New South Wales Government
Independent Planning Commission

TRANSCRIPT OF PROCEEDINGS

RE: McPHILLAMYS GOLD PROJECT (SSD-9505)

PUBLIC HEARING DAY 3

COMMISSION PANEL:	DR PETER WILLIAMS (PANEL CHAIR) MS CLARE SYKES PROFESSOR NEAL MENZIES
COUNSEL ASSISTING:	MR JAMES EMMETT SC

LOCATION: BLAYNEY SHIRE COMMUNITY CENTRE

DATE: 10.00AM, WEDNESDAY 8 FEBRUARY 2023

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COMMISSIONER WILLIAMS:
Good morning, and welcome to Day Three of the Independent Planning Commission's public hearing into the State significant development application for the McPhillamys Gold Project, SSD 95005.

I'm Peter Williams and I am the Chair of this Independent Planning Commission Panel.

Joining me are my fellow Commissioners, Ms Claire Sykes and Professor Neil Menzies. We also have James Emmett, Senior Counsel assisting the Commission at this public hearing.

Before we begin, I would like to acknowledge the traditional owners of the land on which we meet, the Wiradjuri people. I would also like to pay my respects to their elders, past and present, and to the elders from other communities who may be participating today.

The applicant, LFB Resources NL, a wholly-owned subsidiary of Regis Resources Limited, proposes to develop the McPhillamys Gold Project, an open-cut gold mine to extract up to 60.8 million tons of ore, and produce up to two million ounces of gold over 11 years, and build an associated underground water supply pipeline in Central West New South Wales.

The Department of Planning and Environment, in its assessment report, has concluded that the application is approvable subject to conditions. The Commission is the consent authority for this site's significant development application because more than 50 unique public objections were received.

The Minister for Planning has directed the Commission to hold a public hearing into the application. The Minster has asked the commission to determine the application within 12 weeks of receiving the whole-of-government assessment report from the Department.

In the interests of openness and transparency, we are live-streaming proceedings on the Commission's website. A full transcript of the three-day public hearing will also be published on the Commission's website in the next few days.

Following the public hearing, we will endeavor to determine the application as soon as possible, noting that there may be a delay if we find that additional information is needed.

Written submissions on this matter will be submitted by the Commission up to 5 PM Australian Eastern Daylight Time, on Wednesday 15th of February 2023. You can make a submission using the submissions portal on our website.

We have many speakers on today's schedule, as such, I would ask everyone presenting today to please try and keep to your allocated speaking time. As Chair, I will enforce timekeeping rules to ensure everyone receives their fair share of time. However, I do reserve the right to allow extra time for the panel and counsel assisting to ask questions, or to hear new information.

It's now time to call our first speaker. Uh, so Mr. Emmett, if you call the first speaker for this morning, thank you.

JAMES EMMETT SC:
The first speaker to address the the Commission this morning is Mark Lockwood of the Central Ranges Brewing Company and The Beekeepers Inn. I invite Mr. Lockwood to address the Panel, the Commission.

MARK LOCKWOOD:
Good morning, Commissioners. Uh, my name is Mark Lockwood, owner/manager of the Beekeepers Inn café, and Central Ranges Brewing Company, both business located at 2319 Mitchell Highway, Vittoria, situated approximately two kilometers from the proposed Regis mine. Our family-run café has been operating for 15 years, and our brewery and meadery for 10 years.

The Beekeepers Inn is an established hospitality and tourism venue, which caters for locals and travelers alike. We offer country hospitality, along with honey, beer, and mead produced onsite, coupled with regional produce. We also host and cater for, on average, 20 to 25 weddings, uh, per year.

Central Ranges Brewing is an established producer of beer, and more recently honey mead, offering an additional tourism card to our venue. Both businesses have been active participants within the various local tourism sectors over the past 15 years to help promote the bountiful food bowl of the Central West. Both biz- businesses oppose the proposed Regis mine as we believe this will adversely affect the operation of our businesses in a number of ways, including, but not limited to our underground water supply, which is an essential part of the production of our beer and honey mead. As water is the main ingredient to the production of our products, it has been laboratory tested, and our recipes designed according to the mineral makeup and pH levels of the water, our concern being, if there is any change to the underground water supply whatsoever, this will affect the consistency and quality of our products. Dust and air- airborne particles are a concern to our brewing procedures, as we brew in open vat, English style fermentors, and any additional dust or airborne pathogens create an increased risk of infection to our products which can result in losing batches of 1,000 liters, and thousands of dollars. Any dust will also affect our outside dining guests' country hospitality experience, not failing to mention all weddings hosted onsite have their marriage ceremonies, um, onsite as well, and any dist created from the blasting of the mine site would not be favorable for the couple's special day, or for future recommendations.

Blast noise and tremors are also a concern for the reasons just mentioned in the detrimental effects to the hospitality and wedding businesses, but also to the structural integrity of our café, which was built in 1859, and is a well recognized local historical site which is directly related to the original cobb and co trail. Lastly, job creation from the mine will have negative impact on the local community, as many established local businesses, including myself, are struggling to fill positions at present. Extra jobs will not only take away potential local employees, but also put an additional strain on the already strained local housing market, making it harder to entice employees from outside the area.

Thank you for your time in hearing my concerns related to the proposed Regis mine.

COMMISSIONER WILLIAMS:
Thank you, Mr. Lockwood. Um, once again, uh, you've, would also like to include any written submissions - - -

MARK LOCKWOOD:
Yeah.

COMMISSIONER WILLIAMS:
- - - with the, um, with us, we'd, uh, gratefully receive those submissions as well. Thank you very much for your time.

MARK LOCKWOOD:
Thank you.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The next person to address the Commission is Zac Alcock of the New South Wales Apiarists' Association Inc.

If Mr. Alcock is not here, either in person or online, we'll move to the next person and come back to Mr. Alcock. Um, the next person to address the Commission is Warren Aubin. Invite Mr. Aubin to address the Commission.

Is Mr. Aubin online? In that case, we'll come back to both of those, if we have time. Uh, we'll move next to Lisa Paton, can I invite Lisa Paton to address the Commission?

LISA PATON:
Good morning commissioners, my name is Lisa Paton. I'd like to acknowledge the traditional owners of the land that we meet on today, the Wiradjuri. I pay my respects to elders past, present and emerging. Today, I speak with for Commission of the Elders of the Traditional Owners, Bathurst elders, and local elder Aunty Nyree Reynolds.

I've spent over 20 years researching local history in Blayney Shire, I became more deeply interested in the Aboriginal history in the area due to my family and working with historian Craig Bratby, who wrote the biography of the bushranger, John Vane. During this time, I became further aware of Aboriginal history in the Blayney Shire, one area of interest spiked by this was the aboriginal trackers who assisted in the capture of John Vane and his gang. This led me to delve further back into history, and I discovered the extensive links to Aboriginal tangible, meaning material, and intangible, meaning teachings and stories, linked to the Kings Plains area, including from the early 1820s on.

I spent many hours, days, weeks, researching, compiling, and writing this history from a personal interest perspective. Then more formally, for the report for the EIS, whilst I was emplar-employed by the Orange Local Aboriginal Land Council. I was assisted by the elders both in

Orange and Bathurst, and what was written for that report first went through both elders groups for approval, and was then submitted to the Orange Local Aboriginal Land Council board for approval. I was supported by an archeologist from La Trobe University in developing the report, and during this period, I enrolled in a Bachelor of Arts, archeology. Due to the times volunteering to opposed the McPhillamys mines has taken on my life, they accepted my study at a diploma in arts, with a minor in archeology. I hope to resume this at some point.

I resigned from the Orange Local Aboriginal Land Council in October of 2020. I really enjoyed my time working there, and the opportunities that it gave to me. Since this time, I've always kept an open dialogue with the broader Aboriginal community, and in particular, the traditional owners from Bathurst seeking permission for any action undertaken related to Aboriginal culture, in particular the McPhillamys Project.

The links to Aboriginal, colonial and conflict history in the area are extensive. I will outline them in my written submission. However, as an example, in addition to the extensive archeological deposits on and around the mine, the tangible and intangible evidence include the conflict history written about, by a renowned history, Dr. Stephen Gapps in his book, Gudyarra, The Bathurst War, which focuses on the conflicts between Aboriginal people and colonials in and around Bathurst, including Kings Plains. His research is evidenced through extensively speaking with the Aboriginal community and utilizing archives such as the colonial secretary's diaries.
Another significant part of history is that Kings Plains station, now part of the Regis landholding, was once owned in the 1800s, by Sir James Stirling, who reportedly saw conflict with n- Napoleon Bonaparte. Stirling went on to become governor of Western Australia, and led the colonial sin the paja- Pinjarra Massacre of Aboriginal people in WA. This is one example of the associated history of the Kings Plains area that underpins the vast history of this landscape.
As part of the process of responding to the mine, and one, one of the local elders has had an Aboriginal archeologist go through the Aboriginal cultural heritage reports and processes undertaken by Regis. The archeologist has sub- subsequently identified many flaws in the mine's process, and has written a report in line with this. Therefore, an independent, comprehensive, Aboriginal cultural heritage and historic assessment must be completed to rectify this.
Asides from wanting to protect this amazing history in Kings, the Kings Plains region, I would like to voice my disbelief that anyone could consider placing a tailings dam over the headwaters of the Belubula river, which flows on through the township of Blayney to Carcoar Dam, the Lachlan River, and on to the Murray-Darling Basin, our food bowl. A tailings dam breach without a containment bund could be catastrophic. We humans are orchestrating our own demise. Finally, if one positive thing has come out of this project, it's the wonderful new people I have met through the Aboriginal community, Belubula Headwaters Protection Group, and the residents of Kings br- Plains for whom my heart breaks for their stress and loss of wa- way of life.

In summary, I see this project as short-term earn for long-term burn, or short-term gain for long-term pain. Thank you.

COMMISSIONER WILLIAMS:

Uh, thank you Miss Paton. Um, a- no... Sorry. Uh, really, that's, I guess, a, a synopsis of your, um, concerns. Uh, you mentioned, uh, that you have got, uh, that more extensively outlined in your written submission, so we looking forward to seeing those, those submissions.

LISA PATON:
Yeah.

COMMISSIONER WILLIAMS:
Thank you very much.

LISA PATON:
Thanks.

JAMES EMMETT SC:
The next speaker to address the Commission, who I understand is online remotely, is Zac Alcock with the New South Wales Apiarists' Association. I invite Zac Alcock to address the Commission.

ZAC ALCOCK:
Good morning Commissioners, my name is Zac Alcock, I'm a third generation commercial beekeeper located in Cowra. I'm also an executive counselor of the New South Wales Apiary Association, the state te- industry body for commercial beekeepers. Today, with full support from New South Wales Apiary Association executive council, I would like to briefly outline the negative impacts of the proposed the gold mine at Kings Plains on our industry.

Kings Plains Gold Project would destroy 22 hectares of highly valuable native bushland, ruin ground flora pollen flows, and possibly contaminate the water and air our colonies consume. Put it simply the loss of resources is a national food security issue. One third of Australian food that ends up on our table is dependent on honeybee pollination. It's not the only the fruits, nuts and vegetables, but also the dairy, meat and protein products derived from raising farm animals on pastors such as clover, legumes, and leucine that also rely on honeybees.

The loss of resources in the Kings Plains area will make it increasingly difficult for apiarists to keep their bees healthy, to successful fulfill pollination demands, noting there is one of the largest pollination services company in Australia located in close proximity to the proposed goldmine. Note the fact that the commercial beekeeping industry rec- required to keep colonies healthy, profitable and efficient pollinators is the ability to breed high quality queen bees, the resources and climate such as that is found in the central tablelands region, and are extremely important for this to happen. Ground flora loss during the construction of the Kings Plains Gold Project would have an impact on queen production as this area is prime for queen bee breeding during summer and autumn.

The loss of important flora is not only the only thing that will limit queen production in the Kings Plains area. Air and light pollution will negatively impact queen bees in their mating cycle a vast distance away from the mine, noting there is currently a national shortage of queen bees in Australia. The importance of secure resource access for honeybees is a well established fact, and

to allow more variable resources that help sustain honeybee colonies to be lost is an obvious failing. Every beekeeping site lost is, creates pressure on other areas used by commercial beekeepers, therefore having a negative spiral effect on the industry. As stated, suitable beekeeping areas have more apiarist- apiarists using limited areas, therefore restricting pollen, and nectar collected the bees in these areas, from overstocking. This also creates a vast security risk. The effect has already increased after our industry was devastated by recent bushfires and border closures due to an exotic pest incursion.

The honeybee industry contributes an estimated 14.2 billion dollars annually to the Australian economy. The beekeeping industry are facing some major challenges at the moment, including the largest biosecurity threat the beekeeping industry has ever faced, the Varroa mite. Loss of resources is also one of the largest challenges we face. Now has never been a better time to protect this crucial industry, as pollination is vital to life on our planet. The New South Wales Apiarists' Association are disappointed there has been no consultation over the potential loss of these extremely important resources located in the Kings Plains area. Compensation of the loss of these apiary sites I feel is extremely important, and would be greatly appreciated by the industry, though nothing compare to untouched rare bushland apiarists use to keep their colonies healthy.

Commissioners, thank you for your time. It is gratefully appreciated.

COMMISSIONER WILLIAMS:
Uh, thank you, Mr. Alcock, for, for phoning in, uh, with, with those-

Zac Alcock:
Yeah.

COMMISSIONER WILLIAMS:
... those submissions. Um, as I've been saying to, uh, uh, all presenting, uh, is there any, if there's, is also anything you would like to submit in writing, uh, in addition, or, uh, or to formalize it in written format, uh, your, uh, your concerns, that, that, that, that, that would be, uh, greatly received. Um, the, uh, but, uh, this information that you've given us of that will also appear on a transcript, so it will be in public record of this as well.

ZACK ALCOCK:
Yeah.

COMMISSIONER WILLIAMS:
Uh, so I'd just like to thank you very much for you time you spent with us this morning.

ZAC ALCOCK:
No problem, thank you, all.

JAMES EMMETT SC:

The, the next person to address the panel is Doctor Alison Ziller, an expert briefed by the Belubula Headwaters Protection Group. Um, Doctor Ziller, um, um, will address the Commission remotely, and is hopefully online now.

ALISON ZILLER:
Yes, I'm here. Good morning, Commissioners, if you can hear me.

COMMISSIONER WILLIAMS:
Yes, thank you.

ALISON ZILLER:
Yes, okay. Uh, I want to speak to you about the significant adverse social impacts that will arise from this mine during its construction, operation, and the aftermath. So given the number of these, the adequacy of proposed mitigations is a key issue. The proponent has objected to having their proposed mitigation reviewed against the criteria, tangible, deliverable, and durably effective. The objection is on the ground that these criteria are not specifically named in the Department's social impact assessment guideline, published in 2017. A mitigation which is not tangible, and/or is not able to be delivered by the proponent, and/or is not likely to be effective, is not worth much. The documentation presented by both the proponent and the Department reveal, in my view, that not one of the mitigations proposed would be durably effective in mitigating the adverse social impacts that they have identified. In addition, some of the proposed mitigations are not deliverable by the proponent, and therefore cannot be made a condition of consent. And further, some proposed mitigations are not tangible, and may not proceed.
So to deal with some of the specifics, the Department advises in its assessment report that 85 residences are within two kilometers of the mine boundary, and of these, 18 or 21% would be negotiated greement- agreements, including for 16 of them, an option for voluntary acquisition. A map in the EIS, uh, at page 162, shows that there are some 46 residences much closer than two kilometers from the mine boundary, and 40 of these are clustered to the south of the site boundary, and some 34 are located one kilometer or less from that boundary. The southern boundary is close to the very active part of the proposed site, namely, the pit, the waste rock emplacement, and the amenity bunds. Of the 40 residences, 18 would be offered negotiated agreements, leaving 22 households in close proximity to the site's southern boundary with no offer.

Similarly, the majority of 85 households within two kilometers of the mine boundary are proposed to be uncompensated for noise, dust, vibration, loss of a visual amenity and/or any damage to their social environment. It appears that the terms of the negotiated agreements include procedures for acquisition of property, and reimbursements of all costs associated with moving, but no compensation is proposed for the loss social connection to landholdings, some of which have been held by several generations of one family, nor for the fact that a residence is so close to the mine that there's little choice as to whether or not to leave.

Regis offers to install air conditioning and double-glazing in the 18 properties if the landholder declines to sell. This proposed mitigation is a one-off expense for the company, but would result in those households living in enclosed environments for the duration of the construction and extraction operations, that is, for 11 years. That is, to give effect to this mitigation, residents

would not be able to open their windows in the early morning, or in the evening, or at night, as noise and dust from mining operations would occur 24/7. Air conditioning and double-glazing would have no impact on vibrations, or on dust falling on the exterior of houses and their gardens. The health and welfare cost to residents of living indoors in a country environment, and/or alternatively living outdoors less than 1,000 meters from a mine operating 24 hours a day for many years, have not been identified by either the proponent or the Department. There appears to be a failure to compensate residents who stay in their homes for significant ongoing financial and social and health costs. It is unclear what assistance or compensation would be available to the 676 households living within two kilometers of the mine boundary, but not offered a negotiated agreement. And it appears a few hundred meters would mean no offer of air conditioning, or double-glazing, or buyout, despite relative proximity to the mine and the likely experience of me- amenity impacts.

The Department say the amenity impacts on local residents are unavoidable. It relies on five statements to the effect that residual social costs due to noise, air quality amenity, and the limitation of their technical measurement would or could be managed to, and I quote, "A level acceptable under New South Wales government policy." Uh, those statements can be found at paragraphs 126, 145, 178, 186, and 431. In each instance, the relevant policy is not named or cited, and thus these statements cannot be verified. In social impact assessment practice, such statements are called unsubstantiated claims, and they carry no weight. Further, it appears that the Department has failed to exercise precaution so as to take account of potential social impacts of exceedances due to mistakes, mishaps, and operational failures. In the case of this mine, the impacts of such failures will effect the resident population very close to the mine site. It is not possible to know in advance the frequency of such events, but it doesn't seem realistic to assume they will not happen.

It also appears the Department has confused compensation payments to some individual land own- holders with a mitigation of social consequences for the community of Kings Plains and its locality. While these payments, particularly the buyouts, are tangible, and deliverable, their purpose is to encourage out-migration, and thus fragmentation of the local community, thus, they would not mitigate loss of social cohesion.

Properties which are sold will be re-tenanted by Regis. There doesn't appear to be a commitment to ensuring double-glazing an air conditioning for tenants, and the Department treats renting out acquired properties as a measure to reduce out-migration. They say that parra one- 197. In my opinion, this is an error. Renting out acquired properties would be a financial strategy for Regis, but it's not a housing strategy to reduce out-migration, this is because the tenants will not be landholders, and will be sufficiently in need of housing to be living in circumstances which have caused other residents, the current residents, to leave.

