategic alignment with the vision of the city and whether a motorsport recreation facility was actually going to fit within the vision of the city. Forget the State framework that it sat within. It is a super important thing to understand that if the city hadn't clearly identified tourism, and in particular adventure tourism, as something that was on its strategic pathway, I was prepared to walk away from it right there and then, which I had done on many occasions with other councils in many other States. If it is not a fit, that's it—it's over.

We had strategic alignment. We went through a DA process. I will save the details on that, but we effectively submitted two whole DAs. None of the issues that were raised at that level related to post-mining land use or the use of an old mine. We were just being assessed under the LEP and under the DA. There was no consideration really given, other than, "Look, yes, it has subsidence issues." Everywhere within this region, that is pretty standard. In terms of the process we found ourselves in after we received DA approval in May 2019, it was the untrodden path of mine-lease relinquishment. That was our blind spot. That was my blind spot. I took for granted what I was told, which was that it was pretty much a formality to go through a mine closure process.

Certainly, getting a ESF2 sign-off and getting a sign-off from the regulator that says the land is safe, stable and non-polluting and has been returned to the state that was identified in the mine closure plan is seemingly a more well-identified pathway. Taking the next step beyond that from ESF2 to a full relinquishment of the lease is not so much. I have heard various stories. This might be the first time in 70 years that this has happened. When you are talking about multigenerational frameworks that have been around for a long time and nobody knows how to deal with them, it creates a lot of blind spots on everybody's radar, both from a developer's perspective and also from a regulatory authority perspective when it comes to assessing the merit of applications.

The biggest issue I found was that the Resources Regulator was not an authority that was identified as part of the integrated development application process. Unlike Subsidence Advisory, who has a seat at the table, the regulator really didn't feature anywhere. But in the end, it became the thing that stalled the project for the best part of four years. That was in part because the mining company was not resourced, and no-one was really aware of what needed to be done. It was a bit of test and learn along the journey. As an observer—I am purely independent; I am not from the mining industry and I am certainly not advocating that I know all the answers to



this—seeing the legacy relationship between the regulator and the mining company, which is very much an adversarial approach, they do not sit on the same side of the table. That is the point.

I think what we came to as a conclusion was that the way to solve some of these bigger problems was to actually walk around from the other side of the table and actually sit together to work out where we are heading and see if we are aligned with the same goal, and then make the pathway together. That is what I saw. To one of the member's points about a single point of contact and some ability to bring it together at a very senior agency level, when you are in unchartered waters, that really makes the difference. It really got a couple of heads together in the room who said, "Right, you know what, we all don't know what the answer is; let's work it out together." We are not trying to create something out of nothing. There are frameworks that we are working within. We have to work within those frameworks. That's understood.

A bit like the DA process, we effectively worked in a concierge-service relationship with the council where we all had so many unanswered questions from both sides. What worked really well was we had a single point of contact, and we sat down and literally knocked over each red flag as they came up. Every single problem was jointly solved. It wasn't "Okay, well, here's a problem. You go away and solve it, or give us your best answer, and we'll come and mark your exam paper and see whether you did well or not." You'd probably add another eight years to the process if that's the way we worked. I've said this before—I've done a double masters degree in patience on this process. In writing my dissertation on it, it would be that we can all do a lot better.

When I say a "lot better", "a lot better" can be quantified by focusing on problems, by not being afraid to lean into the problems and actually really sit down and identify what it is that we're solving, because unless you know what you're solving it's all rhetoric. It all comes to a whole lot of hot air and a whole lot of chitchat. Lots of well-meaning ideas are shared, but it doesn't help the doers do. The doers need to do in order to make things real. I really hope somebody else is right behind me wanting to do something on a bit of mining land, but I can tell you right now that the inertia of the flywheel—if we don't have a win quickly off the back of this and accelerate what we're already doing, it's going to wither and die. People will lose faith at all levels. I think we have a great opportunity to peg, and it's not very far away.

We're talking about probably the biggest economic transition of a region or an economy in Australian history, really, for the next 30 years at least. I've already done nearly 10 years, and 30 is not a long time. Not a lot of people get to think that far in advance. I really want to impress on everybody and thank everybody for their attention in this inquiry, because what comes out of it is going to affect the next 30, 50, 70 or 100 years in the future of what could be a transitional moment not just for the region of the Hunter but also for New South Wales to take a leadership role as a State and show the rest of the country that we do think about the future. Like it or not, mining is not going anywhere. We have to embrace it, and we have to work out a better way to do it.

We have to work out a better way to transition from an economically productive, royalty-generating industry into something that may not be royalty generating but, if we can create taxpayers and we can create new jobs in new industries and help support the transition of the economies that are going to be left behind when the mines are closed, then I hope that's the legacy that we get to leave behind. That's a long introduction. I wanted to finish just by saying that the question to focus on is why did this take so long? Honestly, it's really simple. It's just about understanding the planning framework that we sit within. It's already well documented. Trying to find some efficiencies in that is not about trying to recreate a planning framework. It's not trying to throw out the baby with the bathwater.

It's just trying to find where those little hurdles were and trying to find whether it's a people fix or whether it's a process fix. I think that's where I'd zero in on the attention for the learnings. I want to close by saying that the incentive needs to be brought into focus as well. The incentive for the mining company to actually go through with the full relinquishment process is very little. It's very resource intensive and there's not a lot of win for them other than reputational gain. I think we've proved that reputational gain out of positive post-mining land use has been good, but the issue for a lowly little developer trying to have a crack is that we had a pathway in the previous Government. We had the Regional Job Creation Fund, a regional development fund and there were grants. We were told to go and submit. We basically ticked all the boxes. We spent about \$400,000 putting these submissions together, and both of the funds just disappeared.

We don't need the funds to make this work, but what it does is bring these jobs online a hell of a lot quicker. What we're facing now is, when you're looking at financing a project on former mining land, everyone has got a bit of a smell about it. It's like, "This is all a bit risky." It's not; it's quantifiable risk. It's engineering risk and its environmental risk. It's all the risk frameworks that we have to be assessed under through a DA process. What would be super helpful, whether it's from the royalties rejuvenation or whether there is a sovereign fund somewhere that we can access. The best is that it's a grant and in the middle it's probably a government-backed loan or, at the very least, it's some sort of guarantor to a loan from a bank.

The banks want to do business. They're open and they want to work with us, but there is no precedent for going out and borrowing money against a post-mining piece of land and turning it into what we're turning it into. That's really the spectrum of all the things that we're dealing with at the moment. This is still happening; we're doing it no matter what. We're going to be open for business in June 2026. What I'd love to see is lessons learnt and also accelerate bringing this thing forward. The momentum is there; we've just got to be careful not to lose it. That's my long introduction. I'm sorry.

**The CHAIR:** Thank you. It was very helpful. As someone that is also kept up at night thinking about this sort of stuff, a lot of it resonated quite well with me. You mentioned in your opening statement about the lack of incentives, particularly in those final stages between the ESF2 and the actual relinquishment. Have you got suggestions for us apart from the need to do something about it? Is there anything that you think would actually help?

**TONY PALMER:** The incentive at that point is really for the mining company to have the guts to push it forward. I don't know what that incentive is, to be honest, from the mining companies' perspective. For us it's just having a clearer pathway forward. There is no real incentive at that point for us to do anything more, other than being able to get on with the project while it's still undergoing the formal relinquishment stage of the process. If ESF2 is a trigger point where we are able to then get on site, and there's some transitional use of the land where we can get on and develop it—I'll give you an example. If we'd received ESF2 sign-off and were able to get on and start doing our development—which was approved through the DA process—while we're waiting for the final relinquishment paperwork to be done, and there was no penalty for the mining company in letting us get on their land or for us getting on there, then we would be four years ahead of where we are right now.

**The CHAIR:** Four years?

**TONY PALMER:** Yes.

**The CHAIR:** This is what the previous witness commented on and their lovely, helpful diagram around the merit-based access to land.

**TONY PALMER:** Yes, very much so.

**The CHAIR:** So in your case, you would be four years ahead?

**TONY PALMER:** Yes. You can either have a mining company sit around and do care and maintenance for 20 years—

**The CHAIR:** Which they do.

**TONY PALMER:** —or you can have an approved future use which allows and considers the approved future use, whether it's an environmental outcome, social or economic outcome. Development is then able to come in and accelerate that program while still achieving a full sign-off and full relinquishment of the lease. I don't know what the answer is to that, honestly. It's really just about accelerating the development process while also considering—are you going to get a better outcome by handing over the care and maintenance program to the future developer of the land under a land management plan, operational management plan or a part of the mine closure plan? There's got to be a tool in the toolbox there somewhere. I'm not a planner by trade, so I don't know what that is.

**The CHAIR:** Nor am I, but I can see that what you're saying would make some level of sense to my non-planning brain. In terms of understanding the framework and finding efficiencies, as you spoke about earlier, and understanding why it took so long, I understand that you are undertaking some work to possibly look at that with the University of Newcastle. Did you want to talk briefly to that? I would also love, if it was possible, if you could also share the results of that with the Committee.