The estimated 300 non-local construction workers are proposed to be accommodate in a demountable village provided by a third party. The Department appears to accept this as a mitigation despite the fact that it is not deliverable by the applicant. The third party is not named. It doesn't appear that a DA for the village has been received or approved by Blayney Shire Council, and there is apparently no social impact assessment of the likely social consequences of such a village for the residents of Blayney Shire. For example, would the demountable village be

comprised of mobile home units? Would they be available and in a suitable location to meet housing needs in the shire, or would the village be relatively remotely located, and/or more like a barracks?

I do not agree with Regis that there is, as they, they say, little evidence base for the social impact issues associated with the proposed demountable village. The literature on the social impacts of mining villages for temporary or fly-in fly-out, and drive-in drive-out workers, has not been referred to, but should be applied to this proposal. No accommodation strategy is proposed for operational workers who seem to be expected to find their own accommodation, despite likely housing shortages in the region, which the influx of these workers will exacerbate.

As well, the social infrastructure costs to Blayney Shire Council and residents of the presence of some 300 non-local workers in a demountable village have not been estimated. The funds provided to the council via the VPA appear to be for local roads, and to address access issues and road usage by mine vehicles. These funds are therefore to achieve benefits for the mining operation, rather than social infrastructure for the Blayney community. While the extraction operation would last a mere 11 years, the loss of country for the Aboriginal community would be permanent. In response, Regis offers vague assurances of consultation and participation. These may be deliverable, but in my opinion, lack reliable efficacy, and are inadequate when measured against the value placed by the Aboriginal on connection to country. There is no consideration of the long-term social impacts of the void, or the pit lake it would contain. For example, the void would be close to a future Kings Plains village, and while it might be fenced, fences have a short life in comparison with the permanent presence of the pit lake.

Regis proposes a number of mitigations intended to be carried out as part of the social impacts management plan, and the Department endorses this approach by making the SIMP the sole condition of consent in relation to social impacts. The fundamental problem with the SIMP, in my opinion, is it doesn't make good the short fall of tangible, deliverable, and durably effective mitigations of the social impacts of the proposed mine. Among the adverse social impacts proposed to be mitigated but the SIMP are out-migration, residual impacts of noise, dust and loss of visual amenity, indigenous connection to country, workforce accommodation, local business participation, and community health and livability.

However, the principle outputs anticipated from the SIMP are either documents, such as plans or sub-plans or information and communication activities. As an example, the principle SIMP responses to the issues of out-migration and the experience of noise and dust for residents of Kings Plains are, dialogue, consultation and information, demonstration that Regis is a good neighbor, good neighbor relations, not my repetition, and investigation of complaints. These responses are deliverable, but they lack efficacy. None of them will make good the issue of out-migration or social fragmentation, or substantially ameliorate the experiences and conditions that residents who stay will face. It appears that the SIMP is a reassuring holdall for matters that the proponent is unable or unwilling to address via tangible, deliverable, and effective initiatives. It's thus a matter of concern that the Department describes the recommended conditions for consent as strict and precautionary.

In summary, the most striking feature of this proposed mine is its disproportionate and negative social impact on an established local community situated in close proximity. The mitigations proposed for the many adverse impacts do not meet reasonable mitigation criteria, in particular, they are not likely to be durably effective. As a result, the proposed conditions of consent will not mitigate the disproportionately adverse social impacts of the construction and operation of the mine, and any extensions or optimizations in the future, or the legacy of the mine on the local community. Thank you.

COMMISSIONER WILLIAMS:
Uh, thank you, Miss Ziller, for that, um, comprehensive, um, uh, presentation. Um, you spoke a lot about concerns about some of the mitigation measures are not deliverable or cannot be conditions. Um, uh, and I think you, you, I think if, I understand it clearly, in your summing up, um, are there just some aspects of this, uh, proposal that is, are impossible to be properly mitigated or c- or conditions, uh, from a social impact, uh, perspective? Uh, will there be unavoidable social impacts that, uh, if this was to proceed, that, uh, could, could just not be fully alleviated or mitigated, um, in any way, particularly some of the impacts your talked about, out-migration, social fragmentation, and so on?

ALISON ZILLER:
I think the problem is that the, the mine is, the proposed mine is so close to the village that, uh, they can't, that nobody could realistically shelter the, um, people living in that village from the, um, the noise, and the dust, and the vibration, and all of those, uh, impacts, which are proposed, you know, they're not gonna happen sometimes, they're going to happen regularly. Um, and essentially, it, um, it makes the village unlivable. So it's, it's like saying that the price of this mine is the village.

COMMISSIONER WILLIAMS:
You also spoke a lot about s- what you perceive to be some of the deficiencies in, in, in compensation and, uh, uh, negotiated r- a- uh, agreements, um, so if I understand correctly, you're, you're saying that, um, that the- there are significantly more house- uh, properties that are effected, particularly in the two-kilometer radius. I think you mentioned, uh, uh, it was 85, I think, roughly, but, um-

ALISON ZILLER:
85.

COMMISSIONER WILLIAMS:
... but, but, but, uh, 40 within a, with a, a smaller radius, and, and only 18 of those... Uh, so what are you suggesting is that, uh, uh, there should be an offer-
Uh, so what are you suggesting, is hat, uh, uh, there should be an offer of compensation for the, for, for Veda and other aff- affected properties?

ALISON ZILLER:
Yes. I think if you look at the map in the EIS, um, it's clear that there are some, uh, dwellings that are very close to the mine. Um, in fact there's an awful lot that are just fractionally away. And, uh, they're not sufficiently far away for it to make no difference to them whether there's a

mine there or not. Um, and they will suffer impacts, and I couldn't... I kept going back into the documentation to try and find out where they might be, be offered, um, a similar, kind of, um, compensation, but I didn't find it. I didn't find any clear statement that anybody living within two kilometers of that mine would be able to, um, even access, um, double glazing and air conditioning, for example.

COMMISSIONER WILLIAMS:
Thanks, Miss Ziller, I'll just see if there's any other questions, yeah.

Uh, Miss Ziller, thank you very much for the time in presenting to us this morning, we appreciate it, your participation. Thank you very much.

JAMES EMMETT SC:
The next speaker to address the Commission, Dr. Ian Wright. And, I'm, I'm, sorry, Gavin Mudd, an independent expert briefed by the Belubula Headwater's Protection Group. I understand Professor Mud is online and ready to address the Commission now.

PROF GAVIN MUDD:
Yes, good day folks. There are some slides, uh, I understand, uh, um, I understand the, um, Commission will be running those slides. I, I hope that they can come up now. Um, they basically just give up, hopefully a good visual for some of the key ideas, I guess, I've been asked to do. So I was asked to look at the, basically some of the key concepts around tailing things and, uh, rehabilitation. Um, and also as part of that, I've looked at some of the issues around groundwater part, my, my background and, uh, expertise.

So I've got... Next slide, please. So I come from a long background of looking at mines for close to 30 years now. A lot of that has been through university teaching, through the research work I do, um, but also engaging the community that are all over Australia, uh, and internationally as well. And so, um, the Environmental Defender's office asked me to look at some of the, the tailings and rehabilitation aspects of McPhillamys. Um, and so therefore, that's pretty much where I'm focusing my, uh, efforts now.

Where groundwater issues are, are relevant, um, for those types of issues. I'll also look at those. So I'll come back to that. But, uh, next slide please. Now, if you look at the proposed, uh, the storage, tailing storage facility, it's, uh, a fairly large, sort of, structure. It's, uh, it's in some ways, um, it looks very conventional. It's got the embankment walls and so on. Uh, given the topography, they know they have to use numerous walls if, uh, an, be the the heights over time in order to make sure that the tailings and the associated process water does stay contained.

Now, one of the interesting issues that I guess I've, I've spent some time in looking through both the EISs and also the, the, uh, tailings feasibility study, I think it's D, as part of the EIS, uh, is this concept of lining, and whether there's enough, low permeability, uh, in the, the soils and the, the underlying rocks, uh, in order to, um, minimize the potential seepage that might flow from that tanking storage and facility.

And I think one of the things that, sort of, stands clear to me is that really, when you look at the, the modeling work that's done, uh, we're really relying... that the design is really relying on the, the modest permeability of those underlying blocks, especially the answer formation. The actual CP trades have done very much, which is, uh, e- interesting. Uh, and I think in many ways, I... What that points to me is that we need to make sure we're understanding, I suppose, you know, seepage impacts, where that goes, um. But also what that means for the long term.

And in the long term, what that suggests is that our tailings will act effectively like the perched aquifer system, as we would call it. So it's going to stay, um, you know, retaining water inside those tailings for decades to come, and that is acknowledged, uh, in the, um, appendix D of the EIS. And so that means that we're going to have a long term for seepage risk, a seepage problem that we need to look at.

Uh, now one of the things I find, uh, and very disappointing actually, is that there was no examination or no assessment of actually transferring tailings once the project was finished, and actually depositing them into the, uh, the final void, or the pit and back filling that pit. And it's something that, uh, certainly I've been advocating now for a long time, uh, probably close to 20 years or more, I would guess, but, uh, they lea- I couldn't find anywhere in the EIS or the appendix that actually considered that as a, as a concept, as part of rehabilitation of the tailings. And by doing that, and I'll, I'll come to the... Some of the benefits of that in a second. But I think when we're looking at the modeling of pH and what that means for the, sort of, this headwaters area of the Belubula in pit, I think certainly helped to minimize those long term risks. Certainly, eliminate some of them, I think. Uh, so I think that the, sort of, the, I suppose, the proposal for tailings, um, but I would again, I think leaving these, these tailings in the place itself opposed, uh, means we have a very long term issue we would need to be managing and, uh, that has big implications for things like rehabilitation and so on.

Uh, next slide. Thank you. So what I've been doing recently is, uh, I suppose, looking at tailings management across Australia. And one of the things that I think actually really surprised me is just how the widespread it is now becoming. And for a lot of mines, you've got, uh, operating gold mines. You can see a lot of pins, the pins there in, uh, in the mapping on the right hand side there. You can see a lot of pins in Western Australia, now in goldmine where they've had open cut mining. Mining has now moved to underground, and so it's, uh, one, it's cost effective to use a, a form of pick as a tailings facility, um, but two, the key benefits are really... We don't ha- need to worry about the long-term stability of a tailings stand.

Right, but we also can, can vastly reduce our, uh, risks of acid mine drainage for acid and management of drainage. Uh, and that means we have lower risks of groundwater contamination. Um, and in some ways, you could even argue that you might be able to eliminate those if we've removed the tails from that, uh, area of the proposed, uh, TSF.

Now that doesn't necessarily mean we, um, have no tailings, I would say groundwater risk within pit tails that there are, but I certainly think there are a lot lower there. Several water of magnitude lower than what we would face given above ground, um, uh, tailings, uh, storage facility. And ultimately, what that means, um, when, when you look at this is that we've got much reduced long-term liability. We don't have to worry about stability concern, we don't have to keep

monitoring surface water, groundwater, um, with a view to making sure that everything is still stable and not causing unacceptable impacts. So that means we're getting a better long-term outcome, right? So I think that mean, for me, that means we, uh, get a, a better, uh, reduction in long-term liability.

All right, and so now, and one of the key reasons that impact tailing as you say, starting to use a lot more is because the tailings that, that are identified in the EIS and appendix D as potentially as acid-forming. If we're putting them deep in the pit, they'll be well below the water table, and not exposed to oxygen in the surface and the environment. And therefore we, we effectively, uh, almost eliminate that, uh, asset generation, uh, process.

Right. And, you know, there are are certain sites where, uh, reprocess of tailings, uh, in, uh, in the process of transferring, or the, the, um... from the, the tanks storage facility to the pit, uh, that can be done too. It's certainly done up at the, uh, the Century zinc mine. Uh, and it's done elsewhere. Uh, our next slide. So I thought I'd put together a, a conceptual picture of how this looks. Uh, and this is not quantitative. I, I do want to stress that. It is a conceptual picture, right? Um, I have... haven't, uh, linked it into the, the psych geology per se. Um, but based on the EIS and, and so on, and the overall project proposal, we know that the, the tailings would take up, um, something of the order of 40% of the volume of repair.

The potentially acid forming waste rock would, uh, be another 35, 40% of the volume of the pit, uh, after it's been mined and, uh, and placed, say in the waste rock. Um, And if we look at the, the, uh, regional water table, uh, it's, uh, something of the order of 10 to 20 meters, uh, below the ground surface. And so, uh, that's what helps drive the, uh, uh, flows in, um, you know, streams like the Belubula. But also it means that we're going to that... water table is going to be much higher than, uh, that acid, uh, potentially acid forming material in the waste rock and the tailing. Now what the final decision would be for the remaining volume of, uh, of the pit void, I guess that's something that needs to be mu- you know, very carefully assessed. And that's something that I think is, uh, I, I would've expected to have seen in the EIS, but, uh, I don't see no mention of it. So whether it's left it's pit lake, or whether otherwise, would be that he put on top to basically return, um, say a potential pre mining topography, um, I suppose that's the decisions into the future.

But certainly, um, that as a concept, I believe should have been, uh, actually looked at in the EIS. But I think to me, there's a lot of key benefits in looking at this approach, both for, for, uh, looking at tailings, but also linking it to mind rehabilitation and reducing that long term liability and risk to the, to the, um, headwaters of the Belubula.

Next slide, please. One of the other issues, I, uh, spent some time looking at was the, uh, issues of, uh, springs and seats. And there's certainly, uh, you know, uh, almost a couple of dozen known in the, in the proposed tag and, and storage facility area. And that means that those, those screens will be lost. So there, there's no kind of, uh, avoiding, um, we can't mitigate that given their uni- uh, you know, very local features. I, I think that it should be acknowledged that EIS has some good efforts. It's unusual to see efforts looking at, um, ack- acknowledging the presence of springs, their values, uh, and characterizing the water chemistry to actually understand aquifer sources.

Right, but I think the, the questions that certainly have come to mind when I'm looking at these types of things, and, uh, I've done this at various times in my career, uh, are looking at things like the vegetation over time, we know that that can correlate to the flow rates, uh, and we know that our, our climatic variations, when you're looking at the rise and fall of the, the water tables that drive springs and seas, um, we know we can get changes in flow rates as well.

So some of those types of issues, I would've thought would be really important because that helps drive looking at things like the, uh, rehabilitation criteria for, uh, uh, and things like that. Uh, now I know of examples, internationally, uh, where, um, tailings have been put over the top of screens, and I note this is in my written submission, which is currently in draft form. I'm hoping to, um, get that finished and submitted, um, uh, very, very soon.

Um, but they'll never be the same in Daylesford in Victoria when they, uh, they stopped, um, gold mining, um, to protect the springs and mineral springs in that area. Uh, sometimes the springs did start flowing in different areas. The flow rates were different and sometimes the water chemistry was different as well. All right, so I think there's, um, there's very significant issues there that, uh, I think we, we really need to be very, very mindful of. So, um, so- sort of, make those points.

Next slide, please. So for the rehabilitation, and I, I think there's been certainly a lot of aspects looked at, um, but one of the things that I find, uh, missing is really quantitative criteria. Now, whether that's, uh, looking at, uh, erosion or looking at water quality, there can be all sorts of ways we can start quantitative criteria, because one of the things that we need to be able to do is have the ability to say at some point in the future, how can we judge that rehabilitation is actually successful and we have a stable land reform, a stable water system, a stable ecology, uh, and also acknowledge the previous speakers in thinking about what that means in terms of social aspects or, or cultural aspects and indigenous issues and so on as well.

Uh, one of the things that are, uh, I, I think, uh, is a, is a, um, a really glaring, sort of, gap in the, in the rehabilitation section, is there's no acknowledgement of the potential, for instance, tailings during site closure and regularization. I think that's something that really should be hooked at. I think that's something I'd hardly encourage, uh, everyone to, sort of, consider. That issue, I... which is quite important and something that we have to pay more and more attention to is what climate change presents, in terms, of risks to rehabilitation.

We know that we're going to get, uh, probably declining rainfall, increasing evapotranspiration, so our water budgets are going to change. And that means that, that there's very significant implications for, for surface water flows, for groundwater recharge, what, what that means in terms of vegetation and, and therefore ecology and so on. So all of those things need to be very carefully assessed, and that's something that I think the EIS doesn't go, uh, you know, far enough on. There's a, a bit of acknowledgement in terms of water resources, but nothing re- really with perspective, what all of that means, uh, in detail for rehabilitation.

Another problem, which is I think a more systemic problem in the way that we, we look at mining, is the long term site monitoring, um, and assessment of that monitoring, uh, and any

maintenance costs after rehabilitation is finished. Our bond system that we have, uh, is there just, you know, help, uh, you know, step in if there's a need. If a company, um, is unsuccessful and goes into administration, and the government has to use that bond money to do the rehabilitation. But, but I don't know of any site that were really put aside, um, a large chunk of money that paid a long term monitoring for decades into the future. And we've got a facility like, uh, flight facilities where you've got potentially acid forming tailings, sitting above ground, a low form permeability materials that's going to stay saturated, and of course, seepage, there's real concerns that there could be, and especially with climate change, I suppose, there's real... I think the concerns are very genuine that we could be seeing problems into... long term into the future. So we need to make sure we actually... we'll address how do we fund that, how do we make sure there's money set aside, um, and, uh, whether it's the interest from that money, or some other way of making sure that we actually have funding to really monitor that site so that we can track its, uh, rehabilitation trajectory, uh, and make sure we're achieving things. So I think that's sort of, all of my key points there. So hopefully that's useful, um, for the Commission, uh, and for the community. And, uh, happy to answer some questions now if you'd like.

COMMISSIONER WILLIAMS:
Thank you very much, Professor Gavin. Sorry, first all of all, um, my apologies, uh, the, um, the, the presentation, uh, would that be able to be made available to the Commission? Uh, the PowerPoint presentation?

PROF GAVIN MUDD:
Sure, it's... Yep.

COMMISSIONER WILLIAMS:
Ok

PROF GAVIN MUDD:
I'm happy if that would be pu- publicly available. And, um, it's basically a, I, I suppose, a visual to what my written submission will go through in more detail.

COMMISSIONER WILLIAMS:
Great. Thank you very much.

COMMISSIONER SYKES:
Thanks very much, um, Professor Mudd for your submission. Uh, it's Claire Sykes here. Um, you mentioned in the earlier part of the presentation, um, that the liner of the tailing stem would produce what's called, what you termed a perched aquifer. And this would create potentially long-term seepage risk, could you just a- a- expand a little bit on the point around what a perched aquifer actually means? And when you say long term, what, what is long term? Um, and then I did have another, um, question when you, um, presented the opportunity or option around, uh, tailings being back filled into the pit, you also had a point that said, um, the potential for reprocessing. Could you also expand on that point, um, as well?

PROF GAVIN MUDD:
Sure.

COMMISSIONER SYKES:
Thanks.

PROF GAVIN MUDD:
If you look at, in, uh, groundwater term, what we, we mean by a perched aquifer system is if you've got... If you look at the broad topography region of the water table seats, let's 10 or 20 meters below the surface. So if we're building a tailing dam up above that ground surface, there's going to be a gap between, I suppose, all the water contained in those tailings and then the underlying water table. All right, and so that's, sort of, uh, a common concept we mean by, sort of, a perched system where you've got something that sits above a normal, say, water table. All right, so that's, sort of, really what we mean. And I think the low permeability, um, we could go through a debate with the test work that's been done, that building investigations and so on, but I think we can... No, it's, it's a, sort of, modest to low permeability system. So that means that, that will be the case. We have, uh... There will be a lot of water retained within those tailings, and that technology in the EIS.

Now, long term, uh, how long is, you know, a piece of string really? Are we, are we talking years, decades, centuries, or more? Now for some sites, we, uh, look at issues where, um, and sites like Captains Flat can be really instructive like this. We're talking monitoring for decades. Other sites, we know we've had pollution problem for centuries, you know, uh, and so, uh, and that time scale needs to be very carefully assessed. And that's partly why we need to think about monitoring for such a long time because we need to make sure that we understand what timeframes are relevant for this site.

And some of it that can be, it can be very hard to predict. Um, there's a lot of uncertainty with those types of predictions. But, uh, that's why I'm always, uh, you know, um, an advocate for, for good long-term monitoring. It's not just a few years or maybe several years, but, uh, at least, you know, starting off with a couple of decades to more.

So, um, so I hope that, that helps explain that. With respect to, um, tailings pre-processing, now that, that is an option that, that's possible. Now it might be possible just to try and get a bit more residual gold out. Um, but also, this is some of the work where I'm sitting currently involved with is, it's possible to look at getting other minerals out, whether, whether we call them critical minerals or things like that.

Um, or we just say, "No, we're just going to transfer the tailings." You know? Um, so we take it from the tailings stand across, into the, into the pit. Um, and examples of that, uh, would be the, the wood cutters lead, zinc mine in the, uh... near Darwin in the Northern Territory. So when that was rehabilitated about 20 years ago, they did exactly that. Um, site was closed down, and the rehabilitation plan actually said, "Well, we're going to the pick up the tailings, put them into the pit, and then backfill, uh, waste rock over the top of that."

And so, uh, without reprocessing now the, the Century Zinc Mine in Queensland's. Um, they've got a, a, um, something of the order of 80 million tons in flat tailings. And so they're actually reprocessing those tailings now, extracting, uh, residual zinc. Um, and that's a, at the moment, it's

quite profitable operation. Uh, and then they're depositing the tailings in the pit. And that's also substantially reducing the, uh, the cost of rehabilitation expected at that site.

So, and uh, so it's a good case study to show that it does work for... But it's not partially reprocessed, it's just an option that may or may not be, you know, technically or, or economically feasible, but certainly, uh, environmental preferable, I believe, to get the tailing from a storage facility aboveground, um, into a pit below the water table.

COMMISSIONER SYKES:
Mmh, okay. Thank you.

COMMISSIONER MENZIES:
Professor Mudd, Mill Menzies. Uh, you raised some interesting points and, and indeed, your answered to Claire just then, um, made me think about the, uh... by slowing the release of water from the tailings and you have the opportunity to slow the rate of oxidation of the pyrite that's in the tailings, I wonder whether there's the oppo- that, that actually represents an opportunity so that the environment can more readily assimilate any acidity that's being generated. And if you slow the release over the course of decades, or even 100 years as, as, as may well happen, um, the environment would be able to assimilate better. E- is that a rational way of thinking about this?

PROF GAVIN MUDD:
Um, the problem we've got with, with, with problems like this, I guess, is that the, uh... Even if we slow rate down, uh, you've still got that quantity to actually, uh, react over the long term. But once you've got that release, and, and the clays in the, and the soil and underlying rock will a- assimilate, or basically, they'll be some chemical reactions that, uh, take the, say, metals out of solution and they stick to the clay, for example. Um, but eventually, you'll get some breakthrough into the environment. And once that that material is into the environment, of course, uh, they may start, start out at a, a lower concentration, um, but they keep accumulating, then they can move from the, the water surface to sediment, to macro-invertebrates, to um, you know, and up through the, the ecology.

So, so I think the point we really want to make sure of, is that we're containing material in the first place, and try and minimize any reactions. And that's why I think its achieved that. It's, it's the best outcome, I think, to be able to really make sure that that's what we're achieving.

COMMISSIONER MENZIES:
Yep. And, and just another thought on the, um, reposition of tailings back into the pit that would unambiguously reduce the risk. Um, but there'd be the environmental cost of considerably increasing carbon dioxide emission because of the fuel that you'd have to use in requisitioning that. Have you given any thought to, to that sort of, you know, trade off of environmental insults?

PROF GAVIN MUDD:
It's an interesting issue, but I think the, uh... one of the things I'm seeing right across the mining industry is increasing use of, uh, renewable energy. You've got the 25 megawatt, um, solar wind

and backing system now built at the Acme Gold Mine. Uh, you're seeing electrification of mining really starting to take off. So I think in, in many ways, the industry is already heading down the path to, to address that issue. Uh, I think Australia probably, um, some companies are further ahead than others.

But, uh, we know the direction that we need to head in on that. So I think it's a matter of understanding that, okay, yes, there, there, there is a cost to doing that and environmental cost, so to speak. Um, but I think the environmental cost or, or risk of not doing that, uh, inser- in my mind, uh, there's a much, much greater risk of burden in the long term.

So I think it, to me, it's something worth that. Um, but we have to make sure we understand, well, uh, what technology, what energy sources have been used? And I think there's, uh, certainly opportunities for electrification of mine fleet, um, if we're just doing a, a hydraulic slurry pumping, um, from the TSF across to the pit, um, that doesn't involve trucks, it just involves electricity.

So I think there's, there's ways to address that. It's certainly an issue, but, um, I think that's also a matter of relative risk as well. And I think leading the tail into the background, um, is certainly a much, much bigger risk than the, uh, impacted associated with, um, moving that material.

COMMISSIONER MENZIES:
Thank you very much, Professor Mudd. We appreciate the time you gave us today. And, um, as I said, we'd also look forward to getting the presentation as well. You've given us this morning as well. But, uh, once again, thank you very much for spending your time with us this morning.

JAMES EMMETT SC:
The next person to address the Commission is Dr. Ian Wright, the independent expert retained by Belubula Headwaters Protection Group.

IAN WRIGHT:
Uh, thank you very much Commissioners. Um, I'm going to try and share my screen. Um, yep, I'm very good, effectively, I understand that you have a copy of my presentation. Can I ask you to do slides for me?

JAMES EMMETT SC:
Dr. Wright, the technical team is just confirming that they have the slides.

IAN WRIGHT:
Terrific. Well, as, as they're loading the slides, um, my first pager, um, I've been asked to comment on certain water quality issues associated with this project. And, um, particularly water quality impacts that could arise as a consequence of this project. And, um, whether there are adequate mitigation measures proposed. Um, much of material, uh, follows on from, uh, Professor Mudd's. No luck we put the slides here?

JAMES EMMETT SC:
I'm told they're coming.

IAN WRIGHT:
Okay.

JAMES EMMETT SC:
Dr. Wright, if you're able to commence the Commission,
commence the address to a certain extent, at least while the slides come up, that will assist the Commission.

IAN WRIGHT:
Okay, yeah, I'll, that's a good idea. So my, my, my first slide is a comment about cumulative impacts, and particularly in terms of water quality. It's pretty obvious which way the water is going to go in the surface, if there's a problem, so the EIS, the Department's assessment and the conditions of consent are all built on the concept that the footprint of this mine is from Carcoar Dam and above, and I reject that. That's a major weakness. It is part of the whole Belubula catchment.

And it seems to be a deliberate strategy to avoid talking about the second mine, the Cadia Mine, and I accept that we have the laudable aim that this will be a no discharge mine, but that may not happen. There could be accidental leakages, or something more serious, or catastrophic. But particularly in terms of flow, which is closely related to water quality. Uh, I think it's reasonable that the entire Belubula catchment, and even down into the Lockland catchment could be affected. And that's part of the, uh, footprint.

But I reject the statement in the EIS that, um, there are now other mining developments located in Carcoar Dam catchment, yes. Hence, there are no cumulative mining impacts expected during operation of this mine. And I think that weakens both the EIS, the assessment and the conditions of consent. For me, one of the biggest problems of any EIS is predicting what sort of environmental performance, or what sort of waste, or what condition of waste are we talking about?

So firstly, let's talk about the pipeline. The mine pipeline, 90 kilometers coming from the Liko area near the, um, Springvale Mine, Mount Piper Mine. I'm concerned about water pollution from any leakage, malfunction, or breakage of this pipeline. And this is realistic to me. Um, with my background in the water industry, I've actually never really heard of a pipeline that doesn't have some kind of a problem, whether that's hairline fracture, a joint, a pump, a control system. I think that is downplayed in the EIS. But the average volume per day quoted in the EIS is 13 mega liters. 13 is not a big number, but when you consider that, that is about six Olympics swimming pools, or si- that's an Olympics swimming pool every four hours or so. And that comes down to 150 liters per second, at an average flow rate.

Um, that isn't quantified, or described to me in the Department's assessment, or the conditions of consent, the potential impact or the measures that could be taken to monitor this, the measures that could be taken to, you know, repair, to fix the damage. And then the biggest question hanging in the air for me is, apart from salt, it's called brine, and figure is quoted in the order of, um,... Oh, terrific.

Um, if you can click a couple of the animations, I'm coming through this slide now. So I'm just breaking down how much flow is coming, another couple, um, and the last one is what contaminants are in the brine. Thank you for bringing that up. And this, to me, cripples the future monitoring program, what might happen if there's a problem associated with this pipeline, and the environments that are being traversed.

And as this includes the large altitudinal for gradient in different directions, we're talking about high pressures, um, small swamps, agricultural land, the Macquarie River, et cetera. Um, next slide please. And one more click please. So the big question, we're seeing, for me, in all documents is what is the water quality of brine? Um, this is a map from the EIS document. Um, I know a little bit about this because I, I've had some personal experience. Um, two more clicks please. So this is the Blackman's Swamp area, and this is actually a picture. Two more clicks, please. This is the discharge currently flowing from Lambda to Kelly.

So this is right beside Mount, the power station. It's owned by Centennial Coal, and I think this is actually a picture taken a couple of years ago, of the brine that's likely to be in this, um, pipeline transfer. It is currently licensed by the EPA with an environment protection license. I'll use the acronym EPL 21, 22, 9 and it discharges into new Beck's Creek, sometimes called Wayne Cole Creek.

Um, another click please. Now there isn't information in the EIS on what pollutants might be in that brine. But this... And thank you Centennial Coal. They published this information, and this is from November last year. So, it... very salty, um, two and a half thousand micro-siemens per centimeter. That's roughly four to six times the salinity level, the conductivity level in Kapo Dam.

Level in previous years that I've seen have been up to double this. Um, so it's probably associated with the heavier rain that we've been getting in the last couple of years. Um, I really do not understand why this information, and particularly since Centennial are collecting this, and the EPA is licensing this, and under the HEA, they're required to monitor this. I just don't know why this isn't part of the EIS.

And again, that cripples the effectiveness of the Departmental, uh, assessment report and the conditions for consent. Next slide please, and couple more animations, over a couple of clicks please. And one more. So I just want to make the point, this is licensed by the EPA, and one of the biggest details missing for me in the conditions of consent, and the Department's report is, how is this going to be licensed? How will it be monitored?

There's going to be a whole lot of pollutants generated by the project. Hopefully, they're locked up and it's a good aim that it's a no discharge. But we need to know what might be there. But in terms of the pipeline, we've got manganese, nickel, and zinc are required to be monitored, and they're at dangerous levels at the moment.

The manganese at 1900 micrograms, um, uh, sorry, that's, that's 1.83 milligrams. That's 1,830 micrograms is borderline. It's just within the ANZECC guidelines for protection of 95% of

aquatic species. But the nickel, 0.23 milligrams, there's some confusion in units. I wish the AEIS was in the same units as the ANZECC guidelines. But that level of nickel in that waste is roughly 20 times the ANZECC guideline, and zinc is about 12 times.

So a couple of points here. Firstly, this information should have been in the EIS, and it should have been used to inform how will this be monitored, what could go wrong. 150 liters a second of a leakage from this pipeline with these levels of com- of pollutants, and who knows what else is there, really, that's important fundamental information in quantifying the potential impact within looking at measures of how to, one monitor, and what to do if something goes wrong. Also, this is licensed by the EPA. It's a recent license that doesn't respect the values of the Coxes River. This is a really important tributary that flows into the Coxs River. Coxs River, second-

Tributary that flows into the Coxs River. Coxs River's the Second biggest river in Sydney's main drinking water catchment, Warragamba Dam. It's used for primary and secondary contact in Lithgow further downstream in the storages on the Coxs River. Very popular trout fishing stream, but also in terms of conservation, the Coxs River, biggest river flowing into the Blue Mountains. It's world heritage in, uh, world, world, world heritage area. So this license has no discharge limits on salt, manganese, nickel, or zinc. So I don't have confidence, although the conditions of consent seem to imply that the EPA will license appropriately, will it be like this license, which to me allows pollution.

Next slide please, and another quick, please. So this is a statement... And another quick, click again, please. This is a statement from the Department's report, and it is implying that they want to calculate site-specific water quality objectives. Now, this is code for We find the ANZAC guidelines a bit too tough. That alarms me, and we should be using the ANZAC guidelines, but if you do use site specific water quality object, We should have that available now for full scrutiny. This is an important waterway, the Belubula, it has many sensitivities, both environmentally, socially, and in terms of agriculture. And those should be upfront.

And how will we measure that? And again, it gives me no comfort that the APA agrees with Department on this one because I would point to the APAs license. 21229, Western Health Service that's currently allowing very contaminated wastes being discharged into the top of the Coxs River. Next slide, please. And a couple of... Again, big issue to me. What are the relevant license conditions going to be? Will they be similar to that BPO? What is the basis for the monitoring program, both along the pipeline, but also in the Belubula River?

The lack of this detail concerns me. Also, what are the pollutants within the operation? Whe-, whether it's in the acid forming, uh, unit, or contained within the tailing stand. We should have an idea of that now, and also their magnitude, their concentration. Next slide please. So, Professor Mark talked about his wonderful research right across Australia, but we have an example very close to us, um, which about a decade ago, I visited with Professor Mark, Sunny Corner. Um, he's... A couple of slides. It shut down multiple goldmines over a hundred years ago. Yet today the soil is still so highly contaminated plants don't grow in most of it, but the water that still emerges from this is so highly contaminated.

Um, I'm just suggesting a good look at the literature and perhaps leeching tests on the geological material would help us understand what are the pollutants, what concentration, and as the basis of a monitoring or licensing program or both, what should we be looking for? What should we be concerned about? Next slide, please. Uh, a couple more, please. So this is Daylight Creek. It's one kilometer downstream from Sunny Corner. The mine stopped a hundred years ago. So, um, I've done some, um, research, published research on this, and I'm just looking at five metals that are often associated with these acid forming metal mines. Lead, cadmium, copper, nickel, and zinc.

Now our view is the ANZECC 95% guideline level that is protection of 95% of species, which I think is appropriate level for the Belubula River, and I've just calculated in my column there for lead and the other metals, how many times. Zinc, 32,000 micrograms. Um, it exceeds the guideline by 4,000 times. This is not coming out of the mine. This is one kilometer below. It's actually quite a lot worse coming out of a mine. And I want to make the point. We need to know what pollutants are likely to be in the mine, and I hope they're locked up and I hope that there is no discharge, but we need to manage, um, and have a, a monitoring program in case they don't. Next slide, please. I'm nearly at end. I think we need an upstream downstream licensing program. Click through the next, um, ones please. This is the West Cliff mine, um, in the Akin area um, on the Georges River. Next slide, please. Their APL license... Actually, a couple more clicks. They actually look at ambient monitoring above and below that is needed in the licensing, in my opinion, for the Belubula River above and below.

Next one, please. And this is my last slide. A couple more clicks. It wasn't mentioned that the platypus is living in the Belubula River. It's one of the last western flowing rivers. Um, whilst it's not listed yet, it probably will be soon, but this is important to the community. It's well-known, um, invertebrate food source and water quality will affect these. Um, thank you very much.

COMMISSIONER WILLIAMS:
Thank you very much Dr. Wright, for that presentation. Um, here. Um, the, um, you spent a lot of time talking about, uh, what's coming out of the, um, uh, pipelines near Lithgow, and the point that we don't know the quality of the water that would be piped here this was approved, um, in terms of contaminants, beliefs and so on. Uh, are you suggesting that, uh, the information presented it might be of similar quality? U, or is that a reasonable assumption the basis be until the information is provided in terms of the actual quality of the water that might come through the pipeline?

IAN WRIGHT:
Yeah, look, that's a, that's a, that's, it's a great question. Um, I put a bit of detail into that because really that's the only data I could find that was, you know, real. Um, and I know a bit about Angus Place, Springvale, um, and the waterways in this area. The figure quoted is in total dissolved solids TDS of 3000, three and a half thousand. That's the only water quality information I could see. Um, the TDS level at the moment of that discharge I showed you is probably about 1500. Um, that, it, it, it's the, I could find that would represent what potentially might be in that in that effluent. So that, that is, that is why, why I use, um... That really, there should have been more information available. And, uh, I, I'm actually astounded that that wasn't in the EIS.

COMMISSIONER WILLIAMS:
Thank you. Thanks Dr. Wright. Questions?

COMMISSIONER SYKES:
Thank you very much, um, Dr. Wright, for your presentation. I just, um, it was probably just following from, um, Peter on the, um, on the Lithgow brine in particular. When you mentioned the sort of the monitoring of the Lithgow brine, because I am assuming that the composition of the water will change, given that it will be used for operational water use, that once it hits site, it will be sort of a, the composition will, will change. So if, if we focus just on the monitoring program that you emphasize of the Lithgow brine between, uh, Lithgow and the site, what, wha- how, how could this look? Is this more in monitoring pipeline integrity and in terms of mitigating leaks?

Um, or is it also monitoring any of the, um, you know, streams and, and other sort of outflows, potential outflows from the result of, of leaks? Could you expand on that a little bit?

IAN WRIGHT:
Yeah, sure. Thanks. Thanks for the question. That's another great question. Um, I, I, I ex-, I expected, firstly thinking about the pipeline and any potential, um, malfunctioned leakage, escape from that pipeline and that those level of metals, and it could be more there. Because we've only got data on, um, five metals in, in that license, uh, and that level of salt, both of which, if it could be a, you know, a hair, one leak under the ground, um, that that could, uh, seriously deplete the quality of that soil ability to grow, um, plants with that level of salinity. But al also, it will... And there's, there's a statement and I've come... I'm, I'm also, uh, similar to pro- Professor Mudd.

I'm still preparing my written submission, but there is, there is a line in the EIS and the Department's report that they will install, uh, reverse osmosis plant. And the reverse osmosis plant, I assume when the Lithgow brine arrives to the project would then process it, uh, to create a much higher water quality. And my big question there is that will create another type of brine, so that's likely to be a more concentrated version of what is already quite highly contaminated brine. Um, the, the figure of salinity of two and a half thousand micro-siemens, the background salinity in upper Coxs is under 50. So one of my big questions is, will, where will that brine from the o- other plants go from the first osmosis plant?