**TONY PALMER:** Yes, definitely. I was pretty well aware from the get-go that we are pioneering something here. I always think it's good to document as you go, like a journal. This has been a long period of time, so in order to accurately reflect on the past and really document the processes and learnings, I engaged Newcastle university to conduct a double-pronged approach. One was a post-analysis of the process that has led us to date, and also to put a stake in the ground and say, "Let's do a longitudinal future case study of what economic, social and environmental outcomes are going to happen because of this project."

Professor Roberta Ryan is heading that up from the Institute of Regional Futures. We have literally just kicked this process off. I would love to share that information with you. I am doing it to be open source. This is information that I want to share publicly because, like I said before, we can do better on all fronts. We can do better and I can do better on all fronts. I think that just sharing that information is going to help generate conversation around areas of expertise that we all individually have but collectively can benefit from if we take it

as a learning exercise. One of the areas of duplication or inefficiency that I'm facing right now is—under ESF2 and the relinquishment process, the regulator assesses the land against safe, stable and non-polluting measures. They have achieved that outcome. I'm now finding myself back at the table with the Subsidence Advisory board, effectively having the same discussions that the mining company would have had with the regulator around safety, stability and non-pollution.

I have to do a bunch of extra work. I have to drill, at great expense, hundreds of drill holes on the site to prove its safety, stability and the fact that it's non-polluting. I feel like that's duplication in the extreme. It's a very slow, painstaking process. It's important work for us to do in terms of the design of what we are building, whether it is a built-form building or whether it's the road or the track. I totally get that you have to do your geotech work on that, but we're finding ourselves having philosophical arguments around what-ifs and maybes, rather than definitive outcomes, which satisfied one State government department in the Resources Regulator. It would be great if they were able to share that information with Subsidence Advisory so at least there is some data. At the moment Subsidence Advisory are in the dark as well.

**The CHAIR:** Why is that not shared?

**TONY PALMER:** I don't know. It's a simple one.

**The CHAIR:** It's probably a question we can ask.

**TONY PALMER:** It's because it's not a well-defined process. I'm not sitting here pointing fingers or blaming anybody. It's really just saying, "Here is a great example of, 'Why don't we all sit around the table together and assess this together?'" We could probably accelerate months of to and fro. That's one of a few small examples. The other is infrastructure. This is a site where we have to bring water in. We have to connect Hunter Water, which we want to do. It is about a two-kilometre run of pipe. It is about \$2.5 million worth of infrastructure that we will build. We would love to give the benefit to the local community, who have never been on town water, the ability to connect to that. Nowhere is there any remote bit of help that can make that happen. Little bits of infrastructure like that—that is something that sits outside of any framework.

Yes, it's a condition of consent for us. That's fine, and we will take it on board and we will do that. But again, if there is another lens to look at it through, it is this: What's the corridor looking like? Are we going to have houses connected into this in the future? Again, this is that concierge. You find yourself having these helicopter conversations and then diving down into the detail, but is nobody looking at what's going on right on our back doorstep? Adjoining properties, for instance, was mentioned. What infrastructure is on the adjoining properties? Is there a way of tapping into that? There's a lot that happens at a State level that was really, like I said, not part of the planning pathway, but I have found myself having to do what I can to learn how some of those regulatory bodies operate.

Other than being an annoying daily phone call for 4½ years to the mining company saying, "How are you going? What are you doing? What's happening?" there aren't really any other levers to pull or any other places to go to get answers or help. To the credit of the team at Lake Macquarie City Council—I think Amanda mentioned this as well—they go above and beyond their remit because they care about what's happening in their region and they care about the facilities and the services they are going to bring to their community. I think that's the lens you have to look at this stuff through: How is this going to benefit the greater good, not just an individual developer? It's not all just for me. There is going to be a lot of good that comes out for the greater community in this.

**The Hon. SCOTT FARLOW:** Thank you, Mr Palmer, both for having us on site and showing us around and for being here today and sharing your wisdom as a pioneer, so to speak. I have to say, with all these challenges, why persist? What's the benefit? Why wouldn't you go and look at another site?

**TONY PALMER:** That is a really good question. I think because I can see a way through. I think persistence was garnered just by not ever believing that no is an answer that you need to accept. I think it's the same with anything that is a framework or otherwise. It's there to be challenged and is there to be tested. As long as you believe that there is a reasonable pathway forward and it's going to be a reasonable outcome, then there is no reason why you wouldn't keep pushing on. Honestly, there wasn't a better site. I can't think of a better set of circumstances and location—everything. It's the one. It's like why you get married—it's the one. When you know, you know. That's also just part of my personality.

**The Hon. SCOTT FARLOW:** You don't take no for an answer.

**TONY PALMER:** I take no for an answer, but I take no as an opportunity. That's the difference.

**The Hon. SCOTT FARLOW:** As my kids say, "Further discussion."

**TONY PALMER:** As my kids say, "When it's hard, it's difficult, Dad."

**The Hon. SCOTT FARLOW:** With respect to that—and with no disrespect to your wife or partner in this regard—but, for some, they would come to this site and go, "It's all just too hard and I'm going to do what I want on an alternative location," which goes back to that point in terms of an incentive in the market. You have outlined two grants, the Regional Job Creation Fund grant and the Regional Development Australia Fund grants, which you invested \$400,000 in but are no longer available. How much were you seeking to get from both of those programs?

**TONY PALMER:** I think we were seeking around \$20 million all up, and that was over a staged period. We have invested that ourselves, in the end. It's not that it wasn't going to happen, but it basically brought the entire project forward. We demonstrated very clearly in the submissions that if we spend that now, versus spend it over a 12-month period—if we can spend it in a three-month period, basically half the jobs can come on quite as quickly.

**The Hon. SCOTT FARLOW:** You can create jobs tomorrow rather than 2026, effectively.

**TONY PALMER:** Exactly. I literally had a call last night with someone and I said, "I can't bring you on until the middle of next year." They said, "But you said this." I said, "I know but, unfortunately, we have to stage our development now. We are still on track for 2026, but I can't bring the team on." The small team is working a lot harder and doing the heavy lifting when we should really have a bigger team on site right now.

**The Hon. SCOTT FARLOW:** With respect, have you got any government funding to support you in this project?

**TONY PALMER:** Zero.

**The Hon. SCOTT FARLOW:** Are there any incentives either for you or for Yancoal in being able to have this exciting opportunity for the community?

**TONY PALMER:** No. I think Yancoal would admit that if I just went away, they would have been happy.

**The Hon. SCOTT FARLOW:** Especially if you were calling them every day.

**TONY PALMER:** The two people in particular who copped the most phone calls, I have to give them credit for their persistence and perseverance because, without their determination, it wouldn't have happened either. Credit where credit is due. They did get it going forward. I think the challenge was that it really wasn't clear about what they had to do. Looking at the industry, you say, "How many mining companies have mine closure and mine transition experts or roles within their business?" Probably very few. There is a lot of ecology, but it's somebody who has both the ability to think future and think now, and also create a pathway, a project plan and a clear set of outcomes and have the ability to communicate clearly with the agencies about what their intentions are and, effectively, help the agencies do their job. It doesn't help anybody, for any level of agency. If you're a proponent sitting on the other side, the best thing you can do is try to help them do their job and give them what they need. Don't throw something over the other fence and say, "Go and assess it and tell me how I did."

That's, unfortunately, a bit of a legacy that I've seen. Certainly, on the development side, there's a bit of that: "Let's test the process. Let's test it, hey? Let's just throw it over and see what happens." That's no way to learn. That's just a slow way to burn money. I will give you an example: In the first meeting that we had with Roberta and the team, we had a representative from the regulator, we had the CEO of the council, we had the planner who worked on the project, we had a representative from Yancoal, and we had a representative from the environmental ecologist who helped Yancoal achieve their sign-off. With just those heads around a table, you knew something special was happening, because they don't get together. They are never in the same room together, those groups of people.

When we clearly identified some of the challenges and the blockages, we were able to start making decisions. They may not get enacted straightaway, but it gave us a hit list. It was like, "If we focus on these three areas, like reduce duplication, increase communication or centralise communication, and find a common incentive language or platform that works across both development, industry and government, then we might get somewhere pretty quickly." We're not talking decades away and were not talking years; we can do this stuff right now. It's happening right now. I'm living it right now. Between meetings with banks about interesting finance packages and being able to present at a forum like this, it's happening. It's not going away and it's just going to accelerate. So it's an exciting time to be bringing smart people together and trying to solve problems together.

**The Hon. SCOTT FARLOW:** Mr Palmer, you have made the comment that every site is different, and I guess every future use is different as well. You cannot really have a cookie-cutter, one-size-fits-all model, because not everyone is going to be doing what you are doing, but what are some of the things that you think

would be common across anyone who is looking to re-use a former mining site and have an adaptive use into the future? What are some of the hurdles you think we should be focusing on as a Committee in our recommendations?

**TONY PALMER:** I definitely think government should not be coming up with the ideas for the future use of the sites. They are not the visionaries. They are part of the planning framework. I say that with all seriousness, because I've had people say, "Maybe we should come up with the plan." No, let the market come up with the plan. The market will tell you exactly what the plan is. Especially some of these legacy sites where they've got—like I said, we're a unicorn. We're an old, underground coalmine that's got a long, documented history of its use. On some of these bigger open-cut swathes, you're going to have to get a community involved. You're going to have to get some visionaries involved. When I say visionaries, it is people that have incentive, whether it's economic incentive through business opportunities or whether it's incentive through their role as a place maker, as a community leader or as a community advocate. There's a lot of opportunity to get people together to share ideas. The first thing that kills creativity is process and politics.

**The Hon. SCOTT FARLOW:** Government loves process, yes.

**TONY PALMER:** Process and politics are the death of creativity. That's the question. The bigger question is how do you facilitate some of these environments and how do you workshop these future uses? With a developer hat on, it's easy because it has an economic feasibility that you have to measure against. Is it feasible or is it not? I think, for some of the sites that are going to, effectively, become community services or be officially handed back to the community in the form of a recreation park or parklands or whatever it is—just use a really simple case study of the skate park. Economically, it's not very feasible, but it's amazing community service. They get all the kids off the streets and it becomes a community focal point for the youth. I think you've got to look at the things in different lenses. If it's a future economically productive development site, there is a different framework to look through versus something that's going to be a community-service-based hand-back.

The common thread with all of this is looking at what point this land is, effectively, considered safe, stable, non-polluting and ready to be put into its future use. The approvals process for the regulator is an incredibly difficult job—a very hard piece of work. I call it the Rubik's cube. You get one piece of one side right and it throws the entire rest of the cube out. You're constantly chasing these sides. That's the pioneering piece of this. I've literally given a presentation using a Rubik's cube and shown how easy it is to break what you think is right on one side of the cube. Very quickly, you can throw out the other side. At what point of that regulatory sign-off process is it the right time to start talking about future use. Is it at the end of that process, or is it now, before it's even been embarked on? Amanda touched on it. If you wait until the end, we are going to be long gone and the opportunity will be long gone.

**The Hon. SCOTT FARLOW:** I think we were advised by one witness, at least, that seven years is probably minimum before closure and about ten years is probably optimum.

**TONY PALMER:** Yes, and you can do a lot in that period between, effectively, operational closure or non-productivity—the point at which it is no longer a productive site, which then goes into the care and maintenance or the rehab stage. Some of that rehab—I can plant trees. I can prune trees. I can keep pests and weeds out. I don't need a mining company to do that. I can probably do it a lot cheaper and better, but then it would allow us to get on with developing.

**The Hon. SCOTT FARLOW:** But are there other things you could not do that a mining company has to do, from your experience on this site?

**TONY PALMER:** Not really. There's nothing.

**Ms SUE HIGGINSON:** We just heard evidence that if you had a 400-hectare void with ongoing serious water management issues, including regulation—so you have to do releases and all that sort of thing—you would have to become a water expert manager. Is that something that you would not probably contemplate?

**TONY PALMER:** I wouldn't become the expert. I would find the expert and employ them. That's a land management plan, so that becomes contingent on your ability to develop. You have to—effectively, something like putting it on covenant, on title. You have to undertake that you are going to do these steps. That's then only a risk an individual would be able to assess: Am I prepared to take on the risk of water management, or am I prepared to take on the risk of revegetation or grouting or any of the other things that they need to do?

**Ms SUE HIGGINSON:** Is it in the public interest that that gets handed over to an entirely different entity that was not the one—you've got those kind of considerations, I suppose?

**TONY PALMER:** Absolutely.

**Ms SUE HIGGINSON:** We are in very new territory.

**TONY PALMER:** We are, and it's easy for me to sit here and say that of course that's a good idea, but we do know some people are going to take advantage of those situations, and you just have to have the framework or the regulations that, basically, there are penalties. If you don't do it, something is going to happen, right?

**Ms SUE HIGGINSON:** Did you say, at some point, something to do with the fit and proper person? Was that something that you had to contemplate, or did it not coincide with the mining lease obligations?

**TONY PALMER:** Yes. Effectively, you can't hand over a mining lease to somebody who is not a miner. That's the issue. There is no pathway of transition of, effectively, a production mining lease. If there was a transitional lease—a lease which is non-productive so the mining company could still, effectively, be the leaseholder but it's now no longer productive and it's no longer bound by the same sort of industrial policy and laws of a productive mine. One of the concerns for the mining company was that if you come onsite and something happens to you, we can shut down our entire mining operation because, effectively, we're still governed by the Mining Act. We challenge that. That's not necessarily as woo-woo as it sounds. You can manage those risks, but there is nothing between a mining lease and a relinquished lease. There is no transitional status, if that makes sense. I don't know what that looks like, but it's just another way of looking at how you accelerate development. How do you accelerate getting the approved future use in action quicker than just waiting around and having to make annoying phone calls?

**Ms SUE HIGGINSON:** I know you said governments are not the visionaries, and I don't think anybody would contest that, but in terms of the tools that government agencies have about geography, spatial landscape form and community future development and bringing all those strategic lenses together, is there a clear role about identifying potential parameters?

I think you even touched on them: heavy industry, recreation and those sorts of things. That's not a place that ultimately should be market driven; that's a place that needs to—

**TONY PALMER:** You need the edges of the playpen. I think that helps to know how big the canvas is and what you can and can't do on the canvas. That's certainly a good starting point. The clearer those boundaries are, the better, as far as I'm concerned. I think Amanda talked about the SEPP. If you are talking about the State SEPPs, there are tools within that toolbox where you can make things happen that otherwise would not be permissible, but they have to be done on balance. It's a balancing act. The clearer government can be about what they want to see in terms of the mud map or the future vision of a region, the detail can get worked out by the rest of the market and falls within it.

I think the city does an incredible job of identifying its needs and its wants, strategically. Thankfully, I came across a planner who understood that language and was able to point to—I think it was the 2020 vision at that stage; it was that long ago. "Here you go. This is where you fit and this is why they'll listen to you" is what he told me. If, at a State level, there is an equivalent resource that does all of that geospatial planning, population planning—whatever those planning frameworks outside the edges of the page look like—that really helps a lot. And then it's just over to the market to work out—and the communities.

**Ms SUE HIGGINSON:** And the community, yes.

**TONY PALMER:** When I say the market, it includes community as, probably, the primary stakeholder of the entire thing. When it comes to smaller developments that are very economically driven, it comes down to feasibilities.

**The CHAIR:** Do you have any final comments or remarks?

**TONY PALMER:** No, I am just appreciative of you taking the time to focus on it.

**The CHAIR:** Thank you for your evidence today and for having the Committee on site on Monday. It was really beneficial for us to be able to witness firsthand what you are creating over there. The Committee secretariat will be in touch if there are any questions or supplementary questions.

**(The witness withdrew.)**

**Mr TIM BROWNE**, Chief Executive Officer, Dantia (Lake Macquarie Economic Development Company), affirmed and examined

**The CHAIR:** Welcome to our next inquiry participant. Thank you so much for making time to give evidence to the inquiry today. Would you like to start by making an opening statement?

**TIM BROWNE:** I would. Thank you for the opportunity to represent Dantia today at this very important inquiry into beneficial and productive post-mining land use. Dantia is Lake Macquarie's economic development company and our vision is to have Lake Macquarie considered Australia's most thriving regional city. In 2014, Lake Macquarie City Council established Dantia as an innovative and unique model for economic development in the city. We have one shareholder, Lake Macquarie City Council, and are governed by a board of highly skilled and experienced directors. Now in our tenth year of operation, Dantia continues its work facilitating economic development for Lake Macquarie businesses and residents. We have also recently established the not-for-profit Circular Economy Living Lab—at the time, I believe it was the first of its kind—in collaboration with Lake Macquarie City Council and the University of Newcastle to try to generate jobs in the circular economy.

The Lake Macquarie economy has an annual economic output of more than \$30 billion. Our top three industries as measured by economic output are construction, mining and manufacturing, with our top three industries measured by total number of employed being health care and social assistance, construction and retail trade. There are currently in excess of 73,000 people employed across our great city. Beneficial and productive post-mining land use is, in my view, the key lever that can be pulled to increase employment and investment opportunities. Lake Macquarie does not have significant areas of employment-zoned land. Moreover, in the coming years, we are anticipating a shortfall of our employment lands. That is why Dantia is advocating for realising the re-use of former mining and, in Lake Macquarie's case, power generation land.

We have significant tracts of former mining and power station land—approximately 62 square kilometres—some of which we believe makes sense to be developed. The city's north-west growth area and north-west catalyst area includes lands formerly used for mining and lead smelting, and has been earmarked as a future regional hub for housing, jobs and investment. From an economic development perspective, it is the opportunity lost by not re-using land and mining sites for economic benefit through jobs and continued investment that we are trying to avoid.

These sites have generated jobs and economic activity for years, and Dantia would like to see these sites continue to do so for years in the future. They typically have existing infrastructure such as roads, powerlines, water and rail already in place, and it is a missed opportunity to require companies to remove these without consideration of repurposing this infrastructure. These sites are prime for re-use rather than impacting other greenfield sites for development to create jobs. Given the history of mining in Lake Macquarie, we are now ready for action in our city, and Lake Macquarie should be considered a testing ground for reforms to achieve beneficial post-mining land use projects.

**The CHAIR:** We will now move to questions. In your submission, Dantia strongly recommends the urgent establishment of a regulatory pathway which may include amending the mining State environmental planning policy to facilitate adaptive planning for site re-use. What specific amendments would you foresee?