I'm assuming that that would be perhaps encapsulated within the project's, um, asset forming materials. Um, and if it's going to be disposed elsewhere, and this often happens with mines that I've examined. Um, you know, the West Cliff coal mine in Appin, for example, has a reverse osmosis plant that treats my, um, coalmine effluent from a couple of mine that's actually transferred and disposed into a tributary, um, of Port Kembla over near the coast. Um, and it's likely to have even higher levels of metals and starts. And again, that's another question that to me is pain there and, uh, needs to be resolved, um, to fully understand potential impacts.

COMMISSIONER SYKES:
Mm-hmm. Thank you.

COMMISSIONER WILLIAMS:
Uh, look, thank you. Thank you very much indeed, uh, uh, Dr. Wright, uh... Could you also, uh, along with your final written submission, could, uh, a copy of the, your presentation today, your visual presentation?

IAN WRIGHT:
Absolutely. Be very happy to.

COMMISSIONER WILLIAMS:
That'd be great. Just, sorry, I think we have one question. Sorry.

COMMISSIONER MENZIES:
Dr. Wright, I'm, I'm just wanting to, uh, explore with you why you are viewing this water as so toxic. I agree that we're at elevated levels of a few metals, um, but the salinity level is perhaps, um, well maybe a third down to a 10th of what would be acceptable for drinking water for stark. Okay, so, um, I, is it just the metal you're worried about rather than the salt content?

IAN WRIGHT:
Uh, that's a, a again, thanks to another great, a great question and it's an important clarification. Um, in my view, the Belubula River is important. When we look at the, you know, the values and uses of the waterway, it has ecological values, um, as well as agricultural values. And I did note in the EIS document that it, that it looked at water quality, um, in terms of what livestock can drink. And both shipping cattle, um, and other livestock can actually drink very, very salty water. Um, but to me it, it's the biodiversity of the river. And if you meet the biodiversity goals, which is kind of the highest bar, you will definitely meet the agricultural, um, and a lot of social goals as well.

Um, I don't know if it is toxic. I haven't seen any results of toxicity testing, but I would say at those levels of nickel and zinc that I've seen in the um, Western Coal Services data, it is likely to be. So, I am concerned with both metals and also salt. I think if we were running the Belubula River at a level that the livestock could take, that could have dire consequences for the, you know, natural flora, fauna and, you know, the environment that's there, and in particular, um, the, the, the platypus.

COMMISSIONER MENZIES:
Thank you.

COMMISSIONER WILLIAMS:
Thanks once again, uh, Dr. Wright for your time. We appreciate your time this morning.

IAN WRIGHT:
Thank you.

JAMES EMMETT SC:

The next person to address the Commission is Andrew Buckwell, An independent expert retained by the Belubula Headwater Protection Group. I understand Mr. Buckwell is online and ready to address the Commission.

ANDREW BUCKWELL:
Uh, good morning Commissioners. Can you hear me fine?

COMMISSIONER WILLIAMS:
Yes, we can. Thank you.

ANDREW BUCKWELL:
Thank you. Uh, my name is Andrew Buckwell and I'll read a prepared statement on the of the economic impacts of the McPhillamys Gold mine after being briefed by the the Belubula Headquarters Protection Group. I'm an applied environmental economist at Griffith Business School at Griffith University. I specialize in non-market valuation of ecosystem services for natural resource management projects.

I've also made similar written submissions in partnership with my colleague, Chris Friend, who is dean of research at Griffith Business School, where he specializes in economic determinants of wellbeing and sustainable resource management. In this statement, we've provided a review of the cost benefit analysis provided by the proponent in the economic assessment, which is informed by the estimated annual greenhouse gas emissions profile provided in the EISs. We've also considered the responses from the New South Wales government in their strict, in their State Significant Development Assessment document. First, we recognize the proponent was correctly identified and in general, thoughtfully applied the New South Wales Government's Guide to Phosphate Analysis, guidelines for the Economic Assessment of Mining Coals and Gas Proposals and other supporting technical notes. In their analysis, they've used the appropriate base case and an appropriate range of sensitivity assessments. They've also used the total economic value framework to enable them to consider a reasonable range of costs and benefits that would be associated with the project going ahead. Overall, they've done a pretty good job in aligning with the guidance material provided. However, we specifically critique two components of the guideline's treatment of greenhouse gas emissions. The first thing we note that the proponent originally performed evidence and argument for ascribing an existence value to knowing other people would have high paid and secure employment at the mine if it was developed.

The benefit ascribed was quite considerable with around $60 million. And we agree with the New South Wales government that this existence value and the employment, employee wage benefits should not be considered in a cost benefit analysis for reasons provided. Now, I'll turn to the treatment of greenhouse gas emissions in the EIS. I'll address this in two parts. Firstly, I'll look at which value of carbon is most appropriate to use in such project assessments. And secondly, I'll address what is the scope of missions that should be considered material. In the New South of Wales Guidelines for Economic Assessment of Mining Coals and Gas Proposals, it states that where market prices exist, they should be a starting point for assessment.
It continues, for non-market goods as for many environmental impacts and social impacts, the aim is to value them as if they would've been valued in money terms by the individuals who

experienced them, and they're well-established technically, valuation techniques for this. Carbon emissions, reduction circuits are a form of market good, but given the volume of greenhouse gas emissions that are not part of any emissions reduction scheme, the current exchange price poorly reflects any scarcity value in emissions reductions, otherwise known as a safe climate. Use of exchange prices in the form of start or future contract prices or emissions reduction certificates in cost benefit analysis can lead to significant underestimations of the external costs of those emissions, given that the significant variations in the prices of traded certificates.

This price is also strongly influenced by Commonwealth domestic climate policy settings, which have been contentious in the last 20 years. For example, since changes by Commonwealth Government in the 2020, 2020 to enable auction contracts and then further deregulation in carbon markets in 2022 have enabled the buyouts of legacy contracts. The price of Australian carbon credit unit is now effectively set through an exchange of secondary units whose price reached $60 in 2022. These ACCUs are now trading currently at around $37. In contrast, European Emission Trading Scheme Futures currently trading at 130 Australian, US stock plus per time.

We argued that until international, national and subnational carbon markets are more integrated and climate policy overall is actually on a trajectory to meet the international agreed targets in the Paris Agreement, and therefore a more globalized and realistic commodity price where emission certificates can emerge, a more appropriate value for carbon emissions is, is best achieved using cost based or reveal preference methods such as estimates of the social cost of carbon. This has been backed up in a 2018 article in Nature Climate Change by authors Rick et al., who argued that the global social cost of carbon captures the externality of CO2 emissions and is thus the right factor value to use from a global welfare perspective. Whilst the proponent modeled the social cost of carbon using an estimate from the US EPA, though it did not state what value is used. We note that Rick's study emphasized that there are some estimates of the social cost of carbon that are considerably greater than that put forward in the proponent's cost benefit analysis. They point to a median value, some $417 US per ton across the literature. In addition, the US EPA also seems to be currently reviewing its estimates and draft values are significantly higher than those used during the Obama period. Whilst cost based estimates may appear to have a wide range of values, they nonetheless should be referred to exchange values and at least form the scope basis for sensitivity analysis for accounting the costs of project carbon emissions.

Secondly, we turn to whose costs and benefits, or the issue of standing to ensure our economic efficiency. That's the position where at least one person benefits and nobody has made worse off. The principle, compensating losers from net gains of a project needs to be maintained. Standing, should be defined by whom we would be willing to pay for a benefit or in this case, be willing to accept compensation for the loss of a benefit. Social cost benefit analysts, should be cont- cognizant of the fact that one party's willingness to pay should not be constrained by a lack of institutions that enable this, such as, as a defined property right, or a well functioning market. In contrast, the New South Wales government guidelines are very clear on the subject of standing. It is the New South Wales community that is the appropriate reference group. Whilst this principle remains sound for environmental and social nuisances, such as air quality and noise, where the reference group, although is withstanding, are locally identifiable, it presents

floored assumptions when accounting for the impacts of greenhouse gas emissions. Greenhouse gas emissions are a uniformly mixing stock pollutant, and the impacts of the emissions have felt globally, though of course, not equally. The reference group, those who would require compensation for economic or pre efficiency typically maintained, should therefore include everyone on the planet, or at least everyone who is subject to an agreement where greenhouse gas emissions represent an external cost, i.e., the Paris Agreement.

There are a few comprehensive reviews of guidelines from different jurisdiction, however, a 2022 reviewed by Boardman, who is a leading voice in this space, suggests that many guidelines recommend at least reporting on the global consequences of greenhouse gas emissions from a project or policy change. For example, the treasury in the United Kingdom recommends a global estimate also using the social cost of carbon. Other supernational agencies such as the World Bank and the Asian Development Bank also suggest that global perspective should be provided, but also that emissions costs should be considered and presented separately as their impacts are crucially dependent on the valuation of carbon used, and they can sometimes appear to block vital infrastructure projects in the developing world.

Boardman concludes that though national standing or subnational standing, where the resources belong to the states should be the default, where international treaties exist, that global view should be taken. To demonstrate the weakness of the current situation, imagine if we were to look at an emissions producing margin the other way around by hypothetically assessing a carbon capture project. To paraphrase Boardman, using the external cost of carbon based only on costs spawned by the jurisdiction's residents, it would yield a negative net benefit and therefore likely be refused. However, using a social cost giving standing to residents in other jurisdictions with which that our agreements would likely yield the net positive benefit and likely be approved.

So in taking a narrow approach to standing, the practical effect for the project is to multiply the external costs of scopes to one and two emissions by the proportion of New South Wales gross state product as a share of global product. This results in a mid-range of stern of cost of greenhouse gas emissions that is non-material. We note that in the New South Wales government's response, it suggests the remaining non-New South Wales emissions costs should be C- attributed to the Commonwealth. Either, given that willingness to pay should not be constrained by lack of institutions, we argue that the proponent is operating in an environment, in an environment of moral hazard, where others are bearing the costs and risks of its operations. Regardless of where responsibility lays the carbon emissions remain in the atmosphere, which is presuming little comfort to the residents of Kiribati or Australians outside of New South Wales. We're estimating external costs of carbon using cost space approaches, and taking a global perspective for the projects scopes one and two, emissions, uh, the upper sensitivity bounds, the external cost of emission are at least equal to the lower bounds of the threshold value of the project, thus tilting the cost benefit analysis into negative territory.

I confide these estimates in more detail in an accompanying written submission. Furthermore, given that Australia does not have an economy-wide comprehensive carbon emissions reduction policy, that is mine supply chain operations will create new emissions, not counted for here or elsewhere. We argue that Scope three emissions, though small in this instance, should also be

included in such social cost benefit analysis. And that concludes my statement, and thank you for your time.

COMMISSIONER WILLIAMS:
Uh, thank you very much for that presentation, uh, Mr. Buckwell. Uh, You, you mentioned towards the end there that, uh, you will be preparing a, or submitting a, a written submission. Uh, uh, will that include some quantification of, uh, where you see the, uh, deficiencies in the methodology that's been used? And, uh, as well as pointing out those deficiencies, uh, are, your own estimates in terms of, of quantifying the cost and benefits?

ANDREW BUCKWELL:
Absolutely. The, the, there's a series of quite complex tables that are probably too much for a presentation but will work in a written format. Yes.

COMMISSIONER WILLIAMS:
Right. And your second main concern in relation to, you know, whose cost and benefits count and standing, um, and then you then included scope, scope three emissions. Um, do you have any estimates also that you received the scope three emissions for this project to be?

ANDREW BUCKWELL:
Uh, I can include these in the written submission, but from what I can remember from the emissions profile, they were relatively modest in this project. Um, it's mainly the scope one and two emissions

COMMISSIONER WILLIAMS:
Module two, right.

ANDREW BUCKWELL:
Yes.

COMMISSIONER WILLIAMS:
Right.

ANDREW BUCKWELL:
But I can include all this in my tables.

COMMISSIONER WILLIAMS:
Yes, please do. Great. That'll be very helpful. Um, well, thank you very much for your time this morning. We, we appreciate you making yourself available to present information to the panel. So thank you very much, Mr. Buckwell.

ANDREW BUCKWELL:
Thank you.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The next person to address the Commission is Melissa McGrath, council retained by the Belubula Headwaters Protection Group. Hopefully Ms. McGrath is online line. Ms. McGrath, You're on mute. Or, at least we can't hear you.

MELISSA MCGRATH:
Thanks, Mr. Emmett. I don't think I'm in charge of that.

JAMES EMMETT SC:
Okay. We can hear you now. Thank you.

MELISSA MCGRATH:
Thank you. Good morning Commissioners. Thanks Mr. Emmett. I am a Barrister at Nigel Bowen Chambers. Um, I'm instructed by the Environmental Defender's Office on behalf of the Belubula Headwaters Protection Group, and I'll be speaking to you this morning in relation to the legislative that your deci-, your determination of the minister's request of the 19th of February, 2020 will require, um, a proposed to do it in in four is, four matters, if you like. The first, the key provisions relevant to your decision-making on the gov- from the governing, um, legislation, the Environmental Planning and Assessment Act and Regulations. Second, the principles that might assist you with your approach to your decision. Uh, third, some ways that other authorities have approached other mining projects that might be in assistance to you.

And finally, a few comments in relation to the, excuse me, recommended Commissions by the Department. I will provide, um, a set of written submissions, uh, by the 15th of February, which will include citations to the, the cases and the decisions of the court that I'm going to suggest will be of assistance to you. And it will also apply some of the, the evidence that you've heard this morning. That, um, is new to me, but will be able to be applied to the principles that we go through this morning.

Um, as you know, from the address of the president, Mr. Sutton, on Monday, uh, BHPG opposes the grant of the license to mine, um, at McPhillamys on the basis that the public benefits do not outweigh the series impacts the mine will have on the land and the surrounding community, and it's not in the public interest. It also says that the conditions as drafted by the Department are at risk of being valid, and I'll make good on that later. As you know, the role of the IPC is to make independent and objective decisions on state significant development applications.

And under section 4.38 of the EPA, um, the of the act, um, it falls to you to consider and determine the development application or the project by either granting consent with valid conditions, or refusing consent to the application. The decision review you'll make is the final merits review. It cannot be appealed other than non-issues of law. Section 4.12 requires the application to be, uh, accompanied by an EIS, which addresses the state environmental assessment requirements, which in turn have about to buy physical, economic, social, and social considerations, including the principles of ecologically sustainable development.

The ESD principles, um, in particular, I highlight to you the precautionary principle, which can be, uh, otherwise thought of as, "Better safe than sorry, or look before you leap." Um, and there's also the principle of intergenerational equity. We say that those two are particularly important in this instance, and the balance of those principles are the conservation of biological diversity and ecological integrity. The real work for your decision-making sits under the evaluation provision of Section 4.15 of the act, which provides matters to be evaluated by the IPC. The BHPG says that the pro- project fails on at least the grounds regarding the likely impacts of the development, including environmental impacts on both the natural and built environments and social and economic impacts on the locality, and the public interest.

The evaluation is to be conducted in accordance with the objects of Section 1.3 of the act, which in short shrift, um, include to promote the social and economic welfare of the community, to facilitate ecologically sustainable development, and importantly to protect the environment, including the conservation of threatened and other species of native animals and plants, and to provide increased opportunity for community participation in environmental planning assessment. The IPC is obliged to acquaint itself with such materials as we're committed to consider the likely impacts of the development. It is not confined to the material provided by the proponent. And where impacts are at issue, it must be aware of the likely harm and ways to protect or litigate.

Um, perhaps the best assistance that you, can be provided is that, uh, Justice Moffitt in the 1982 decision of Parramatta City Council and Hale, which, in which His Honor said that, "There is, it's a two-pronged obligation. In essence, it's a, there's a direct obligation to take into consideration matters, which are in fact, relevant and indirectly to acquaint the IPC with such material as we're committed to consider matters that are in fact material." Does... His Honor said, " If it is... If the IPC is to consider the impact of the development upon the environment, it is to consider whether it is likely to cause harm.

If it is, if it's considered the ways the environment may be protected or the ways likely harm might be mitigated, it must be aware of each of those matters. Namely, what is the impact, the likely harm and the ways to protect or mitigate." Um, the decision of the landed environment for, in Hoxton Park Residents Action Group, um, assists you in relation to what is the meaning likely impact. And that was held by the court to mean real chance or possibility. I think you've heard some evidence this morning of what might be real possibilities, um, with the way that this mine operates this morning. Turning to my second, um, area, that is how you make the decision. Uh, chief Justice, um, Preston of the Landed Environment Court who, um, made the decision on the Rocky Hill Project said that, "The way to decide is first to make the relevant findings of fact. What the IPC says is relevant of the material, put before it by the parties. And second then to conduct a balancing exercise," which he refers to is as intuitive synthesis, and that is to balances the public interest in approving or disapproving the project, having regard to the competing economic and other benefits and potential negative impacts of the project, which it may have if it was approved.

Importantly his honor said that to balance the benefits and cost of the project, is in the end a qualitative, and not quantitative exercise. Such that forms of economic assessment, such as cost benefit analysis, um, which quantify, monetize and aggregate different factors assist and are not

substitute for the intuity synthesis required by a consent authority. And it may interest you to know that Chief Justice Preston's reasoning was cited and agreed with by the IPC Bylong Coal project.

Um, from this, sustai-. to say that sustainability is, is at the heart of your decision. You say that the acceptability of opposed development of a natural resource depends not on the location of the natural resource, but on its sustainability.

One of the principals of ecologically sustainable development is the principal of sustainable use, the aim of exploiting natural resources, which is sustainable or prudent or rational or wise. The principal also has an ecological call-out, that is the use of natural resources needs to be within ecological limits. The use of natural resources should be within their capacity to sustain natural processes, while maintaining the life support systems of nature.

In Hub Action Group and Minster for Planning, it was a 2008 decision to the land and environment court. The principal of sustainable use of natural resources was said to involve the exploitation of natural resources in a way that was sustainable in the long term, and which reduces the environmental harm. It involves consideration of the effects of use of all natural resources that would affect the use of the resources independent, um, subject of the activity. But also, the effect that the use of those resources might have on sustainabilities of other resources. That begs the question: Why mine gold ?

The Departmental report states that because these New South Wales is moving away from coal, we must mine mills where they lay

Chief Justice Preston dealt with that, um argument in the Rocky Hill project and he said that the development that seeks to take advantage of natural resources must of course relocate where the natural resource is located. And he gave his examples of seas side residential by the sea. But he, importantly, he said not every natural resource needs to be exploited.

The Department states that New South Wales has untapped resources for a range of minerals, and the New South Wales government has provisioned to build on a state's potential to become a major global supplier and processor of critical minerals and high-tech metals. But it does not identify gold as one resources. The Departmental report also suggests that mineral gold, uh, sorry, mining gold, because of its value to renewable energy is, is a worthwhile um, endeavor. However, that's not supported by any of the material from the proponent.