**TIM BROWNE:** In terms of specific amendments, what we are suggesting the Committee look at is perhaps the mining SEPP is the vehicle to do what might be a comparative land use assessment. For example, if you have got an area that has been previously disturbed for an industrial mining activity, if someone wants to come along with a similar, comparable land use, utilising the already disturbed land, and didn't impact on other natural areas and just effectively comes in—say, for example, there's a warehouse somewhere and one business leaves and another business comes in. Is there an opportunity within the mining SEPP to look at some sort of comparable land use?

**The CHAIR:** In terms of the barriers to land re-use, what are the primary barriers you have identified in the current planning approval and rehabilitation framework?

**TIM BROWNE:** Certainly, from the anecdotal evidence—evidence is probably the wrong word. From anecdotal discussions that I have had with businesses—and I just caught the last bit of Tony, then—it does take an inordinate amount of time. Some of that has got to do with the fact that this is pretty new and people are trying to fit into a planning system that is as old as I am. I am 45 years old and our planning Act was enacted the same year I was born. There have been bandaids and bandaids and bandaids on it. I think that the challenge is about: Is there a way that we can streamline this process?

I just want to make it really clear to the Committee that Dantia is not advocating that there shouldn't be a process; there absolutely should be a process to relinquish a mining lease and then start a new activity. But is

there a way we can learn from what we have done to then make it a bit more efficient and a bit more streamlined? There is an example where there is some duplication in the system. There are a couple of different State government agencies that have responsibility for a similar aspect from different angles. Is there a way that we can do the work—or a proponent, rather, can do the work—that would then meet the requirements of both agencies, rather than doing the work for agency A and then going around and doing it again because it needs to be done slightly differently?

**The CHAIR:** We heard an example from the previous witness of that duplication. Are there any other examples that you could provide to the Committee?

**TIM BROWNE:** If you're referring to the subsidence—

**The CHAIR:** Yes.

**TIM BROWNE:** —that is the example I was leaning on as one example of where there is an opportunity to potentially streamline this process. It's interesting, too. Dantia, as the economic development corporation—we would certainly want a lot more inquiries than we're getting with regard to land in our area. But at the moment there are some companies that are ready to go. When I say "ready to go"—in the next 18 to 24 to 36 months. But we don't have that land there. You couldn't put up a site that's potentially three to five years away. So then they take their investment and then they look somewhere else.

**The CHAIR:** In terms of a defined regulatory pathway, which in your submission you describe as a pathway for the assessment risk transfer and uptake for transition to beneficial and productive land use options, do you have a view around what that pathway would look like?

**TIM BROWNE:** Yes. Again, I just stress that this is Dantia and it's my view, not a view of a mining organisation. But if a mining company is to modify their consent, to change from what is typically removal of infrastructure and then put trees and grass down to an alternative land use, they actually open up their entire consent. Then there could be other unintended consequences when wanting to just talk about a specific aspect of that consent. I would love to see an opportunity where you could set up a framework that says, "We're talking about post-mining land use and that's it, and everything is off the table." For example, we've only had smartphones for 15 years. Things can change so rapidly. It's incredibly difficult for any organisation to go, "Well, what is this going to be in 20, 30 years time?"

**The CHAIR:** In terms of training and skills development now for the region, what specific initiatives do you suggest to reskill and retrain the current workforce to align with new opportunities?

**TIM BROWNE:** We would love to see a manufacturing centre of excellence at the Glendale TAFE site. It's very centrally located. It's just up the road here. It's right next to Glendale Technology High School, so there are lots of synergies there. In terms of a strategic location, it's very easy to get to from the Central Coast, from up the Hunter Valley, Port Stephens and Newcastle. Some of the work that the Institute of Regional Futures has done in Lake Macquarie—I've got the statistic here. I'll just read it so I don't get it wrong. I can't find it quickly, but there is a large percentage of residents who are willing to retrain for another job. I think that that's really important—65 per cent.

The other thing that's really important and is interesting for Lake Macquarie is we have a really high skills base of trade qualifications. Based on the 2021 census, we're well above the State average in your cert II, cert III, cert IV. I'm generalising greatly but, if someone wants a widget, someone in Lake Macquarie can probably build it properly, bend it, fold it, make it, things like that. We've got lots of manufacturing and we've got a number of examples of companies who are moving into that advanced manufacturing. We have this opportunity right now to take these skills and apply them to new industries, whatever they be. If you're a diesel mechanic or you're working on big coal machines and things, I would have thought that there's not much of a training to go from that to building turbines for windfarms, these types of things. I'm not an engineer, but I imagine the mechanics are still the same.

I'll give you another quick example, which I found really fascinating and I really think highlights the point. I was out at the Glendale TAFE. If you're a motor mechanic, you need to do a course at TAFE to work on EV vehicles because they're high voltage. It makes complete sense when someone tells you, but to me that hadn't entered my thought. There is an example of something that's happening right now. It could be as simple as you go to TAFE or whatever, you learn how to do this new skill and you can apply it to a range of industries because we're seeing that now in Lake Macquarie.

**Ms SUE HIGGINSON:** There is one point from your submission that—I'm going a bit unprepared because I only just re-read it. I'm curious about the opportunities you see in terms of the mention of the defence force manufacturing aspect. I'm raising this mostly on behalf of my colleague, who is not here. But do you really



see that that is a good public interest kind of component—an investment in what ultimately ends up as the industry of war?

**TIM BROWNE:** In terms of the question, the short answer is the defence industry is a large employer and it has a large supply chain. You'd all be aware that there is the RAAF base at Williamstown and then there is the defence aerospace astro lab—I think it's called. That's going to be the primary area of where defence is going to be. But from our point of view, yes, there should be an opportunity for those smaller businesses who are manufacturing some really unique and highly intelligent products to feed into that larger supply chain. I don't see a defence prime necessarily setting up in Lake Macquarie. What we do see is, "How do we tap those people who are already here building this technology into these larger areas?" Because if you boil Dantia down to one word, it's jobs. We want jobs for—

**Ms SUE HIGGINSON:** Sorry to interrupt. Because we're looking at such a massive project and we are trying very hard to have very important social buy-in and the governance around that, and therefore the social governance and the ethics of it all, is this an opportunity for your organisation to actually be advocating, "Hey, we're looking for opportunities. Perhaps, yes, intelligence, but not efforts of war."? I'm trying to look at this big geopolitical issue.

**TIM BROWNE:** I understand.

**Ms SUE HIGGINSON:** If we're talking about land use and we're talking about getting the benefit of that, particularly from a post-mining environment, is that something that your organisation is considering?

**TIM BROWNE:** Not explicitly, no, in terms of identifying—if I've understood the question correctly, we haven't talked about saying we should focus on industry A, B and C and not focus on industry C, D and E. For us, we want to use the skills that Lake Macquarie has. They're here. They're now. Is there an opportunity to find that next piece of land for them to expand or grow? Because Dantia is not just about bringing the next Google in here. That'd be wonderful but it's also about—

**Ms SUE HIGGINSON:** The next what, sorry?

**TIM BROWNE:** Google. We're not after a big, high profile—that'd be great, don't get me wrong. But it's also about the businesses that we have here and expanding from 30 employees to 60 employees. If we can help with that, that's still a wonderful outcome for Lake Macquarie.

**Ms SUE HIGGINSON:** We've also heard evidence that diversification is really important because—"Look at the predicament we're in because we weren't diversified. We've put all our eggs into one big digging-hole industry and pulling coal out."

**TIM BROWNE:** Yes, diversification is important. The other thing from our point of view is, just to elaborate on my point about which ones we're advocating for or not, what we actually want is similar quality jobs. If you're an engineer earning \$120,000 a year, our ultimate goal would be to have an opportunity to—if you are in an industry that closes or diversifies, you can go to another engineering role of a similar quality with similar employment outcomes.

**Ms SUE HIGGINSON:** You've clearly done that analysis in terms of the skills and what that looks like. We heard very early on in this inquiry about how some of the big mines have particular tickets for working in the mine but those qualifications don't necessarily correlate directly with the skills outside of the mine. For example, we even heard this morning that you drive a big truck but you actually don't need the truck licence you would need outside the mines to drive it. Is there work happening around those jobs coming out of the mines being able to have those qualifications transferred into the other sectors that you're looking at?

**TIM BROWNE:** Not that I'm aware of. I can't comment on whether that works.

**Ms SUE HIGGINSON:** Is that something you think should be happening?

**TIM BROWNE:** It makes complete sense, right? It's about what we want is having our residents of Lake Macquarie to have a retraining, whatever that retraining looks like—a micro-credential, a driving test for a truck, in your example, whatever the case may be to allow them to then move to their next employment. What we don't want, what I don't want, is a mine shuts, or it starts to close, and the operations go down and people are found without a job. I don't want them packing up and going to Queensland, or packing up and going to wherever they are. What is the next available option for them? The fact that we in Lake Macquarie have so much of this land, and they are in large landholdings, there is a real opportunity here for that.

**Ms SUE HIGGINSON:** The work and your lens on the circular economy components, could you just talk a little bit more to that and what that looks like? Because obviously that is a massive part of the State's

requirements, that we work out how to move to a more circular economy. What are the particular things here in this region that you think this inquiry might be able to put some attention on?

**TIM BROWNE:** We're incredibly proud of the CELL. It's a not-for-profit, as I said. It's a collaboration between Dantia, Lake Macquarie council and the University of Newcastle. It's fair to say it's been a slow-ish start. It is a startup in every sense of the word. We are trying to find our feet. Our goal is to create jobs, but in the circular economy. We've got a couple of things we are doing. One of the things that we are pretty proud of is we are working through a project where we are looking at can we take some of the ash out of Eraring and put it in road pavement. It's a long process. It's going to take time, because we need to do it properly. What I mean by properly is we need to do the testing. We need to do the geo-testing. We've got the National Road Transport Research Organisation. Uni is involved. Origin is involved. EPA is involved. Transport for NSW is involved. CELL is involved. We are really excited. It's taking a long time and will continue to. It certainly is not going to be the silver bullet for coal ash. But I think it's just one of many. That is an example of what the CELL is doing.

In terms of the circular economy, and in the context of your question around what this Committee is doing, I take it back to the point where, if we get in the situation where organisations are required to dig up and recycle railways, dig up and recycle powerlines, crush concrete and recycle it and that sort of stuff, yes, that's an outcome. But we know people are coming to Lake Macquarie and we know people are moving. A better outcome would be to keep it there, if it's appropriate. Then don't go and re-quarry and make new concrete, don't make new steel, which has all the impacts of that. That would be something the Committee could look at if you are putting the circularity lens on this. The other point to make is that a lot of these sites are really large, and I'm sure you've heard that many, many times. Certainly, I think there is potential risk that when people say beneficial post-mining land use, they think the entire area then goes back to some sort of industry. They are actually quite large, and if you focus an area in on the areas that have been disturbed and are still existing, we think that would be a great start.

**Ms SUE HIGGINSON:** It's interesting, we had that point made in a submission that, frankly, they are the areas we really should be looking at, the disturbed areas, as they stand and the infrastructure. I hadn't actually thought of it in terms of the re-use of these things through that circular economy lens. It's a very simple but very important context and I hadn't thought of it through that. But I see exactly that point. It is part of that very, very important circular economy narrative, because it's not just re-using; it really is the whole circularity of it.

**TIM BROWNE:** It is. You keep it in the system for longer, and you repurpose it, and you've got a concrete slab that still has 30 years of life. Try and use it for what it was intended for, as a concrete slab. If we take the premise that we are going to need more land for jobs, they've got to go somewhere. Right now, that would probably mean going somewhere else that has natural environment on it. Forget about the costs and all that, just the environmental benefit of the fact that this land has already been cleared of trees. I know there are challenges around different viewpoints on that, but if we accept the premise that there are jobs somewhere, then they are going to go somewhere else.

**Ms SUE HIGGINSON:** I don't think we've heard that if their current obligation is to revegetate but the land use then does change again, maintaining the use of that land as disturbed land, let's say—actually an obligation elsewhere may be acceptable to many proponents. Is that something that you think? Or do you have the view that no, if the land is already disturbed that obligation to regenerate it should just be retired? Or do you see that could be carried on in circumstances?

**TIM BROWNE:** It really is a case-by-case basis. What I wouldn't want is a perverse outcome of company A has to put trees and grass back on their old land and that costs X. But then we say, "Okay, we want to use that for the next advanced manufacturing there. Now you've got to go and spend X plus 10 to do it over there." It just wouldn't work. So, as I said earlier, I am absolutely not advocating that companies who got an approval based on a set of conditions necessarily get out of those requirements. What I am saying is there is a piece of work for someone to go, "Well, if we accept that the population is going to increase and they are going to need somewhere to work because Dantia doesn't want people driving up the valley or driving back to Sydney"—we can accept driving to Newcastle but, ideally, we want people to live, work and play in our city, then there is that opportunity of if it's not here, where is it? It is a complex challenge for the Committee.

**Ms SUE HIGGINSON:** But that idea of transferring that obligation is something that should be on the table, depending on the case by case.

**TIM BROWNE:** Absolutely. It should be part of a consideration with regards to that obligation instead of if there is a process, or when there is a process and it says, "We think the best outcome for this piece of land is to build the next advanced manufacturing hub in the Hunter Valley", great. But that means that 20 hectares that would have otherwise come back to a certain vegetation community is not going to be there. Then what is the outcome then? Does the developer go, "Well, I'll pay into the biodiversity trust, or whatever it's called now, and

then the State can then choose if the best use of the money is somewhere completely different"? I don't know. I'm just throwing ideas out for the Committee to consider. But I wouldn't want a perverse outcome around, yes, we want to do this, but the hurdle is so high to jump over that you just don't jump over it and you just put it back there.

**The Hon. SCOTT FARLOW:** Thank you for your submission and for your thinking around this. It comes down to that question that, I suspect, from the tail end of that conversation, you've looked at things like having embedded carbon and the like that have actually already been put into these developments, and how there can be that greater use. As we wrestle with this problem, it's horses for courses, isn't it? Not every site is going to be the same. You've got some experience here, with the Pasmenco site and being able to get opportunities out of that. If you haven't spoken about that, I'm interested in your learnings from that. I know that it's a little bit different, but it's about effectively re-using existing assets and those opportunities. Do you want to walk through the experience you've had with the Pasmenco site and what that's yielded for the city?

**TIM BROWNE:** Certainly. Prior to working at Dantia I worked at Lake Macquarie City Council, first in the environment group and then city works. When I came in as the manager of the environment group here, I came in at the tail end of Pasmenco so I know a little bit about it. I'm certainly not an expert of the whole project but I'll speak to what I know. Obviously it was a lead smelter for a long, long time. The State took it over and there's the containment cell up on there that you can't develop on. I think that's a really good example to say, "On all of these sites, they're not all developable." I'd say it's highly unlikely you're going to put residential on the top of a tailings dam, as an extreme example.

**Ms SUE HIGGINSON:** You never know.

**TIM BROWNE:** The good thing with Pasmenco that I'm aware of is that, effectively—and it's quite ironic—outside of the cell it's probably the cleanest site—

**The Hon. SCOTT FARLOW:** Really?

**TIM BROWNE:** —in and all around here because it was remediated all the way back to bedrock. It took away—the biggest issue up there that I'm aware of was contamination. But you're right: Working through that, now we've got this opportunity where there's the housing around it—we've talked about, and I'm sure you've heard about, the housing—and then we've got this opportunity of a site up there that's really close to the M1, right next to the main northern rail line, and what that can look like. Dantia would like to see that be some jobs, some housing, a mix in there. It was identified in the Hunter '21 plan of around about—I always get them mixed up—either 6,000 jobs and 4,000 homes or the other way around.

**The Hon. SCOTT FARLOW:** It's 10,000 all up.

**TIM BROWNE:** Yes. I always get it mixed up. But that's a really good site to show, even though it wasn't mining per se, it was heavy industry and there is that opportunity. Costco's up there, Bunnings is next door and that sort of stuff. The way that council opened up the last bit of Munibung Road has really opened that up, because now we get into that Cardiff advanced manufacturing zone. We've got a couple of sites just over here, which I'm sure you've heard about, and that is all the way out to the M1. That piece, in terms of the strategic location, is crucial. We've shown, not only with Tony's one but with Pasmenco, we can re-use these sites—but it does take a long time. If I'm remembering correctly, Pasmenco shut down around 2001, 2002, 2003-ish, something in that vicinity. There's still lots up there that haven't been identified of what they're going to be in the long term.

**The Hon. SCOTT FARLOW:** You spoke as well, I think in your opening statement, about that demand that comes from the market, that you would like to see more people knocking on your door saying, "We want opportunities."

**TIM BROWNE:** We would.

**The Hon. SCOTT FARLOW:** If you had that sort of list of sites and what could be possible, do you think that'd work as an attractor, so to speak—to the point of Tony's evidence before, which I think you heard—where people start to come up with their own ideas? It's not necessarily government led, whether that be State or local government, but you actually do have the market saying, "We're looking for a site like that and this is our idea for what you could do there."

**TIM BROWNE:** Yes, absolutely. The short answer is yes. We have had a couple of companies come to us and say, "We're looking for quite large sites." We just don't have them, in terms of being ready to go in their time frames. The other important point is that the reason that Dantia's so excited about Black Rock is that there are going to be lots of people coming here with very deep pockets who are going to see Lake Mac, they're going to see how beautiful it is and they're going to see why everyone's moving here. Imagine if we said, "Hey, this block of land's coming online in the next period of time. Let me show you. Here's how you can invest in our

city"—that type of stuff. At the moment I'm reluctant to go down to Western Sydney and say, "You should move to Lake Mac," and they go, "Great! Have you got a warehouse for me that's 10,000 square metres?" and I go, "Oh, no, I don't." So I don't do that, but this is the type of stuff where we really want to start to get going. You know the old saying, "If you want a big tree in your yard, the best time to plant it was 20 years ago—and the next best time is today." We need to get started.