The Departmental report outlines the transition to renewable energy as being dependent on the available raw metals, that gold is not one of the metals specified. Importantly, what the depar- Departmental report does do, is identify that the global demand from, for gold, comes from four sectors. 55% comes from jewelry, 25% from the investment sector, 11% from central banks, and 8% from technology. Applying the, the objects of uh, one point three, and the principals of the ESD, it's difficult to see how we'd be able to justify the mining of gold at all, and certainly not in this area.

In considering the Rocky Hill, I just want to turn now to um, a, a trum- other projects that may be assistance to you. In considering Rocky Hill Coal project, his honor refused the gun- the license. And that was similar to this particular, um, instance. Because on the one hand, uh, the benefits to society were jobs and uh, the mining license - mining for New South Wales. Um, and overall for the state.

On the other hand there was a laundry list of negative impact, which is similar to here. In particular, his honor spoke about visual impacts. He said visual impacts of Rocky Hill Coal project would be high, the proposed mine will have a high visual contrast with the surrounding landscape, which will, would not be eliminated by any barriers. And I believe Dr. Zimmer, um, made it clear, uh, the difficulties with screening barriers which will not be effective until the sixth year, if provide-, if provided by trees.

Um, he also dealt with issues of air quality. And importantly, he found that the cumulative air quality level, um, in that project would have complied with the developmental standard of the mining SMPP. But none the less, found that the residents' concern was that the mine's potential adverse effects on air quality, and concomitant threat to their health of their families would have social impacts. And that that would concern residents who may leave, um, the area and equally, um, people who would decide not to come to the area, uh, as well as products coming from the area maybe not being seen as clean and green.

He dealt with social impacts as well, assessing um, he he said that the social impacts which essentially, um, particularly with jobs, he said were unlikely and at best moderate. And he heard evidence from Mr. Sutton and others about the low unemployment rate in Blayney at the moment, and some businesses closing, um, because of a lack of staff, um, assuming a a similar situation arises here.

Um, and then in relation to um, the Bylong Coal project, uh, which was a green field open cut and underground coal mine. The IPC refused the project on grounds including the mine's impacts on groundwater and agriculture. And mining would be incap- incompatible with the existing equipped and likely preferred uses. We We've heard from um, the experts this morning about impacts on water, so I'll apply that in root submissions.

Um, turning to conditions, um, it, it might be said that the conditions the main protector in reducing and mitigating impacts referred to in section four point one one five. And now I've submitted the draft of conditions have quite a high bar to clear, if it is the case that the condition is to be satisfied that they will protect, reduce and mitigate the impacts as the Department would suggest.

The Department relays its w-, current conditions, uh, provided comprehensive, strict, and precautionary approach, um, in my submission the role of the Commission is to really examine and interrogate that statement. Um, if those inadequacies cannot be resolved by way of amendments to the draft of conditions, my submission of the project should be refused. Um, one of the key considerations here is whether the conditions ultimately resolve an issue in the mind of the Commission, or, a and does it sensibly? Do so sensibly and in a reasonable way, as is

required by the criminal principals and validity for conditions. Or does the draft condition merely keep the can down load for determination of later date by a different party at a different time. Um, I'd submit that there, there remains um, I think Dr. Wright just identified that there's a significant um, uncertainty uh, in relation to many of the scientific issues that is before you. Um, and the expression, look before you leap, will require the Commission to have a very close look at the conditions of the consent to determine whether they resolve those uncertainties, or ask if they can be taught inside of.

Um, I will just make the point that it's almost impossible to be conditioned out of wide reports of accidents and spins, um, and certainly, very difficult to condition out of um, social impacts.
I think I'll leave it there other than to say: Two examples that I would provide you, and there will be more in rou- item. Um, in relation to conditions is it- for example B13. The applicant to take all reasonable and feas- feasible steps to minimize noise, not clarity on what that might be. B34, the applicant must prepare a, a management plan, um, in consultation with EPA and CCC. That makes the possibility of consultation with no outcome and, and no quick way forward. Those are my solutions.

COMMISSIONER WILLIAMS:
Thank you very much, uh, Miss McGrath for, for your solutions. Um, the, I gather you may not have been quite able to complete the statement. Um, if that's the case, uh, I note you will still be submitting a full written submission to the Commission?

MELISSA MCGRATH:
Yes, Commissioner.

COMMISSIONER WILLIAMS:
Yes, plea- Oh, good, good. Um, so if you make sure that's all incorporated within the map, that would be very helpful. Um, once again, thank you very much the time you've now done, um to speak to us. Thank you.

MELISSA MCGRATH:
Thank you for the opportunity.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The next person to address the Commission is Peter Rogers, who we have online to address the Commission now.

Mr. Rogers, th- uh, there may be a technical issue either at our end or your end. We can see your lips moving, but we can't hear you. No, w- we still can't hear you. Sorry, Mr. Rogers. We, we, I can see you are trying to speak. We, we can't hear you. We're confirming the systems at our end as well.

PETER ROGERS:

...is that, how's that?

JAMES EMMETT SC:
Yes. We can hear you now. Thank you Mr. Rogers.

PETER ROGERS:
Okay. Sorry about that. A technical dinosaur.

Um, thank you so much for letting this have my time today to talk to the Commissioners. I would also like to just commend you on uh, the last three days of how you've made people feel, or any of the speakers, uh, quite comfortable.

Um, my name is Peter Rogers and I'm a singular child, land developer, real estate agent and a backless businessman. Although I've never developed a mine, I know from personal developer experience the amount of red, and green tape is attached to all developments today. Especially DAs in sensitive areas. For Regis resources to have gotten to this stage, they must've given all the local and state governments some comfort within concerns raised about the environment or other matters. And there are some, obviously experts that uh, have more to say about it than I do. Now in 2009 a development company of which I was a director of was asked by the then mayor of Blayney council if we would consider doing a commercial development sub-division on some employment land that Blayney council owned.

This was to try and help boost the local businesses, and hopefully attract some new business. We took up the offer and developed seventeen lots called the Blayney trade center. This is where the Blayney car wash is situated today. The lots were curb and guttered soot, water, gas, electricity, NBN, etc.

We tried for several years to sell these blocks. We even opted to build something that it would suit, and make it ring promise. We tried with global businesses, and spent a lot of time trying to attract new business from out of town. This proved impossible. And the end the lots with poor progress can still be seen at the site today, years later.

In around 2012 it was announced that Regis Resources was purchasing the McPhillamys Gold Project from Newcrest. To say the least it put a real buzz in the air, and gave the business people of Blayney a real leap. We even started to get inquiries from and businesses from out of town, re the trade center. But they all had to proviso, they would look to move, build or open their business when the Regis Resources mine started.

After holding on without sales for eight years waiting for the mine to start, and still no start time being mentioned, we decided in around two twenty to cut our losses, sell the lots, whatever price we could achieve, and leave Blayney licking our financial wounds.

We solemnly believe, as developers, that if McPhillamys mine project had started years ago, Blayney would be a much more commercially dependent town today, with more opportunities for the local population.

My son in law, who is a high school teacher in Blayney, often talks about how the kids must move away to get a job, or travel many kilometers to find work. Commercially and socially, Blayney needs the financial boost this mine will give it. Now also wearing my hat as part of the Bathurst business community, it would give a great lift to our economy as well, as it is located at Kings Plains, a short drive to Bathurst.

There can be no argument the mine in Cadia has been instrumental in giving a huge economic boost to Orange since its inception. Not only by offering a variety of more paying jobs on site, but it has been successful attracting new support businesses to Orange that that aren't part of the Orange business community. Employing people and training the premises and trainees. This has been verified by many of the speakers who have spoken over the last three days.

The Orange economy has had many different wings. From the Cadia Mine project, one that has been Orange airport. With the edge of the people from the mining associated business using this service. It now has more flights, and even offers direct flights to Melbourne and Brisbane. A service the locals are enjoying, but would not have eventuated if not for Cadia.

These extra flights have had a flow onto the medical services, now being offered in Orange based in private hospitals. With specialists taking advantage of extra flights u- to Orange to offer their services. Bathurst and Blayney, along with a lot of rural towns are suffering the ret- are- are s- suffering in the retail sector, with lots of empty shops in the main streets. Governments are always talking about relocating government Departments to the country to boost local economies, but it rarely ever happens. Opening the McPhillamys gold mine will have the same economic effect as moving any government Department here. It will create great opportunities for, for the young people in here, offering them a large variety of trades and services they can learn setting up for in the future.

As a society we owe it to our younger people in the area to offer a choice in the climate and a future. Water although I am no expert in the matter. I haven't had much time left, so I won't go into too much detail about this today, except that Chris keys who spoke are about almost 99% finalized for the pipeline to bring water from Lithgow. This could be a game changer for everyone in the area. The pipeline will run past the new energy Australia water filtration plant, that has cost around 250 million. If it could run through this facility, it may outlay the worries of water not being fit. This is a huge quantity of water that we could tap into, which normally flows east and out to sea. And that's about it. Thank you.

COMMISSIONER WILLIAMS:
Thank you very much, Mr. Rogers. Um, I've noticed you raced through your presentation at the end there. Uh, uh, if, I- if in writing, um, please submit your full written submission to us, so we can uh, look at it in a more timely fashion, and not not, so you don't to rush. Um, thank you also for persevering with the technology. I'm, I'm also luddite with the technology, not all so plain. So um, we appreciate you um, getting the message across this morning and spending the time with uh putting your view across.

PETER ROGERS:
Thank you very much.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The next person to address the panel is Warren Aubin. I think we have Warren Aubin online. We don't have Warren Aubin online.

The Commission will break for lunch, um, we'll resume with Warren Aubin hopefully at twelve thirty. So the Commission will, will take a break now for half an hour and we'll resume at twelve thirty hopefully with Mr. Warren Aubin.

All right. Can I ask everyone to take their seats, and the hearing will resume in a moment. The next person to address the Commission is Warren Aubin, who will be addressing the Commission remotely. Mr. Aubin, can you hear us?

WARREN AUBIN:
I can hear you.

JAMES EMMETT SC:
We can hear you.

WARREN AUBIN:
Thank you. I, I'm actually sitting in my car. So motor is off, I'm all safe.

JAMES EMMETT SC:
Uh, when you're ready, the Commission's ready to hear your address.

WARREN AUBIN:
Okay. Thanks very much. Yeah. Listen, um, I have heard a few of the other speakers, uh, and their cases they put forward. I'd just like to add I'm a councilor on Bathurst regional council, um, on the business side and uh, in Bathurst. And um, I just feel that our region has been through a very very tough time over the last few years or, with, with drought, with um, Covid. And now as everyone knows that economic situation with interest rates and that sort of thing going up, I just feel this, this development would be so good for our economic wellbeing in this region. It, it's um, with council we love to see business come to town and um, industry come to town. And, give us jobs for our younger people that are coming through because it's the young people we need to keep in our area and not lose to the bigger cities.

And um, I know with this type of development, it's not only ground level workers, but workers you know, right through the whole specter. So it's a fantastic thing if this can get going. Um, on- on a secondary point I guess, um I touched on drought, a while ago was um, the fact that t- pipeline coming through from the Blue Mountains. And it will bypass Bathurst on the way through to um, Kings Plains. Now we could well get access to th- that water in times of drought. No doubt we will see drought again in the not too distant future. So um, yeah, that's another absolute plus for our region. Um, we were down to very very little water left in our dam a couple

of years ago and, we're in dire straits. Though that would certainly be another benefit of um, this venture going ahead.

And that's pretty much all I have to say at this point.

COMMISSIONER WILLIAMS:
Thank you Mr. Aubin. Um, uh, thank you for taking the time out to speak to us. If there's anything else you did wanna submit or if you wanna put this into a, a written submission as well, um, that would be fine. Uh, equal weight is placed on both oral and, and written submissions. Uh, but if there's anything which you would further like to add, um, you're more than welcome to lodge a written submission uh, to the Commission as well. Uh, but we-

WARREN AUBIN:
Yeah, that's fantastic.

COMMISSIONER WILLIAMS:
Yeah, so tha- just, just bear that in mind. It is also available for you as well. Um, ra- there might be things you can think of afterwards-

WARREN AUBIN:
Exactly-

COMMISSIONER WILLIAMS:
Rather than-

WARREN AUBIN:
Yeah, no, it's fine. I've got the air conditioner on, so we're good.

COMMISSIONER WILLIAMS:
Good.

WARREN AUBIN:
But yeah, it's always the way with a, with a hearing like this. You do, you know, ten minutes up the road, you're thinking: "I should've said that." So I will keep that as options open, and um, will probably make a written submission as well.

COMMISSIONER WILLIAMS:
That would be great. Thank you very much for presenting today, Mr. Aubin, thank you.

WARREN AUBIN:
Yeah, no problem, thank you. Bye now.

JAMES EMMETT SC:
The next person to address the Commission is Kim Wilde, who will address the Commission for himself and for Dianne Luker. I think we have Kim Wilde online.

KIM WILDE:
Yes, hello.

JAMES EMMETT SC:
Hello Mr. Wilde. Um, the, the Commission can hear you, so commence your address when you're ready.

KIM WILDE:
Okay, um, I just first will introduce myself. Kim Wilde, um, I, um long time resident. I grew up in this district, actually my parents' property is only fourteen, fifteen kilometers from here. Uh, I currently live, um, just opposite the um, the [proposed mine side, they're a few hundred meters from the boundary. Apart from myself, my partner is Dianne Luker, um, Dianne originally came from Northern suburbs, Northern beaches in Sydney. Um, she moved to Mount Fitzgerald about uh, 1994 I think. Um, and she's uh lived there between Bathurst and bought this block here about 2022. Um, we built a house and uh, uh started a new construction.

We, we run a small um, horse breed training and racing facility. Um, we import saddles and uh and a few things for various clients. Uh, we're trying representatives for the farm. Um, okay, we, first, um, first take about the mine was one of the representatives about twenty eighteen I think, 2018. Um, as I say, I try and keep trained horses here and various other things, and I had um, and at the time I was diagnosed terminal lung disease pulmonary fibrosis.

So I um, we hadn't had a meeting from for any um representatives reach us at that time. So we arranged a meeting from the reps. And uh, he was very sympathetic and he um, uh for short short time he said those, he had good grounds that they would probably um, be able to purchase our land, and allow us to be uh, retired to a a better climate or better suited dry area.

Uh, after the uh, um, training Commission had to prove that command. Uh, anyway we uh, during that time, 2018, I think we had a couple a more since 2019, we decided to sell the farm. Um, the land father gave me. Um, we listed our land, and it was, we had an offer within 48 hours, um, which we accepted. Um, the proposed purchase, spoke to the mine, the mine was no secret, the mine was going to be there. Spoke to representatives of the mine, and uh, had withdrew from the sale because of the uh, proposed disturbance um, or the problems that may arise with their um with them moving here. Um, with relation to the mine.
We, we, after that we removed the property from the market. We had another meeting in 2019 with the uh, the uh an exhibition held by Regis at the uh, sewerage center in Blayney, uh, I'm not sure of the title of the guy that he's saying he was in town at the time in his area. Um, and he seemed to have grounds purchase our property when the planning Commission was uh, was approved, um.

You can imagine our steel we had, w- a number of people who signed contracts with Regis, so. Uh, um, we, we were left uh, left out in the cold. Obviously they don't make enough noise. But anyway, take, to carry on from there, one of my uh, main concerns as you can imagine with a the lung disease would be the dust that will come over from the mine.

And uh, I'm not sure if I can mention it here, but those, there was an article conducted by land line, an ABC television program , a um, discussing dust in Port Hedland, which is a pretty serious issue and they discovered there that uh, when the dust for a period of eight or nine months, um, one of the dust monitors had not been working. So I have uh, put a link to that in my written submission, which will complement uh, as one of the conditions I've already- if the mine does go ahead. Any uh monitoring of the water quality or air should be conducted by independent authorities. Um, I'm just trying to find my notes.

Excuse me. Um, so we um, during the first uh, uh, submissions to the training authority. We quickly had a negative um, uh, crick in the neck if, or an injection to the, to the mine. And my injection was to um, uh real estate. Because uh, we wanted to relocate and we weren't able to sell our land. And uh and that was due to the directive to the mine's location in relation to our property. Uh, and uh, after this submission sort of, the authority had to um, had given their verdict. We had another meeting from the Regis representatives.

Excuse me. And it was really good. They came along to show us what they were doing. To light the fuse of uh, of anyone who had a negative um, uh, report, a negative uh, um investment in in the uh go ahead of the mine. They, they spread the map out and they showed me what they were doing with their tailings dam and various other infrastructure changes. Um, but they hadn't uh, addressed anything about the real estate. They really won't uh, they hadn't done the homework that it was okay, but they weren't going to do anything about it. My- the reason I objected to this, to the mine in the first place.

Um, so, one of the big uh, big concerns we have apart from the dust quality, is our clients who come here for lessons will send horses to you. Uh, I worry we're going to be, uh, have trouble by the um, the mines blasting. Uh, I'm not sure, but I do believe that uh, we we're certainly close enough to hear, and possibly feel it. One of the, one of the uh, the other mines in the district, um, they've had to uh, a friend of mine six kilometers away has recently sold his property to the mine, six kilometers away from, from the other mine, because of the uh, the cracking that started to appear in the foundations of his house. And that- attributed directly to the mine's blasting. Um, so certainly we're within, well within that uh, that distance here. Um, another uh, problem I had with dust quality is uh, a uh, uh I noticed a recent dust problem another place where they received a maximum, a maximum uh fine of fifteen thousand dollars for, for the dust which was um spilling from their works, um. I think for the time period, uh, to run a water truck would be a lot dearer than [the fine.

I think uh, as you condition as well, I think the environmental authority should look at uh, making the farms relevant to the case to, to, when there's a problem, um, fifteen thousand dollars is not a big, a big uh, big lot to pay. And they, they run to the mine.
I have um, I have prepared a written submission which I haven't yet submitted, um, and uh, put links to a couple of things in there, um which pertain to the, to the uh, mainly the pollution. Uh, risk, which it found, which I think that's it, probably about all I can uh, I can think of right now to say. I'm sorry, I've got some notes here, but I've just glossed over in my head that's sufficient. Thank you very much.

COMMISSIONER WILLIAMS:

Thank you very much Mr. Wilde. So uh, I know, you, we've got some notes. Um, it, if you are able to put them in the form of your written submission, um, we would gratefully receive that at at, at the Commission. Um, I think you've, have you got until the fifteenth of of, of uh this month. Um, but clearly there's, there's more information you would like to provide for us, and we would, would like to receive that.

Um, just one, I don't think you touched on it, and also it would be worthwhile incorporating in your submission if you do, uh, you- you're actual address in terms, in the sense of, you did say that you're located directly across from the mine. Is, is that correct?

KIM WILDE:
Yes, we- uh, 341 uh, three, 3149 Mid Western highway.

COMMISSIONER WILLIAMS:
Right, right.

KIM WILDE:
Yeah. So we're, we um, we're just over the hill from Northern road, uh, on the Blayney side.