What I'd love to see—and I might be being a little ambitious here—is an opportunity where a parcel of land in Lake Macquarie, just by nature of the fact that we don't have open cuts and a lot of it is ready to go—could there be a way that this Committee goes, "On this block of land we're not going to not go through a planning process, but what we're actually going to do is trial a new planning process for this block of land. We know that we're doing it this way because what we want to do is work out, well, if we then applied this"—the challenge is that you've got State legislation trying to govern a myriad of sites that all have different issues, which is going to be an incredible challenge for the Committee. But wouldn't it be great to go, we'll pick this lot. We put all the checks and balances in place but then we actually trial something and say, "Okay, if we did amend this, how would that work?" Or, "If we did not require this but required that, how would that work?" I reckon that would be something—

**The Hon. SCOTT FARLOW:** So what's the block that you want for that trial?

**TIM BROWNE:** I don't have a block in mind. I just know that we've got an awful large number of hectares.

**The Hon. SCOTT FARLOW:** You've got a few.

**TIM BROWNE:** By the very virtue of the fact that our history is we don't have many operating coalmines left, we'd be perfect for a testbed.

**The CHAIR:** That's all we have time for, Mr Browne. Thank you again for giving evidence to our inquiry today. I don't believe there were any questions taken on notice, but if there are any supplementary questions our Committee secretariat will be in touch with you. Thank you again. We'll now have a short break.

**(The witness withdrew.)**

**(Short adjournment)**

**Professor TIM ROBERTS**, President, Hunter Innovation and Science Hub, affirmed and examined

**Mr ALEC ROBERTS**, Vice-President, Hunter Innovation and Science Hub, affirmed and examined

**The CHAIR:** I welcome and thank our next inquiry participants for making time to give evidence today. Would either of you like to start by making an opening statement?

**TIM ROBERTS:** Yes, thanks. Over the last 10 years, from 2010 to 2020, I ran the Tom Farrell Institute for the Environment and worked closely with Alec, who is not a relative of mine but shares the same name, as well as working with Nigel Stace, who is behind me, and many others. Our primary focus in one area was to run an annual mine rehabilitation conference in the Hunter Valley. We did this successfully for a decade until the university closed the institute. But the most important point is that we normally had up to 300 delegates at the annual mine conferences, which we would hold in Newcastle, Singleton or Muswellbrook. The delegates were made up of government officers, professionals involved in mine rehabilitation, local government members, as well as the miners themselves. We got a very good understanding of what the problems were in mine rehabilitation and the best ways to do such rehabilitation, and got an understanding of the desire for the communities, when mines closed, to end up with something that was highly significant.

During that time, we learned about the Eden Project in England, which was a quarry reformation. During that time, we interacted with the speakers at a conference from Indonesia, Spain, America and Europe, so we were able to get inputs from other countries where they had been dealing with the problems of mine rehabilitation. In that, we developed a good understanding of what the best thing would be for the developments after mining finishes in the Hunter Valley. Related to that, we also came to the conclusion that it would be really difficult to bring about changes unless there were changes to legislation, because many of the mines had their finalisation and their sign off criteria written in concrete at the start of their mining. It's very difficult to put forward an alternative if the legislation is saying that you must replace like with like. That's probably my introductory statement, and I will hand over to Alec.

**ALEC ROBERTS:** I would also like to say that, through this, we got to work side-by-side with world experts in mine rehabilitation in our office. We got to sit next to people who were developing and utilising the latest best practice tools from around the world. It was a real eye-opener for us to find out what can be done and what is possible. I want to briefly talk about three things—landform design, landform evolution models and incorporation of new land use. When it comes to post-mining land use, we really need a stable and lasting landform. The NSW Resources Regulator requires such stable and permanent landforms that are suitable for the agreed end land use, that will not adversely affect surrounding land and with maintenance needs no greater than the surrounding land. In particular, landform design must address potential erosional issues and manage surface water to stabilise the landform and integrate with surrounding catchments.

Conventional approaches to mine rehab involve developing uniform slopes, terraces, berms, contour banks and sediment ponds, and building rigid, non-erodible drainage structures. These steep drainage lines—downdrains, they are often called—are designed to handle specific extreme events. However, these conventional approaches often fail and lead to accelerated erosion from overtopping. I'll give an example of that. We visited Glencore's Westside mine here, near Wakefield in New South Wales—quite close to here, actually. There we saw where overtopping had occurred. The rehabilitation was only seven years old and overtopping had occurred on one of the vertical drains. They had a digger up there to try to repair it because the water had formed a new watercourse down the side of the hill, alongside all this wonderful stonework that it wasn't utilising at all. Without constant maintenance, most mine rehab landforms gradually erode.

An alternative approach is geomorphic rehabilitation using progressive rehabilitation. You've probably heard that progressive rehab involves restoring the land in parallel with mining. That's now fairly common. Geomorphic rehabilitation is a catchment approach to mine rehab, using drainage basins as fundamental basic planning units for mine rehab. Progressive geomorphic mine restoration has been shown to neither reduce mineral production nor significantly change operations, which is very important for the miners. The landform is designed using software such as GeoFluv Natural Regrade. That is a good example. This mimics the drainage networks and landforms of natural catchments.

The building of the landform design utilises existing machinery and operators, which is really good. It uses the GPS inside the machinery so the man or woman can dig and create the landforms based on what the software has designed. The goal is blending into and complementing the drainage pattern of the surrounding terrain. Sediment movement at the designed drainage network is similar to local natural dynamics of flow. Studies in New Mexico found sediment yields were less than or equal to adjacent land, which is a great outcome for mine rehab. Most examples of this form of mine rehab are found in North America, Canada, Spain and Australia.

Mangoola Open Cut mine near Denman in New South Wales utilises progressive geomorphic mine restoration. So we've got a good example here in the Hunter.

I will briefly talk about landform evolution models. These simulate erosion across a landscape over time. They are a model that works out what's going to happen in the future. They can incorporate future changes in rainfall patterns, such as the increased high rainfall events that you may get with climate change, and can evaluate post-mine landscape designs. For example, we've seen Westside mine failures, but up in the Upper Hunter where it rains less, we don't see as many failures because it rains less and we have fewer rain events. But that doesn't mean it's not going to happen. It's just going to happen later on because of the lower rainfall, and may happen more often with changes in rainfall events.

These models allow simulation of long time periods and allow us to observe whether the structure will fail and, potentially, when it will fail. They can be utilised for new mines and extensions to mines to ensure landscape designs negate any potential erosional issues. Designs that fail can then be redesigned and retested before you start digging. So it's a great thing: You can work out what you're going to do before you get out there and do it. One of the landform evolution models was designed by the late Professor Garry Willgoose from the University of Newcastle. He designed one of these models.

Briefly, I will go into incorporation of new land use. Novel uses for mined lands are being suggested that were probably not thought of at the start of mine planning. For some of these mines, it has been over 20 years since the original miner operational plan has been put together. New potential uses may include new industry such as pumped hydro, intensive agriculture, bioenergy precinct, chicken processing plants, biodiversity or climate corridors and changed land use for farming. To enable such changes, government regulations may need to be amended and a process developed for the modifying of the final post-mining landform and approval mechanism. These would relate to retention of existing infrastructure, retention of certain landforms and proposed modification of landform design. For example, fit-for-purpose built infrastructure that may need to be retained, as needed for the proposed new land use, could include high-voltage electricity lines, access roads, rail loops, water infrastructure, built infrastructure such as buildings et cetera, and also flat areas. I should also close by noting that environmental standards must be maintained or improved by any changes to post-mining land use.

**Ms SUE HIGGINSON:** Thank you very much for your submission and your evidence today, and for making the time. You make a very important point about rehabilitation. Some of the newer mines or the more recently approved mines had that requirement to do progressive rehabilitation. My understanding of that is that different mining methods and the mines themselves can allow that or otherwise don't, such as pit mining or those draglines and how that works; the dragline has been more prone to that progressive rehabilitation. Do you see anything in terms of the differentiation of that as a problem in terms of a regulatory scheme where we're looking at beneficial mine land re-use?

**ALEC ROBERTS:** I'm just going to say, first up, that progressive rehabilitation is actually less costly for the miners and has less risk environmental outcomes than doing it all at the end. That's first up.

**TIM ROBERTS:** I think that it boils down to what's the end point, and the end point is determined by what was agreed to at the start of mining. There are two end points, if you like. Those mines that were started a long time ago had no requirement for rehabilitation. They had no requirement for what was going to be left, whether there was going to be a hole left or not a hole left. The later ones had a requirement that was "make back to what was there". Making back to what was there, if it was farmland, then it should go back to farmland; if it was forest, it should go back to forest; if it was grazing land or whatever, it should go back to that.

I think the point is does it matter about progressive rehabilitation? The bigger question, in my mind, is after so many years, do we want it to go back to what it was before, or do we want it to be more useful for the jobs that are required in that area now? I think we can do that with the newer mines. With the older mines, I don't think we can force them to do anything other than walk away and leave a hole because they weren't required to. That's the dilemma, I think.

**Ms SUE HIGGINSON:** Just on that, we've had some strong submissions about the nature deficit that we've now experienced and that we're holding in the Hunter region and the Gunnedah basin area, and that we're holding that nature deficit, or that nature debt, on the basis that we were going to repay that in some way or form. In your view, is that still a necessary thing that we do—that we do can still be nature-positive? We've seen those submissions made to this inquiry. Given the progressive rehabilitation that has been required, particularly in relation to repairing nature or recovering nature with the regeneration, do you think that a threshold of repaying that debt is very important? Or do you think that's something you set aside now?

**ALEC ROBERTS:** No. I think, as we said before, that what is key is that the environmental standards remain the same and outcomes are potentially improved from the changes. We don't want to have a step back in what we're doing here.

**Ms SUE HIGGINSON:** Is that possible, in terms of the way you look at the different landforms, what we've done and the conditions that we have imposed? In terms of what the landscape looks like now and the current approvals and requirements, do you think that we will likely achieve that and that there is still scope for that beneficial re-use or change under some of the existing approvals?

**ALEC ROBERTS:** I think what we're basically saying is that you need to have stable, lasting landform, and we're suggesting going with best practice to make that happen so that we get the best chance for positive environmental outcomes.

**Ms SUE HIGGINSON:** In terms of that erosion that you were—was Glendell one of the mines that you said that—

**ALEC ROBERTS:** Yes.

**Ms SUE HIGGINSON:** Yes.

**ALEC ROBERTS:** Westside Mine.

**Ms SUE HIGGINSON:** Westside? Is that something that is likely to have been a fairly common occurrence in terms of some of those mines around that age?

**ALEC ROBERTS:** That was a young mine. That had only been closed for seven years when that happened. It's just that the rainfall events that happened here on the coastal fringe are a lot more often than they are further up the valley. They still happen up the valley, but it might take 15 years for them to get a rainfall event equivalent. But we don't want to design a landform that breaks in 15 years, because who's going to fix it? If the miners are long gone, you need to design a landform that's going to mimic natural landforms and therefore it's not going to need all this maintenance work.

**Ms SUE HIGGINSON:** Do you think that the current register of final voids, which is quite a lot, poses potential problems to the regional final landscape scenario?

**TIM ROBERTS:** In my view, it is a legacy that we appear to be stuck with and a legacy that will give us a virtual set of lakes in the next 200 years, running throughout that area of the valley. I think, in terms of the point for this review and this inquiry, that the question is how to make those voids into something more useful than a fenced-off area of dangerous water, because the way they are—they will have such deep and steep sides to them—it could become very dangerous.

One of the joys of my life as an academic is that I get to take students around the place, and we have had five trips to Borneo to look at rehabilitation of forest in Borneo following open cut coalmining. We visit on each trip a large coalmine that does 50 million tonnes of coal a year—if you consider the output of the Port of Newcastle at 130 million tonnes a year, then you get some idea of the scope of the holes that this mine is digging. They have successful rehabilitation there, and they have successful formation of a pit lake into a stable and usable lake for both recreation and fishing. We've seen that development since 2018 and my first trip to now.

The voids can be used; the voids can be made into something useful. I guess my contribution to this inquiry is to urge the Government to look at going forward in a way that creates jobs for the region, in a way that creates recreation for the region and in a way that doesn't leave the region with a festering sore of erosion or of water that can't be used in one way or another.

**Ms SUE HIGGINSON:** I've got two quick follow-up questions on that. Professor, is there written material about the Borneo project that you could provide to the Committee if we requested that?

**TIM ROBERTS:** Sure. There are some published papers that have come out of that company. The company is PT Adaro. It's regulated by the Central Government of Indonesia. The regulation criteria for end-of-mine are as strong or stronger than regulations in New South Wales and Queensland. In terms of the quality of water, any water released from the site has to be above pH 6.5 and a certain minimum sedimentation standard. There are some publications that I could certainly send in.

**Ms SUE HIGGINSON:** That would be very helpful. With the software and the programs that are available in terms of final landforms, are any of those fit or currently run using climate models and scenarios for the type of precipitation that we are heading into and what we've already started to experience across New South Wales, and Australia more broadly? I'm curious about where the marriage is happening in that field.

**ALEC ROBERTS:** The landform evolution models definitely do that. You can actually put a rainfall profile up off into a thousand years into the future and then simulate what will happen to the landform based on that model of rainfall changes. It's very important. The good thing is you can apply this to existing landforms. It can be conventional landforms or it could be landforms that we're suggesting here. The landform evolution models can be run against any of these landforms to work out what will happen with the potential effects of climate change on those landforms into the future.

**The Hon. SCOTT FARLOW:** Thank you for the evidence. With respect to some of the learnings you have—and you were talking about the conferences that you were running, and that sort of engagement—what have you seen globally in terms of best productive land-use models? Is there something that we should be looking at?

**TIM ROBERTS:** I would say that in west Germany and also in Western Australia, the business of pit lakes turned into something useful "touristically". There's good evidence certainly in Germany—

**ALEC ROBERTS:** Poland too.

**TIM ROBERTS:** —and in Poland, that if there is sufficient will, this can happen and the public can use these lakes. There may be other examples. I've recently seen a book, which I haven't bought yet. It's called *102 Things to Do with a Hole in the Ground*.

**The Hon. SCOTT FARLOW:** We've heard of that one.

**Ms SUE HIGGINSON:** Yes.

**TIM ROBERTS:** That comes from the Eden Project in England. Our colleague Jose has a chapter in that latest edition. His chapter is about the use of the GeoFluv, computerised landform regeneration. He is operating in projects from South America through to—currently he's in northern Sweden doing a landform there on a quarry and he's done a lot across Europe.

**ALEC ROBERTS:** There's also some good research done in Catalonia and also in New Mexico in this area.

**The Hon. SCOTT FARLOW:** With respect to the Eden Project you were discussing before, I think you had some engagement with them as part of those conferences, has there been any investigation of an "Eden Project (Hunter)" so to speak? I know that there's one planned for Anglesea in Victoria, but has there ever been exploration of something similar in the Hunter?

**TIM ROBERTS:** Certainly at our conferences it would come up routinely as to what's the best way to deal with the mine voids. We've seen everything from a lake through to pumped hydro through to—currently west of here is a motorsport set-up about to be launched, I think, in a pit lake. But in the more modern mines I think we are facing a different dilemma. Because if we do progressive rehabilitation as we go, we eventually get to a situation where the final rehabilitation has to be removal of all the roads and removal of all the infrastructure. To my mind, that is a great loss of potential, alternative use. If we're talking about setting up a solar farm, then to have the high-voltage electricity running from that point by turning the electrons in another direction, we could use all of that.

**ALEC ROBERTS:** A 33-kV line like they traditionally use for these mines is exactly the right size for a solar farm. So you can imagine people thinking "yes", even for pumped hydro.

**Ms SUE HIGGINSON:** This has come up before but if we are rehabilitating the land and we're planting native vegetation, native grasses, or whatever the requirement was, in that progress regeneration; I think most of those approvals are either grasses, farmland and/or native vegetation, is it such a bad problem to do that and have that landform and land use undertaken because the carbon benefit of those projects—that is, they are, generally speaking, drawdown, capture and sequester program—and then have a different use later on? Is the contemplation that we should not progress that and hold that in sterilisation because of infrastructure? Or is it not that big a problem to do both things?

**TIM ROBERTS:** I think not a problem to do both. It's absolutely necessary to do the progressive rehabilitation so that everything begins to be stabilised. But if you look at the area of the mine and the associated buffer zones, you've also got the small area of the buildings and so on. To me that is the area that would be wasteful to totally destroy and totally take that smaller piece of land back to what is required in the progressive rehabilitation.

**Ms SUE HIGGINSON:** So progressive rehabilitation up to a point and then look at the beneficial re-use of the assets and infrastructure that's there, but it's not necessary. In fact, as you say, there is an important benefit of that progressive rehabilitation up to that point.



**TIM ROBERTS:** Absolutely, yes.

**Ms SUE HIGGINSON:** Thank you, that's clearer for me.

**ALEC ROBERTS:** The mine is not going to be pulling that infrastructure out until towards the end anyway because they need that to keep mining. When you're saying "progressive", it's more to do with the landforms—it's more to do with returning it to native forest or returning it to farmland.

**The Hon. SCOTT FARLOW:** But the argument is that if you've got infrastructure there already and that infrastructure can be used to support another use, as you've sort of outlined—solar or pumped hydro or the like—it's much easier and more cost-effective to keep that infrastructure in there rather than pull it out. There is actually an environmental benefit with that as well.

**TIM ROBERTS:** Yes.

**ALEC ROBERTS:** What we've got to remember is these are the ideas that we know now. We need to have the flexibility so when new ideas come up in five or 10 years that we have the flexibility to be able to adapt to them then, so we have the legislation in place so we can make changes to the final landform so that, ongoing, we can make these changes and make the appropriate decisions based on the regulation and based on what has been analysed and worked out for the process in that.

**The CHAIR:** In terms of that landform design, can you elaborate a bit more on the specific challenges that you've observed with the traditional approach and how they impact on the long-term landform stability? You mentioned, obviously, the Wakefield example. Are there any others?

**ALEC ROBERTS:** Traditional landform, as opposed to geomorphic rehabilitation, has got less biodiversity outcomes. Because basically the slopes are uniform, geomorphic rehabilitation, if you think about a natural landform it's trying to emulate, the slopes differ—the concave slopes—so you get different levels of water retention in different parts of the landscape, and therefore you get better biodiversity across the landscape. There is a better biodiversity outcome using the geomorphic than the standard because of the artificial nature of it being berms, straight slopes, vertical drains and that.