COMMISSIONER WILLIAMS:
Right, right. An- an- and you're saying that you, you, you, you haven't been offered uh, any acquisition or mitigation by by-

KIM WILDE:
No. We- we originally approached them, uh, when I was ill I needed, it would have been beneficial to move to a a- warmer climate. So we, we uh, we approached them um before we put it on the market to see if uh, if they would be interested. Uh, and of course they, they weren't, and we got uh, a standard um reply that they uh, they would probably buy it after they had uh been granted um approval to go ahead with the mine. Um, but uh, and I've heard that from three different people, but uh, no- no one has come back to um uh to put anything in writing.

COMMISSIONER WILLIAMS:
Right. All right, thanks Mr. Wilde. I'll just see if there's any other questions uh. Uh, uh thanks Mr. Wilde, just uh for your time, and just to, to uh reiterate uh, um. We, we would like also, it would be very helpful for a written submission also.

KIM WILDE:
Thank you very much for your time.

COMMISSIONER WILLIAMS:
Thank you.

KIM WILDE:
I appreciate it. Thank you very much. Bye.

COMMISSIONER WILLIAMS:

Thank you Mr. Wilde, thank you.

JAMES EMMETT SC:
The next person to address the panel will be Dr. Ryan Vogwill, an inter vented expert reached by Belubula Headwaters Protection Group. Um, Dr. Vog- D- Dr. Vogwill will be addressing online and hopefully we have him remotely now.

RYAN VOGWILL:
Hello.

JAMES EMMETT SC:
Hello Dr.-

RYAN VOGWILL:
appreciate the opportunity to speak today, I appreciate it very much.

JAMES EMMETT SC:
Dr. Vogwill, one thing I should say before you commence your address. Uh- we understand you have a p-

JAMES EMMETT SC:
... Vogwill, one thing I should say before you commence your address, uh, we understand you have a PowerPoint presentation. The Commission has not yet received that PowerPoint com-, presentation, it's not on its way, if it it may be on its way, but in the meantime, if you are able to screen share, and put, put up your, your PowerPoint presentations that way, the Commission will be able to see it immediately.

RYAN VOGWILL:
Okay, how's that? Can you all see that?

JAMES EMMETT SC:
Yes.

RYAN VOGWILL:
Okay, great. Um, so before I start, I'll just give you a little bit of a background of myself. I, I've, uh, uh, completed my, my PhD at Western Australia, in, uh, the early 2000s. I, I then went to work at the Water and Rivers Commission which is basically the Department of Water now, here in Western Australia. I, I worked there on al- allocation planning, and environmental impact review, uh, type projects, before I moved to, uh, the West Australian Department of Conservational Land Management, where I worked on, uh, threatened biodiversity assets in the, uh, West Australian wheat belt. I then went to the University of Western Australia there and started a hydrogeology, uh, masters course. Uh, which ran for a number of years, before, which is still running but I, I ran it for a number of years before I then left to, to, to consult for myself. And I've been working on a number of, uh, reviews of different projects around Australia, as well as doing, uh, a lot of mining, uh, hydrogeological impact assessment as well as hydrological impact assessment. So just a little bit about some of my background there.

So, uh, some of the things I've got to talk about today. Um, positive comments, um, I think there's a lot of good work in the EIS. Um, I'd like to talk a little bit about climate change and the implications of extreme events. Um, but really for me, one of the, the big issues is around conceptual hydrogeology in the modeling, uh, that's been presented. Uh, although the modeling is in some ways good, um, we have issues with respect to the model being very non-unique because of parameter uncertainty and, and just the general non-unique solutions in groundwater modeling. And there is some significant conceptual uncertainly, uncertainty in the modeling, particularly to do with the, uh, the interaction of fractured rock and porous media groundwater flow.

Um, and then I want to talk a little bit, a little bit in general about model predictions and, and how they match reality. Um, and, and looking at our, a white paper that was done in the United States some years ago, doing some post-mortem examinations of, uh, of hard rock mines in the context of typically contamination and acid rock drainage. And then we'll just talk a little bit about the implications, as I see them, uh, McPhillamys.

So from a, from a hydrological and a hydrogeological perspective, I think the pipeline construction of lower impact risk. Um, the mine site's located in a very good area from a surface water perspective, it's, it's high in the catchment with a very small operative surface water catchment, which reduces the risks of, uh, flooding and, and that type of thing for the mine. Um, for my perspective, not that I, I would say I'm a biodiversity expert, I've got a lot of biodiversity experience, but, um, I, I believe the biodiversity and cultural assets are, are well [inaudible] at this stage. Um, it doesn't appear to me as though any EPBC, sort of national sig-significance level, uh, assets could be at serious risk. But I believe that some of the local stakeholders' interests will be impacted. Um, but yeah, as I said before, I think the EIS work is generally of a high standard. Uh, especially given the data limitations. Uh, but I think some refinement is required.

And, and my main concern, and I think the main impact of the mine set-, potentially, is the, the risk of contamination of groundwater, springs and sinks included, uh, as well as the streams and rivers that are receiving that groundwater discharge. So, I think, uh, the existing work of, uh, McPhillamys has tested the effect of the project under the obver-, observed range of climate quite, quite effectively. But climate change, uh, in, in it's current, uh, sort of, under, in our current understanding, uh, suggests that extreme events will take up kind of outside of that observed range. So I believe it's important to test, uh, the, the impact of some of these more extreme events as well as the observed data range.

And there's some, there's some, there's some, uh, predictions that have come out of the recent IPCC4-, uh, as in, IPCC report. Talking about different issues and, and the fact that there's, um, medium confidence there's going to be increased da-, drought frequency as well as increased heavy rainfall intensity. And I, I think we can all accept that there are some, some changes in our climate these days. I think it's more important to test the impact of climate in the surface water context, uh, than the groundwater model context, but I think it would be of benefit to test, uh, in both.

What, what is modeling uncertainty analysis? Well, I think we can all accept that models have uncertainty, and that, that uncertainty comes from a lot of different sources. Um, but analysis of the uncertainty associated with predictions is fundamental to the decision support making, when you're using modeling. Uh, there's some so-software that's been developed, uh, for parameter estimation, the PES software suite, but this, recent developments with this software tool have really focused on the evaluation of model uncertainty and, and how, how to describe and how to give predictions that are more than just one number, that are ... well, we think the prediction is 10 meters of draw down plus or minus five. That, that sort of thing.

And we really need transient model calibration, which we don't necessarily have very much of, at McPhillamys, uh, as well as aquifer testing, to help us reduce this uncertainty. Because the, uh, as the model incorporates and, and tests storage, we really need to understand, uh, that. And, and without a transient model calibration, we haven't effectively had a look at the, the storage properties very much. So this diagram on the right, it really shows all this in, in a, in a nice way. Um, if we have a look here and this, this graph, it's a graph with two axes. Two, two hydraulic parameters, so hydraulic conductivity and groundwater storage, or hydraulic, hydraulic conductivity and recharge are the classic ones. And the red dashed lines represent different predictions. So, different predictions of, say, draw down, or, or distance from, uh, the mine site that say contamination our context would be more relevant.

The green lines represent how well calibrated the model is statistically, in terms of what the, what the residuals are, what the, um, the, how, how well the model predicts versus the data that we've got. Um, and, and what really happens is as we do predictive uncertainty analysis, we run lots of model scenarios, hundreds and thousands of model scenarios, uh, and we produce these sort of, sort of graphs to understand the area where the model is at its lowest, with a matter of inaccuracy so where the model has the best calibration, according to our data. And we often come up with a best estimate, um, as a part of that, but also, it's this range in the predictions. These, these two dots here are very important in terms of we want to understand, not only what the best estimate is, but also what's the possible range in that uncertainty? So that's a, a really quick introduction to, to what, my-, the way I see predictive uncertainty analysis.

But we, we also need to test things like conceptual model uncertainty. Uh, and this is some work done for the Amaroo Phosphate, uh, Mine, in Northern Territory, a project that I did some review work on, and what they've done here is not only have they tested, uh, the, the, sort of predictive uncertainty in the context of our parameters, they've also had a look for this relatively, uh, small basin, uh, sorry, relatively large basin in the Northern Territory, few hundred kilometers across, um, what would be the effect of having different types of boundaries on the margins here? Is it a, is it a constant head boundary condition? Is it an open, open boundary condition? Uh, some of these terms won't necessarily make sense to everyone, but the reality is, is that ... wha-what we're doing here is we're doing a number of different scenarios, testing what the effect would be of the hydraulic status of the model, uh, of the, of the, the numerical model domain's boundary conditions being variable.

And from that, along with the parameter uncertainty we had a look at in the last slide, we then generate a large number of predictions. So what was the most interest for this, uh, the Amaroo Phosphate Mine was draw down at a particular bore. And so each one of these gray lines

represents, uh, a model realization under a reasonable range of parameters and a variation in this conceptual model. And then we can start to apply things like probabilities, uh, to these distributions and estimate what sort of, uh, distribution there will be of the impact. So here you can see what's happened the, uh, Amaroo, when they've analyzed those, all those previous scenarios, that, that cloud of scenarios. And they've come up with a, a best estimate of, uh, um, models predictions, of draw down confined at this bore. But they've also come up with a best case, and they've also come up with a worst case. Being those long lines there. So that's why I think predictive uncertainty is very important, because it allows stakeholders, both the regulators and the community stakeholders, to understand not only what the prediction is, but what the variation, the possible range is, in that prediction.

And another issue at the moment is the current groundwater modeling for McPhillamys assumes that the, uh, the, the, the groundwater only flows by a porous media sort of effects. So here we can see just diagrammatically on the right here what I mean by that. Uh, the water is just flowing through the individual sand grains in the pore spaces. So that's porous media flow. Fractured rock, however, is where we have significant groundwater flow occurring through the fractures. Uh, and, and in porous media flow, groundwater moves very slowly, but in fractured rock aquifers, uh, groundwater can move much more quickly, uh, and a lot of the work that's come here in terms of distance has come out of the, uh, this, this sort of estimates, it's come out of the contaminated site fields.

So we know that much higher flow velocities occur in groundwater fractures, but the volumetric flow rate is generally lower, as the fractures only occupy a small percentage of the geological formation. So the way I think about it is, I guess, porous media flow is very, can be very slow. Um, but it has large volumes. So think of a, say, a filter paper, a coffee filter paper. And water's percolating through that filter paper. That's sort of water pouring through the porous media type effect. But if that same filter paper had a number of holes punched in it, there'd obviously be much more rapid flow out of the filter paper through those small holes, and, and that's the sort of the analogy I would use for the difference between porous media flow and fractured rock flow. So when we look at this, uh, study that was done by the US, looking at, um, hard rock, uh, water quality problems in mines, uh, basically they studied 70, uh, 70 hard rock mines in the US, and represented ... and the representative subset of 25 for detailed analysis. And this impacts from the mining itself, including the pit, but also tailings storage and disposal. So they basically went back and did a post-mortem, uh, and had a look at what these models predicted, and then what happened, uh, after the models were in place.

In, in short, the answer is no, models do not predict reality. I, I think the term that I've heard use with, uh, the way I've heard it described before is old models are rung-, wrong, but some are useful. And, and the way to make a model useful is to do predictive uncertainty analysis. Um, you know, we-, you can, you can read these stickers yourself. Basically their, their conclusion was a lot of the time, the predictions don't match reality afterwards, and, and why is this? Well, science is complex, we often have large knowledge gaps and site conditions, and we don't necessarily understand our physical and chemical processes in enough detail prior to approval, uh, in many cases. And yeah, numerical modeling isn't a precise science. I think people who don't model, uh, look at modeling think, "Oh, it's a, a very fancy model, it's, it's got all this data in it, it's, it's gotta be able to predict reality." But the truth is, no. Um, we have to be very careful

to make sure we don't assume our models are perfect, uh, they never will be. We need to understand how to make modeling more transparent.

So, where the is s-, where are the sources of uncertainty in the modeling? Well, if the distribution of data that we've got, um, and, and one, one thing as I said before, is we don't have much transient data for, um, McPhillamys at the moment. Um, but often we, we don't have, the model calibration methods talk about errors of, at, at sites where we have data. They don't talk about where we don't have data. Um, the m-, the model can be statistically well-calibrated as it, as it appears to be in this case in the semi-state context, but is the model well-calibrated for these key predictions? Uh, and I'll talk a bit more about what those key, key predictions are in our, in our context.

Um, so this un-uncertainty in our data and the numerical models themselves, cascades through the whole process, uh, and it, and it leads to uncertainty in our predicted outcomes, which is really one of the main, main things Mike talked about. Models are non-unique solutions as we saw before. Um, and if we think back to that diagram, uh, that I presented before, all of those models in the middle, uh, area were eq-equally well predicted, with-, uh, were equally well calibrated, sorry. But the predictions across that range would vary considerably. Uh, they might be the difference between a draw down at 10 meters and a draw down at 20 meters, for example. Uh, and there's a recent paper that I've, I've come across, uh, from Thomann et al. that really highlights the pre-approval predictive uncertainty analysis is critical to the whole adaptive management process. If, if you're going to enter a, a situation and, and have an adaptive management process moving forward, it's really important that prior to approval, that predictive uncertainty analysis is completed according to the Thomann et al.

So, Mc-McPhillamys, for, for me, the implications are that the mining process and the tailing storage and disposal, will create impacts. The only question is their extent, and they acceptable to all stakeholders? Um, because once these impacts start at a, at a hard rock mine, um, often they're very hard to stop. We, we can't turn the tap off very easily, because once we've disturbed the environment and acid rock drainage has started to mobilize, it will continue for some time. So, overall our single model prediction will lead to uncertain impact assessment. And there's considerable uncertainty in the current model prediction from multiple sources.

The key issues I have is this prediction of 50 meters contaminant seepage in 100 years. Uh, what's the range on that prediction under not only the, uh, numerical parameter uncertainty, but also this conceptual uncertainty? Because we can see on the right here, this is a, a map from, uh, from EMM, from the EIS, and we can see the very large number of fractures that are present in the vicinity of the mine site. And, and a lot of them extend outside the mine site. So, uh, that, that to me is a key prediction that needs more uncertainty around it. Um, but also the status as a pit lake as a sinker, a through-flow system, this is somewhat glossed over, uh, in, in, in some of the, uh, the documentation.

But for me, you know, the, if the, if the mine void remains a sink in perpetuity, a lot of the contaminants will go into that sink and be captured. But if it becomes a through-flow system, even in a relatively long tame-, time frame like 100 years or 200 years, well, that will probably

mean that there'll be a lot more contamination coming out of that, uh, void, and into the, uh, uh, and into the surrounding environment.

So, um, if you'd like me to stop there, I can.

JAMES EMMETT SC:
Uh, Doctor Vogwill, a-a-a-as you heard, the time is up, subject to the discretion of the chair. Um, as you are hopefully aware, anything you haven't been able to cover, um, you, should be included in a written submission or report.

RYAN VOGWILL:
Of course.

COMMISSIONER WILLIAMS:
Sorry, Doctor Vogwill, uh, Peter Le-, Williams here, if you could just quickly just summarize in about 30 seconds, um-

RYAN VOGWILL:
Yep, sure. Look, m-my, um, my, my concern mainly was related to the fact that there's been no, uh, acceptance nor inclusion of fractured rock, uh, groundwater flow being an important mechanism of McPhillamys and that for me suggests that the, uh, conta-contamination could extend much further than that 50 meters, uh, in a 100 year time frame, uh, at the current prediction. And, and I would like to see, uh, the, the proponent do a bit more work around, uh, understanding that fracture, uh, ground-, fractured rock groundwater flow, and its implications for off-site transport.

COMMISSIONER WILLIAMS:
Great.

RYAN VOGWILL:
Thank you.

COMMISSIONER WILLIAMS:
No, great, than-thank you very much, Doctor Vogwill, sorry to, to, to get you to finish up quickly there. Um, I presume we-, you'll have a written submission? Um-

RYAN VOGWILL:
Yep, no, I do.

COMMISSIONER WILLIAMS:
Fantastic. Uh, that would be great, because it'll give us a, a full picture of, of, of, of all your comments. Um, and, and also would it be possible to have your presentation today, uh, made available to the Commission, or forwarded to the Commission as well, as well, please?

RYAN VOGWILL:
Of course, I've already ... Yeah, I have already forwarded it. It just hasn't got through to you yet-

COMMISSIONER WILLIAMS:
Yeah.

RYAN VOGWILL:
I'm sorry about that.

COMMISSIONER WILLIAMS:
No worries, thank you. Um, I, I've just got one question. Well, ma-maybe two questions, myself. Um, and then my ... probably other questions.

COMMISSIONER SYKES:
I have one question.

COMMISSIONER WILLIAMS:
Okay. Okay. Um, the ... you spoke about the groundwater flow, fractured rock in comparison with, with porous rock, and you showed us the map in, in terms of the extent of fractured rock within the McPhillamys site. Does that formation extend ... is that more extensive than just the McPhillamys site? Does it extend to, you know, the, the surrounding locations? So the, the extent of groundwater movement is greater because there is actually a far greater area of, of, of fragmented rock in the locality?

RYAN VOGWILL:
Yeah, that's right. The, the fractured rocks clearly, uh, extend well off the property, uh, in question of the, the particular site. Um, how extensive they are at a, at a regional scale, uh, I'm not sure has been conclusively answered yet. A-, I think, um, you know, aquifer testing could help us understand the fractures more, as could tech-, uh, techniques such as tracer tests. Uh, you can apply tracers to the area where the mine is proposed and see if those tracers end up in any of the nearby springs or, or river systems.

COMMISSIONER WILLIAMS:
Great. Thanks, Doctor Vogwill, I'll just hand you over to the other Commissioners.

COMMISSIONER SYKES:
Yeah.

COMMISSIONER MENZIES:
That was my question.

COMMISSIONER WILLIAMS:
What was your question? Okay, you've answered one of the Commissioners' questions already. So thank you very much for that.

RYAN VOGWILL:
No, no worries.

COMMISSIONER SYKES:
Um, thanks very much, Doctor Vogwill, and, um, I'm going to attempt to ask this question, because the was quite a lot of information to take in there. Um-

RYAN VOGWILL:
That's ok.

COMMISSIONER SYKES:
... if, if I understand correctly, that you, um, had concerns about the amount of transient data, and aquifer testing, um, in relation to, um, you know, the benefits that this would bring to, um, modeling or predictive modeling, um, for the groundwater. Um, you mentioned that the modeling, um, can reduce uncertainty, um, and also that scenario model ... modeling can also, um, help you with, or assist with prediction and uncertainty analysis. Um, could you just explain, um, what that means in practice in terms of you said you would benefit from greater understanding of the, um, underlying rock fractures to better understand the behavior of the groundwater through that system, but you also refer to the potential for, for real time and dynamic modeling as a way to sort of have an ongoing modeling program to predict, um, the, it-, like, have a dynamic model. Is that what you're referring to in terms of scenario, um, and variational predictive modeling? Um, will that constantly evolve over time, and then how do you, um, address bias in, in the system when you're making those predictions that will then further inform and evolve those models?