**The CHAIR:** Is there anything that requires rehabilitation in this geomorphic fashion, or is it just that it's up to the mining proponent to determine the fashion in which they rehabilitate?

**ALEC ROBERTS:** They still have the same outcomes; it's just a different method to get it. They'll end up with better outcomes and less cost, so it's less risk and less cost.

**The CHAIR:** So it's considered best practice for the industry.

**ALEC ROBERTS:** Yes.

**The CHAIR:** So one would assume that most would be doing it this way.

**ALEC ROBERTS:** Well, not really, and that's the problem. Commercial ventures signed up to a rehabilitation plan eight years ago and that's what they're delivering on. There is no incentive for them to change.

**The CHAIR:** And there is no flexibility in that for them to be able to change to something that might be more contemporary or evidence based?

**ALEC ROBERTS:** There's a little bit of flexibility but not a great deal and not enough to change the whole landform.

**TIM ROBERTS:** Certainly if we look at our experience, I guess GeoFluv really started to take prominence in about 2017 or 2018. Before that, the mines hadn't seen it and were doing best practice according to the rehabilitation of landform that was around at the time. There's an evolution in this as the newer mines come on board so that they look to go to these bulldozers controlled by GPS according to almost a CAD/CAM-type preform program so that they can build according to the latest profiles rather than stick to what was there in 2000 or 1995—whenever.

**ALEC ROBERTS:** This software is quite amazing. It actually models the creek lines. I never knew, but there's all this physics to do with the width of a creek and the bend in the creek, and it does all this for you. You sit there modelling it all in 3D and, when you're finished and you're happy with it, then you can basically get a landform evolution model to test it out to make sure it's going to be good. If it's good then it gets fed into the diggers and everything, and they create that three-dimensional model out there for real.

**Ms SUE HIGGINSON:** Are there mining companies using this?

**ALEC ROBERTS:** Mangoola is using it.

**The CHAIR:** Are there any other real-world examples where that geomorphic rehabilitation is being used and it has significantly outperformed the traditional approach?

**ALEC ROBERTS:** Yes, as I said, the Catalonia one has excellent results there and the New Mexico one—I think it was La Plata mine in New Mexico.

**The CHAIR:** In terms of the landform evolution models, how can they be effectively utilised in the planning stages of new mines and, indeed, extensions to predict and mitigate these potential erosion issues?

**ALEC ROBERTS:** Basically they're a model to simulate what's going to happen into the future. If you've got a design you're putting together as part of your final landform design you're going to have that you're going to put out to the government, you can test that to see that it actually is going to work. I would say to government officers, they should also test it too to make sure for you that you can see, yes, it's going to last 200 years into the future and it's not going to fail with increased rain events happening in the Hunter or wherever we are. It's a very, very useful tool and also can be used when there's a change to the mine plan as well.

**The CHAIR:** Indeed. In terms of policy and funding commitments from, say, the New South Wales Government, what would be most beneficial in terms of trying to advance geomorphic rehabilitation and other innovative post-mining land use practices, whether it's incentivising the uptake of it or—I'm not sure.

**TIM ROBERTS:** It has always been at discussions like this that we come to those mines that have been initiated without a set of requirements that can bring about any change in what they will do at end of life of mine. Whereas, in the newer mines, it is possible to look at some changes on the way through. In terms of answering your question, I would think that money should be spent on the grassroots, on getting views from the people living in the area as to what they would like to see going forward, so that you have a more consensus approach to what future developments there are. The buffer lands are one point, really, that is highlighted by what should be done because if the buffer lands aren't maintained then they become fire risks. It's an area that I think has been neglected.

**ALEC ROBERTS:** I was also going to mention that further research and collaboration between universities, government, environmental practitioners and mining companies is needed, both for landform design and landform evolution modelling. We develop and further develop and go down this path to ensure best practice is implemented and enhanced over time.

**The CHAIR:** Are there are examples where that landform evolution modelling has successfully predicted long-term landscape changes and helped to avoid potential failures?

**TIM ROBERTS:** With the uranium mines in the Northern Territory, I think that landform model—the Siberia model—has been very useful in ensuring that there's absolute minimal overflow from the dams there that are storing the radioactive material. But I don't recall at this stage; my mind's a bit fuzzy on the detail.

**The CHAIR:** Thank you. That's useful to know. You mentioned earlier about your travels to Borneo and about some other innovative—the Eden Project. Are there any other innovative uses for reclaimed mining lands that have emerged recently that you think the Committee should be aware of, and how would these impact our planning processes here?

**TIM ROBERTS:** You mentioned in the document about pumped hydro and I believe that that is a future opportunity. A few years ago I was learning of pumped hydro in Central Queensland at a mine there. I don't recall anymore more recently what's happened there but, to my mind, the pumped hydro is one possibility.

**ALEC ROBERTS:** There's also in Poland a number of different things that have been done there. They've developed this tourist area with lakes and—you wouldn't know it was a mine. You'd have no idea it's a mine; it's a gorgeous looking place. Other things they've done on the industry side is they've developed—this is for biofuel—coppicing systems. They grow these trees and coppice them every couple of years to provide fuel for the biofuel. So they've taken the sites and developed these coppicing systems for biofuel.

**The CHAIR:** Do any of my colleagues have final questions in the last minute?

**Ms SUE HIGGINSON:** I did have something but I've lost it.

**The CHAIR:** Do you have anything further you would like to add in the hope that it will jog my colleague's memory?

**TIM ROBERTS:** No, I don't have any more.

**Ms SUE HIGGINSON:** It was about the application of the tool.

**The CHAIR:** The land evolution modelling?

**Ms SUE HIGGINSON:** Yes, but I've lost it. I'll leave it for supplementaries. It's that time of the day. I was on track. Maybe you answered it already, but it was in terms of the tool, the modelling around it and using that tool—oh, I do know the question. It was about the limitations of that method of rehab. For one of the mines that I've had the benefit of seeing—it's an old mine and it's a deep pit mine—the rehab is that traditional terrace and—

**ALEC ROBERTS:** Terraces.

**Ms SUE HIGGINSON:** Yes. I could see already erosion happening there. Is there a capacity to retrofit—to then go back—or have we missed the boat on some of those old, hard, deep pit mines?

**TIM ROBERTS:** My view is that you can do anything if you've got the money. If you look at the abandoned mines across Australia and across New South Wales, there are so, so many of them. The Government puts, I think, \$2 million a year into the reparation of abandoned mines and it's just one little, tiny drop in the bucket of what's needed. Yes, you can repair and rehabilitate, but where's the money come from? If you can't hold the miners to account, then I think the Government just won't be able to foot the bill unless there is a very significant cost benefit to doing it, but the cost is very large.

**ALEC ROBERTS:** These models can be applied—and, as a matter of fact, the research points it out—to abandoned mines.

**Ms SUE HIGGINSON:** It's going back some years now, perhaps 2007 or 2008, that there was the Auditor-General's report on the legacy mines being one of our most money-haemorrhaging, expensive liabilities that we have on the books. So it's interesting—where does the reconciliation of that liability come? Where does that happen? Sorry, that's me thinking aloud. It's very interesting to know that you can—of course you can retrofit anything. You can go back and fix mistakes and errors and bad practice and make it good practice.

**ALEC ROBERTS:** I want to briefly say the geomorphic rehabilitation can involve a larger footprint than the traditional model and so if a mine decides to go with the—and this has recently happened, where the miner said, "We want to go with geomorphic rehabilitation." They've gone back to the government planners and the government planners have looked at it and gone, "Yes, okay", and realised that there was going to be a slight increase to the footprint but the outcomes would be a lot greater.

**Ms SUE HIGGINSON:** Was that Mangoola? Is there an example of that?

**ALEC ROBERTS:** I can't remember who it was now but it was one of the Hunter mines.

**The CHAIR:** That is all we have time for today but thank you very much, again, for making time to give evidence to this inquiry. Final thoughts, Professor Roberts?

**TIM ROBERTS:** I've just thought of one other point that you may be interested in. Professor Ravi Naidu, who is at the University of Newcastle, is editing a book on abandoned mines. We had a conference in 2017 in Muswellbrook, I think—perhaps Singleton—and the papers from that conference are being put together in a book. I have a chapter of that. Slowly, slowly the lot is coming together. There will be two chapters in from Borneo. So one name I'd suggest to you is Professor Ravi Naidu, if you wish to talk to other people.

**The Hon. SCOTT FARLOW:** We're going to have to have a reading list from this inquiry, I think.

**The CHAIR:** I know. Some light bedtime reading for us all.

**Ms SUE HIGGINSON:** Yes, we've got a reading list attached.

**The CHAIR:** That's very helpful. Thank you again for making time to give evidence. If there were any questions that were taken on notice, or if the Committee has any supplementary questions for you, our secretariat will be in touch.

**TIM ROBERTS:** Will you write to me about that paper on the Paringin lake in Borneo?

**The CHAIR:** Yes.

**TIM ROBERTS:** Thanks.

**(The witnesses withdrew.)**

**The Committee adjourned at 16:20.**