RYAN VOGWILL:
Yeah, look, bias is a tricky one. Um, you know, obviously, the more data we get, the better we understand the aquifer system and the more we can reduce that uncertainty. And as we reduce the uncertainty, the bias kind of gets reduced as well. Um, aquifer testing is the process of pumping a bore in the ground and watching how the groundwater levels around that bore respond. And, and from that we can understand things like, well, are there any barrier effects, uh, from, from impermeable areas where the, the draw down changes because of them, or do we have fracture flow or, or recharge boundaries as we often call them in hydrogeology. And, and we can often work that out from doing these detailed aquifer tests.
Um, but also I guess aquifer tests, um, help us understand our hydraulic parameters and that again helps us reduce that uncertainty as I showed before. Um, you know, the bias is, is, is a tricky one, but as the uncertainty gets reduced, the bias naturally gets reduced as well, because we're tightening up our understanding of, of the actual ability of the aquifer to transport contaminants. Uh, and as we do that, we get a better understanding of, of the risks to, to the stakeholders. So has that answered your question fully- - -

COMMISSIONER SYKES:
Yeah-

RYAN VOGWILL:
- - -or is there another component of - - -

COMMISSIONER SYKES:
Yeah, no, that's-

RYAN VOGWILL:
- - -of it? Because you, you did have sa-, uh, it was quite a long question.

COMMISSIONER SYKES:
No, that's it, thanks.

COMMISSIONER WILLIAMS:
No, that's answered the question, thanks very much, Doctor Vogwill. Um, look, thank you very much for your time, uh, you've taken to present to us today. Hopefully your presentation, we do receive it. Um, if not, we might have to get back in touch with you, uh, but once again, thanks for the time you've given us this afternoon. Thank you.

RYAN VOGWILL:
Oh, I really appreciate the pa-, the panel giving me the opportunity, thank you very much.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The next person to address the panel is Robert Taylor, who will address the panel online. I think we have Robert Taylor ready on, online to address the Commission.

ROBERT TAYLOR:
Yes, hello. Can you hear me? Hello?

JAMES EMMETT SC:
Yes, we can hear you.

ROBERT TAYLOR:
Can you hear me? Thank you very much. Uh, yes, I'm Robert Taylor, Mayor of Bathurst, and thank you for the opportunity to, to speak. Uh, of course, you know, Bathurst, I can see the advantage of the McPhillamys, uh, project, uh, to, uh, to Bathurst and the region, the economic development, uh, which it'll bring to the mining, is, uh, fairly advantageous for the, um, advantage for the, the region, not only Bathurst but Blayney and the rest of the area. Uh, the job, job creation that, uh, obviously goes into mining and, and the construction of the mine is, uh, going to be well-received in, in the area. Uh, very, uh, uh, advantageous for, for all of the area. I can see that as, as a positive.

Um, the main thing that we're looking at is the, the pipeline which is running from Lithgow through our area and out to the mine. Gives us a, uh, you know, an opportunity probably to access that in, uh, needs of severe drought, which, uh, as you know, we, we've, um, had just recently in the last few years. But that just goes to the opportunity to probably tap into that, that, uh, give us some, some water security so we look at that as a definite advantage. Uh, as far as the mine goes itself, I, I, you know, I think the, the, EIS studies that they've done, uh, have been very, very good.

Um, you know, being a mine, they have to go, uh, through all those, uh, you know, things that they have to do to submit it to it, so, I'm sure that they've pretty well covered all of it. I know there's going to be, uh, a few, um, uh, things that they, they have to, um, go back and readdress, um, but overall, I just think that, uh, you know, the development of it would be very advantageous to this area and the region. So, that's why I'd, uh, like to see this project go ahead. Uh, I know there's going to be a few people disadvantaged with that, but I feel the mine, uh, McPhillamys will address those issues and, uh, and rectify those. So that's, uh, is about all that I could, uh, put to them.

COMMISSIONER WILLIAMS:
Uh, uh, thank you very much, Mr. Taylor. Uh, uh, Peter Williams here. Um-

ROBERT TAYLOR:
Yes, Peter.

COMMISSIONER WILLIAMS:
... we, that, we've heard, um, uh, evid-, well, submissions made, uh, by the community, uh, both, uh, members of the community and, and also people involved in business and so on, uh, in the region. Um, about things like, uh, employment, and, and the argument's been put, in terms of economic benefits, that there'll be economic benefits, but also negative economic impacts, um, in terms of, um, wages and, and s-, and, and labor shortages, um, housing accommodation, uh, services, uh, uh, insufficient services, uh, or more services will be provided. So there's a, there's a clear, uh, difference in, in ... particularly the economic and social impacts, uh, of ... in the broader locality and the region, not just Blayney, but, uh, Bathurst and Orange and so on, combined. Um, could I just get, could I just get your thoughts on ... your thoughts on that, that particular area?

ROBERT TAYLOR:
That, that would be, uh, your one thing that would have to be addressed, and you're dead right, uh, you know, the, the negative thing-, economic and social impact would be supplying housing and, uh, supplying the, the jobs in the region. But I'd presume that, uh, you know, a lot of, uh, workforce would come in from out of the region. The housing would be a definite problem. Um, I think that, uh, could be addressed, uh, with, uh, you know, housing being provided for the workers. Um, I, I just think that the economic benefit would out, outweigh the, the non-economical, uh, advantages aro-around the area. It's a vast area. Like, it would go from, you know, as far as Cowra right through, you know, so I think that we could, uh, address the housing problem in that, that respect, um, as long as it-, you know, we don't suffer as in workforce, you know, taking from our area and put into the mining area. So that would be a problem, but, you know, an issue that we would really have to address and look at.

So, uh, you know, that's the, that's my, my take on it.

COMMISSIONER WILLIAMS:
Mm-hmm. Right. No, look, thank you very much, uh, Mr. Taylor. Uh, if there's anything you want to do also by way of written submission, we'd, we'd-

ROBERT TAYLOR:
Yes.

COMMISSIONER WILLIAMS:
... certainly receive any written submissions. I think they're open til the 15th of February. Um, so, I mean, you, your presentation today will be transcribed and will go with all the other presentation on the Commission website. Um, but if there's anything else you might want to add or to formalize, uh, in by way of written submissions, then we'd certainly be happy to receive that.

ROBERT TAYLOR:
We'd put it in for sure.

COMMISSIONER WILLIAMS:
Yep, for sure. Right, thank you very much for your time today Mr. Taylor.

ROBERT TAYLOR:
Okay-

JAMES EMMETT SC:
Mr. Taylor, this is, uh, James Emmett, I'm the counsel assisting. One minor matter. It would assist the Commission-

ROBERT TAYLOR:
Yep?

JAMES EMMETT SC:
... are, is, is, is your address to the Commission, uh, um, in your personal capacity or on behalf of the Council?

ROBERT TAYLOR:
Uh, on behalf of the Council.

JAMES EMMETT SC:
Thank you.

COMMISSIONER WILLIAMS:
Thanks. Thanks James.

JAMES EMMETT SC:
The next person to address the Commission is Frances Retallack. Can I invite Frances Retallack to the lectern?

FRANCES RETALLACK:

Good afternoon. My name is Frances Retallack. My husband and I live at Millamolong. Our property sits at the south of the Belubula River, approximately 33 kilometers southwest of the proposed Mc-McPhillamys site in the Blayney Shire We are immediate neighbors to Junction Reefs, a former goldmine closed in the late 2000s and Cadia Valley operations. I do not have any financial interest in this project, nor do any members of my family.

For 10 years, I was a member of the Junction Reefs Reserve Trust. I'm also a member of the Governing Committee of the Cadia Community Sustainability Network. My husband is the Chair of the Cadia District Enhancement Project, a community group dedicated to working with Cadia to achieve some positive outcomes for our community. We are opposed to the proposed McPhillamys mine, particularly the position of the tailing stand. I'm concerned that this panel is being asked to consider McPhillamys' proposal, which will add to pollution in our district, with minimal consideration of what is already happening.

We have heard extensively over the last two days from many residents about their concerns regarding the proposed project. It appears that Regis has adopted what sadly seems to be a fairly typical mining company approach, harassment and intimidation with an orchestrated campaign designed to force people to sell out, for fear of what is to come, and appeasing residents further away from the mine, and the Council, with the promise of lollipops.

In our experience, over the last 20 years, the community is right to be alarmed by the risks associated with this project. Firstly, in regard to water. My husband and I have measured heavy metals, including arsenic, copper, cadmium, and cyanide and acid discharge from Junction Reef, flowing directly into the Belubula. This will continue in perpetuity. The pollution in the river from derelict mining as it flows onto our property, frequently exceeds safe drinking standards. We have also monitored Cadia Creek, which flows onto our boundary and runs through the Cadia mine site into the Belubula. And it measured elevated copper levels. Our cattle do not like to drink the water. The results from a recent water test were described as being inconsistent with animal life. This incidentally creek, which has platypus, at the bottom of the creek, there are Murray Cod. Endangered species.

Like McPhillamys, Junction Reefs was built on top of a watercourse, and adjacent to a river, and clearly demonstrates that when a tailing dam in that type of location fails, there is no viable repair. The scale of evaporation is simply not achievable. Despite spending millions of dollars and extensive consultation with the EPA and other experts, Junction Reefs has proven impossible to meet the monitoring requirements of a passive system, and will likely forevermore need careful monitoring and a constant pump system to capture the seepage. Tailing stands have to release water, especially if they're built on a spring system. In the case of McPhillamys, the open cut pit will over time fill with water, and become an acidic, saline, toxic swamp, which due to evaporation will become increasingly concentrated. How do we ensure that this contaminated water doesn't flow-, doesn't, in a flood event, flow into the river? How will Regis stop the bees from drinking this, this water? I fear that the mine may be completely incompatible with the bees. I am not an expert, but loss of the bee industry has a massive multiplier effect across the entire agricultural sector for the whole state.

This pit is going to be there forever, long after Reg-Regis have packed up and left town. The draft Regional Water Strategy for the Lachlan, dated October 2022, identifies the Belubula as a source of pollution for the Lachlan river system. It's the only river system identified as a source of pollution for the Lachlan. We should be meeting here today to work out how to improve the river's health, not discussing a prop-, a proposal which will make it worse.

In regard to dust, you've already heard from Gem Green, of the Cadia Community Sustainability Network about some of the dust events we've experienced. The community has been told on many occasions by senior executives at Cadia, a number of whom now work for Regis and have made presentations to this Commission, that the vent shafts are emitting condensation. An independent air quality audit report dated August 2022, I have it here, identified 4000 tons per annum of particulate matter was being broadcast over the community. This dust includes PN10 and two and a half, silica, DPN and heavy metals. Vent shaft eight is discharging particulates at a rate of approximately 18 times the permissible rate. This report was provided to the DPE and EPA in August last year and resulted in the, the suspension of an approval for, for a production rate increase. But no change, to date, in operational remissions.

The report identified prevailing wind will tend to carry the dust towards the north and east of the mine, over the Blayney Shire. The CCSN has recently tested water samples for a group of a residents in the shire. These samples confirm what Cadia still tries to deny. The dust is blowing over an extensive area around Cadia, Millthorpe and Blayney. It is not condensation. We have heard this week that Regis told community members there'll be no pollution. Cadia has been telling us that too. Yet, we have heavy metals in our drinking water.

Whilst I recognize that this Commission can only consider the proposal put forward, I am very concerned that this shire is already at a tipping point in terms of the link between pollution and health. The Blayney Shire has been identified as having significant worse heal-health outcomes than the national and state average. According to the Australian Cancer Council Atlas, we have 11% more cancer and 24% more cancer deaths than the national average. The Commission asked yesterday if our district had sufficient medical facilities to cope with another influx of several hundred workers and their families. The census data discussed yesterday by Gemma, and the Cancer Council data would suggest the answer is a definitive no. According to the census, the only health category we do not exceed the national average in, is dementia. Is that because we're already dead? There is a perception in the community that the regulators will protect us. Our experience is that the regulators' role is to determine the conditions under which a mine will be allowed to operate. In practice, this results in mines seeking the cheapest option to allow them operate today, with little regard for the long-term impact. It is all too easy to buy an expert report which claims the proposal put forward satisfies the required conditions.

I do not believe this proposal passes a full risk-based assessment. However, in the event the Commission believes it does, I would love to suggest some conditions which may mitigate some of the damage. Regis must, at all times, be required to minimize environmental harm. We ask that the Commission enforce this requirement. Current EPA finds are woefully inadequate and the option of cutting production should be available for any infringement. Any disagreement by Regis to such a provision would only serve to demonstrate that they do not believe they will be able to achieve the limits imposed. Number two, buy-out provisions should reflect that market

value does not necessarily provide a replacement of property within the district. For example, you might want a 10 acre property, but to buy the same amenity in terms of location, houses, et cetera, you might be forced to buy 20 acres at a significantly greater cost. Affected residents should not have to have their quality of life reduced, Buy-outs should be at a multiple of market value and compensation for all costs and stress in... stress involved.

The affected immediate residents must be recognized as stakeholders and be rewarded for the life of the life of mine. Regis appears to have done a very poor job at identifying and working out... working with these residents. Safe uncontaminated mains drinking water should be installed for all affected residents, this is critical, that's because our water is not safe. Blasting should be limited to business days only. All Blayney residents should be able to plan social activities at home without having to consider mine noise and dust. Water from Lithgow should be purified before being pumped to Blayney. We know the gas pipeline has broken just recently in the floods, this is, obviously, a very real risk.

The size of the tailings dam should be designed to minimize environmental harm, Cadia assumes a conservative density ratio of 1.5 tons per cubic meter. We estimate that 60 million tons of processed ore with a density of 1.5 implies a volume of 40 million cubic meters, suggesting the proposed 50 million cubic meters is... tailings dam is 25% larger than required for or body. It appears that tailings dam has been designed for a production rate that is not under consideration in this application. Any future reserves identified, such as Discovery Ridge, should be processed after the McPhillamys resource and the tails placed in the pit. Every effort must be made to fill in and rehabilitate the pit. Equipment in the pit should be electrified. The NEPM for air quality standard changes in 2024, eight months away. Will a tightening of restrictions on PM 2.5... Sorry, can I just...

COMMISSIONER WILLIAMS:
Yes, just quickly, thank you.

FRANCES RETALLACK:
Thank you. This project should have to comply with the new standard. It is disingenuous that the draft mine license has been written without recognizing this change properly. I believe by any objective analysis of the current proposal and its proximity to- to immediate residents and the town of Blayney, you would conclude that the short-term financial gain does not justify the permanent risks of significant pollution to the Belubula and Lachlan River system and the very real risk to human health. It would appear that Regis' business pace is based upon the destruction without compensation of many businesses and ultimately at the expense of the entire Blayney community. Thank you for your time.

COMMISSIONER WILLIAMS:
Questions? No? Okay. Sorry th- thanks very much, Ms. Retallack. Uh, I'm not sure whether you were able to get the material across in the time that's been given. So if you haven't, please, uh, also submit in writing - - -

FRANCES RETALLACK:
I will.

COMMISSIONER WILLIAMS:
... your- your sub... your- your views and comments as well. That would... That would help us as well also, thank you.

FRANCES RETALLACK:
We'd also like to submit the- the water quality sample - - -

COMMISSIONER WILLIAMS:
And anything that you've collected, uh - - -

FRANCES RETALLACK:
... as- as evidence of the very real pollution that is happening in the district.

JAMES EMMETT SC:
I'm sorry, can I... Do you mean submitting actual water samples as-

FRANCES RETALLACK:
No, no, no. Sorry, the results. The results.

JAMES EMMETT SC:
Anything like that the Commission can consider.

FRANCES RETALLACK:
A very good lawyer question. (laughs)

COMMISSIONER WILLIAMS:
You- You can see he's a lawyer. Um. (laughs) no, the, um... a record of those results would- would be... would be quite welcome also, uh, thank you.

FRANCES RETALLACK:
Thank you.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The next person to address the Commission is Mark Taylor. I think we have Mark Taylor online to address the Commission.

MARK TAYLOR:
Good afternoon. Can you hear me okay?

JAMES EMMETT SC:
Yes.

MARK TAYLOR:
Terrific. And who's- who's navigating the slides, um, please? Is it... Will you put the slides up so you can see them or am I meant to do it from my end?

JAMES EMMETT SC:
The, um... The team here has just put up the slides, so we have the first slide and if you ask for each slide as you go, um, the team will move forward.

MARK TAYLOR:
Terrific. Terrific, thank you very much. Um, my name is Mark Patrick Taylor. I'm an honorary professor at Macquarie University and I'm speaking to you in that capacity. I do have a- a professional role as Victoria's chief environmental scientist, but it's important for me for this purpose to separate, uh, those two roles, and, uh, the comments that I'm making today are in the capacity just honorary professor. Um, I did a piece of work at Goldfields recently, um, and I'm sure, um, Goldfields will be happy to share that report if they felt necessary. Well, we did a base... uh, a baseline study looking at trace elements in 100 beats, um, um, also soil, dust, and water. Bit of a typo on that slide, a bit rushed.

So where I'd like to say, uh, uh, where I start on this particular matter is- is this statement which comes from David Attenborough, and Attenborough stated that, "The truth is the natural world is changing. We're totally dependent on that world, it provides food, water, and air, it's the most precious thing we have and we need to defend it." And the purpose for me, uh, providing that is because we are wittingly contaminating our environment and unwittingly causing adverse effects without full consideration. And in this regard, I had done some work, uh, looking at trace element contamination in bees, which is clearly relevant for Goldfields in this particular matter, and I'll take you through some of those steps.

So in terms of envir... Next slide, please, sorry. The... In terms of environmental protection, we should always be focused on prevention rather than rehabilitation, that is the key, the treatment is, uh, poor outcome rather than prevention. And it's important both industry and communities central to, uh, preventing harm. That's either through the highest best practice standards, world best standards, also engaging the community about what they can do and contribute to this problem, for them to understand and be able to participate in the solutions, in the minimization, in the mitigation of pollution. And in regard to many contaminants in the environment, and I'll come to this a bit later, there are no safe levels, and that's with respect to benzene, for example, trace metals such, uh, led or arsenic, which is a relevant item for this particular development, and also dust and very clear that there are on tri... uh, safe levels of exposure for multiple contaminants.

So in terms of the release of contaminants into the environment, we completed a few studies which shows, it's captured in this diagram, that trace metals are recycled. Sorry, thank you. Next slide. Sorry, I'm- I'm flicking the slides here but, uh, like, obviously, you can't see. And trace metals are recycled into air which gets into soil, which gets into plants, which gets into bees, which gets to a lesser extent, into honey. And the point is, is that once you've released the contaminants into the environment, it is... it is virtually impossible to contain them and they will

with redisperse and remobilize and that's starts to affect and adulterate the quality of food, not only the food, but also the animals in the bios that are involved in the production of the food. So key points from the baseline study. The studies show that the Goldfields tank water, which all... entirely collected from, uh, rainfall or precipitation, was clean, and there were no major concerns. Next slide, please. Oh, yeah, we're on the next slide, sorry. No concerns with respect to contaminants in bees or honey. So why does this matter? Because Goldfields are producing high quality honey, they- they're reliant on the production of bees and the production of coins for their business, and the issue is, is that the location of their facility and their operation, uh, but directly the boundary fence for the mine site, and there is not one mine site in history that does not have offsite pollution. This means it is very likely that values will change in the honey and the bees a- and may well begin to affect the quality of their drinking water and also the products that they produce to sell to the Australian and international market.

We undertook... Next slide please. So this is just a brief snapshot, um, of- of, uh... of some of the data the manganese and copper in bees and honey, and essentially you can see, I'm showing this because there are variations in concentrations over time, and- and it's important to understand that's the natural process and- and we've got on here dead bees and live bees, um, and the, um... the dead bees are in, uh, triangles and the, um, live bees are in circles, and- and they're both vary in a similar way over time and that's because the contaminants or, you know, the trace elements that you find in those bees, which are, you know, naturally occurring contaminants as they stand at present, vary due to the production of the dust over the time. They're environmentally controlled. Now if you change the environment and you increase the dustiness in that environment, you will change the concentrations during periods when dust is most, uh, prevalent in the environment due to, you know, the summer period for example.

Next slide please, thank you. Um, so my contention to you and for your consideration is that dust, it will be element for this project. It's important because the environment is generally dry, we're in a drying climate, bees are exposed, uh, from the environment as they age and they accumulate those contaminants over time, so they, uh... so they bioaccumulate it, the trace elements that are persistent and some of them are toxic like arsenic, so bioaccumulate, persistent and toxic the PVTs, and it's well established that they will... it... evaluated levels of trace metals, arsenic, manganese, for example, will impair foraging capacity. For many contaminants, including that, uh, arsenic and manganese, the- there is on safe level and- and the exposure effect is important, they are greatest at the lowest levels of exposure. So the first and early levels of exposure cause the relative greatest harm.

The diagram on the right just shows a study from Nouméa, it's quite hard to see maybe, but essentially the live bees are the ones which are orange bars, and the, uh, dead bees are the ones which are blue bars, and on the bottom you've got, uh, the different trace elements, and the vertical axis you've got concentrations. The takeaway message is the bee... dead bees have higher levels than the live bees and that's because they accumulate it over time. So if there's more dust in the environment than contaminants, that will cause a problem.

I'm just contentious of time, so I'm going to slip straight on. Like, we go on to two more slides, please. You can look at those in- in due course if you so wish. So if we go to why do contaminants matter? Well, um, research is very clear about this, accumulation of potentially

toxic trace elements have been shown to have diverse effects on bees and their foraging behavior. Moreover, honeybees cannot sense harmful concentrations of trace elements in food sources, so they cannot discriminate, which means that they cannot make decisions to avoid contamination, it's invisible to them. Moreover, recent research, which is on some of the previous slides from our nickel smelter in Nouméa shows that trace element considerations in soil where in order of magnitude greater than trace elements in honeybees, but honeybee trace element concentrations were a- an additional order or magnitude greater than that in honey. The point of me telling you that is that the bees habit... the bees will concentrate and bioaccumulate the trace elements. It won't get into the honey, but it will affect the influence the foraging capacity of those bees to do the job that Goldfield seeks them to do. This therefore, contention here is that the biggest impact on the proposal will be on the bees and there foraging capacity, which in turn presents the risk of harm to Goldfield productivity and product quality.

Fi- Finishing off, there are several undressed matters that I think, uh, uh, are worthy of further consideration. Can the operations guarantee there will be no offsite impacts? There is on safe or acceptable level established for bees and- and the absence of evidence... evidence of absence and I think it's important that the proposal determines and evaluate properly what the consequences of the dust and the evaluated trace elements will be on the bees and their foraging capacity and what consequences that may have. Honey is the natural product and should be free of contamination and the question that the panel might want to consider is will that remain the case? And fi- And finally, last sentence, thank you for the bell, the proposal has not quantified for the short and long-term costs of the stress and worry in the community, that's the mental health, uh, and wellbeing, and I think this is really important aspect. We've seen this with floods, the impacts of floods on the community and the distress and anxiety it will cause, and I think the panel needs to take that into consideration about not only the development proposal you're looking at, but the long-term consequences of that and how- how it is that, that's being considered and if it can be mitigated.

Thank you, uh, for you time, I appreciate it, and I'm sorry a few seconds over time.

COMMISSIONER WILLIAMS:
Thank you, uh, Professor Taylor. Uh, I note that you had to skip over a few slides. Uh, would you be able to make that presentation available to the Commission so we can have a look at the slides, the materials?

MARK TAYLOR:
Absolutely.

COMMISSIONER WILLIAMS:
That would be helpful, thank you.

MARK TAYLOR:
I'll, uh... I'll send it to the contact, uh, right now.

COMMISSIONER WILLIAMS:
That would... That would be very good. The, um, IPC Secretariat.

MARK TAYLOR:
Yeah.

COMMISSIONER WILLIAMS:
Uh, look, I've just got one question, um, uh, and it's if- if... and we've heard it before, but, uh... but you've also made the comment again today that in relation to contamination in bees, the ar... the argument that there is no safe levels, um, yet, there are these seasonal variations in trace elements that have been recorded in bees, sort of natural variations.

MARK TAYLOR:
Yeah.

COMMISSIONER WILLIAMS:
Could you just, for me, reconcile those two statements, please.

MARK TAYLOR:
Well, you know, the elements in the environment are naturally occurring and there are particular elements, so to arsenic is naturally occurring in the Goldfields area... we know that, it's co... it's a co-contaminant, uh, with respect to the ore that is proposed to be extracted. However, what happens is during as the season changes, it becomes drier, they get remobilized in the environment, and so there are nat... there are always natural variations a bit like there's always natural variations in weather from season to season from year to year. However, if you impose a development or do something to the atmosphere, you materially shift it, you change... you move it to a different part. So instead of having the difference, let's say, for example, of one unit in winter and five units in summer, which is a naturally occurring variation, you might shift that, and, uh I don't have the numbers because we just don't have the data, you might shift that, by a order of magnitude five, you know, let's say it's... it's more than automatically five units in the winter and, say, 50 units in the summer period because there's more contaminants available in the environment and we know that the bees will ingest those and they will bioaccumulate them.

So that's the difference, so you get natural variations, like you did with weather, and then you get a whole shift in that due to other activities, which is anthropogenic impacts of CO2 in the atmosphere or a mine development as, uh, we're looking at- at this location. Does that help explain?

COMMISSIONER WILLIAMS:
That helps very much, thanks Professor Taylor. I think we have another question for you as well.

COMMISSIONER SYKES:
Thanks very much Professor Taylor for... it was a very informative presentation. I just had a question around that point around your... the point around bioaccumulating, um - - -

MARK TAYLOR:
Yeah.

COMMISSIONER SYKES:
- - - and that your other point around early exposure causes the greatest harm and impact on bees. In your testing and your base file and analysis, um, did you see evidence of bioaccumulation from some other events that have happened in the region such as recent bush fires or dust storms that have happened in recent years, um, or indeed any other, um, uh, dust events that could've been caused by industrial activity?

MARK TAYLOR:
No, uh, not- not is this particular site, um, and we didn't attempt to attribute the shifts that we saw to any external events, but the... I... and I don't think they were particularly relevant at that time. Uh, it is possible the variations may have been achieved by, um, some external events, but, and I can't answer that question, but what I can say is when we've looked at sites at Broken Hill, we looked in Nouméa and we've looked at sites in Sydney, we've been able to establish very clearly using a variety of mechanisms including lead isotope fingerprinting, looking at dead bees versus live bees, looking at samples collected over time, that the bees will accumulate contaminants from the surrounding environment, so if you release contaminants into the surrounding environment, it is more likely than not that they will accumulate those contaminants in their bodies. It's pretty clear from the study we've done those contaminants only enter the honey to a lesser degree of that and order of magnitude less than you find in- in the bee, but it's what's in the bee that's important, it's the bee that is the- the engine room for producing the food.

COMMISSIONER SYKES:
Mm-hmm.

COMMISSIONER WILLIAMS:
All right.

COMMISSIONER SYKES:
Yeah.

MARK TAYLOR:
Does that help? I mean, I've kind of answered your questions in an indirect way, but is that sufficient for you?

COMMISSIONER SYKES:
Yeah, no, thank you, that's great.

COMMISSIONER WILLIAMS:
Thanks, once again, uh, Professor Taylor. We appreciate the time you've give to, uh, put this mi... made this material for us this afternoon, so thank you very much, once again. Thank you.

MARK TAYLOR:
Yeah, terrific. Yeah, good luck with rest of the proceedings, thank you.

COMMISSIONER WILLIAMS:
Thank you.

MARK TAYLOR:
Bye.

JAMES EMMETT SC:
The next person to address the Commission is Bronwyn Evelyn. I think... I think we have Bronwyn Evelyn online to address the Commission now.

BRONWYN EVELYN:
Um, high there, um, I'm Bronwyn Evelyn, um, I'm from Canowindra in the just down from Blayney. Can you hear me okay?

JAMES EMMETT SC:
Yes, we can.

BRONWYN EVELYN:
Okay, great. Um, first of all, I'd just like to acknowledge the Wiradjuri nation in which this meeting's being held today, I'd like to acknowledge elders past and present, I'd also like to acknowledge all other nations as well, um, thanks. Um, I'm totally opposed to the McPhillamys gold mine, um, I live in Canowindra, which sits on the, um... Canowindra sits on the Belubula River and our shire in nestled between the Belubula River and the Mandagery Creek. Um, the river is a lifeblood of our town and the constant backdrop to everything we do. Um, it is where we connect to place, um, schoolkids learn to swim there, I love swimming in the river, um, people fish there, um, Cabonne council is in the process of finalizing river walk under the Canowindra main stream... main street precinct plan. Um, there are platypuses upstream of the town, the river's riparian zone provides critical habitats for birds, marsupials, reptiles, and bats, um, and after the catastrophic bush fires of 2019, the Belubula River at the swimming bridge in Canowindra hosted tens of thousands of gray headed flying foxes relocating from East Coast for the season because all their blossom feed had been decimated on the East Coast.

Um, Canowindra is promoted as Australia's food basket, we depend on the health of the two rivers, um, and there are water licenses allocated along the river to farmers can irrigate and spring and bores and dependent upon, um... To contemplate putting a tailings dam across the head borders, capping springs and disputing, um, tributaries, this is, um, insane to me and makes me really distressed, um, the head borders in charge of this river are [inaudible] um, and also we've got the Cliefden caves 20 Ks upstream from Canowindra, um, under the Belubula River, and, um, these have been added to the New South Wales State Heritage Register, um, and, um has the proponents of the state government looked into the impact of a failed dam wall and leaked toxins could have on these caves. Um, I'm ashamed that the state government is considering this proposal at a time of climate emergency when water and food security is of utmost importance.

In a time of transformation and industry and economies, our state government should be bound to support industries that reuse and recycle in the circular economy. I give reference here to Mint Innovations a New Zealand based company setting up a refinery in Sydney to retrieve precious metals from e-waste, um, which is much needed process as opposed to the redundant, um, to me,

lazy massively inappropriate, invasive and destructive proposal of the Regis group. Um, I thank Lachlan Price for this submission, um, pointing out that agriculture has to be sustainable and future proofing and how and why can a gold mining company be excused from this and these, um, kind of practices. Um, I feel if anything goes wrong here it will have disastrous and catastrophic consequences to Belubula River and the communities and agriculture that rely on clean river ecosystems.

Um, I'm totally opposed to this, um, project, the risks are too huge to contemplate, this project has already played heavy with too many lives and it's shown with submissions I've heard at this hearing. It's imperative that we care for and protect, and respect the Belubula River, Regis' gold mine proposal dishonors and disrespects this natural heritage and all who long here. Um, thank you for listening.

COMMISSIONER WILLIAMS:
Um, Ms. Evelyn, thank you for your presentation to the Commission, uh, this afternoon. We appreciate your time. Uh, as I've mentioned with others speakers, if you would also like to submit written submission, uh, identical to- to this or- or perhaps, uh, with some further material for us to consider, we would, uh, so rightfully take that on board as well. But, uh, once again, uh, thank you very much for being with us this afternoon.

BRONWYN EVELYN:
Thanks very much for having me.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:
The Commission will now take a short break and will resume at 1:58.

If I can ask everyone to take their seats. The public hearing will resume in a moment. The hearing will resume now. The next person to address the Commission is Ishrana Anna. Ishrana Anna will be addressing the Commission remotely, if I could ask everyone in the room just to lower their voices for, ah, Ms. Anna's address to the Commission.

ISHRANA ANNA:
Hi, did you want me to go ahead?

JAMES EMMETT SC:
Yes, please. The Commission and this hearing can hear you, so just commence your address when you're ready. Thank you.

ISHRANA ANNA:
Okay. Um, hi. Um, my name's Ishrana Anna. I'm the Mullumbimby Grandmother, ah, and, um, from my point of view, an open cut mine for 11 years, ah, gold mine, is brutal on the land and environment. My understanding is that there's no real environmental impact studies and that it's right next to a freshwater creek or river, that they would be mining. Um, so I don't see that jobs is

a selling point with this, because if you take 100 people in the town and you say that there's, um, 11 years' worth of jobs, that's just 11 years' worth of jobs. And if you look at it from that context, um, there's no job sustainability, the carnage that's left after any mining is quite damaging.
I understand as well that there's really, ah, a lack of rehabilitation. I've had a look at the website and, you know, there's presentations there but, you know, um, I've never seen, um, great re- rehabilitation after mining. Ah, I don't feel that overseas investors have any place here. Um, I'll give an example. Rocky River, they fought. Rocky River is up behind [inaudible], which is the other side of the hedge land of Byron Bay. And they saw a fight there for 12 years for the gold mine and... Sorry, not 12 years, seven years. And it stopped for two years. They got a go ahead. My understanding is that that was back in the 70s. It's, that river is only just starting to come good now, and that was the second purest river in the world.

Um, I'm one of the grandmothers here in the Byron Shire and the impact on the Byron Shire of us being inundated with people who have no understanding of what this area's about, it's different to an open cut mine, um, has been huge. Um, we have a lot of lack of respect here and I'm just paralleling that on that because I don't feel that the local people are being respected with this mine. Um, there doesn't seem to have been any consultation with the elders. Ah, my background is that I carry the bloodline for Rodd Heffron. He was Education Minister for 17 years, ah, SES Minister for 25, and Premier for five. And he opened over 200 schools. He, um, opened the University of New South Wales, he opened the University of Technology. He did a lot of work and he was part of that era of government where it was about serving the people. So I look at things very much from that point of view. What, what's for the common good? This is against our law, it is not in the best interests of the community at large and we are not a service center for international mines and multinational, um, corporations and corporations in the mining industry.

And unfortunately, um, from my point of view, and I know I'm not alone here, ah, that seems to be the way that the international mining industry sees us. And we are [inaudible], we are very sacred and I actually see it as an offense, being one of the grandmothers, the way that this has been conducted. That's all I have to say.

COMMISSIONER WILLIAMS:
Um, thank you, Ms. Anna, for the time you spent, ah, presenting, ah, to the panel this afternoon. Sorry, my name is Peter Williams, I'm one of the Commissioners. Um, ah, if there's anything you would also like to put in writing, we'd re- receive that also. Ah, equal weight is given to both, um, oral presentations and, and written submissions, um, but, ah, and, and this submission will appear on, on our website, ah, as a transcription. But as I say, anything else you want to, um, to say at all by way of written submission, um, we'd gratefully receive that also.

ISHRANA ANNA:
Yeah, I'm happy to do that. No problem.

COMMISSIONER WILLIAMS:
Great. Ah, and that can be, that can be submitted via the Commission website.

ISHRANA ANNA:

Yeah, I saw that.

COMMISSIONER WILLIAMS:
Great, great. Thank you very much.

ISHRANA ANNA:
Thank you for hearing me today. I really appreciate it.

COMMISSIONER WILLIAMS:
Thank you very much for spending your time with us. Thank you.

ISHRANA ANNA:
Thank you.

JAMES EMMETT SC:
The next person to address the Commission is Professor Warwick Giblin. Professor Giblin, do we have you online?

PROF WARWICK GIBLIN:
Yes, you do. Ah, good afternoon Commissioners and others stakeholders. Yes, my name is Warwick Giblin and I speak on behalf of the Belubula Headwaters Protection Group, and in particular the Kings Plains Community. I have over 40 years' experience in executive level, um, environmental impact assessment across both government and the corporate sector. I first prepared EISs for coal mining in the Hunter Valley back in the 1980s.

Over the past decade, I've acted for landholders and councils in assessing mining and energy projects and negotiating fair outcomes for them. Since 2011, I've assessed 10 mine proposals, including four [inaudible]. I'm an adjunct professor, attached to the University of New England, appointed in recognition of my environmental and social advocacy, ah, for rural societies. In 1989, I was appointed the founding president of the Environment Institute of Australia and New Zealand, which is the association for professional environmental practitioners.

Now the matter at hand. The McPhillamys mine proposal should not be approved because inter alia, there are simply too many homes too close to the mine site. The reasons for this judgment are five fold. One, the incompatibility of the proposed mine with the existing land uses. Secondly, the magnitude of the adverse amen- amenity impacts due to noise, dust and visual. Thirdly, the magnitude of the social impacts of the mine on the locals. Fourthly, that the adverse environmental, social and economic costs outweigh the benefits. And lastly, but not least, the project is not in the public interests for the reasons outlined above.

Commissioners, ah, and others in the room, in 2021 I acted for some of the landholders in Morkam Road at Kings Plains. As I talk, I respectfully encourage you to please spare a thought for these people, who have had the mine proposal thrust upon them, upturning their lives. I cordially invite you to compare the McPhillamy proposal with the Rocky Hill coalmine project at Gloucester, which was refused by the then PAC and later the Land and Environment Court in February 2019. There are some stunning similarities between the two mining proposals. Chief

Justice Preston, of the Land and Environment Court, [inaudible] that the Rocky Hill mine should be refused due primarily to its, "Significant and unacceptable planning, visual and social impacts, which could not be satisfactorily mitigated." I emphasize, this is the principle but not the only reason for the refusal.

Please let me elaborate on the comparison between the two projects. At Rocky Hill, there were 111 houses within three kilometers of the project site. Here at McPhillamys, there are about 104, namely 88 within two kilometers of the mining boundary and I estimate another 16 between two k's and three k's out. So the house numbers, Commissioners, are comparable. At Rocky Hill, there were nine homes with a direct view of the mine. Here, there are approximately 20. At Rocky Hill, no operations were proposed overnight. Here, operations are planned 24/7, day and night. And lastly, at both Rocky Hill and McPhillamys, the noise and air quality technical compliance criteria, were in that case, and are in this case, predicted to be met, albeit likely, at the margins of compliance. If one reflects on the key metrics of the two mines, it is not unreasonable to conclude that a merit-based assessment would similarly find that McPhillamys should also be refused. Simply, Commissioners, there are too many homes too close to the mine site, with unacceptable amenity and social impacts.

I'd like to now comment on these amenity impacts. Firstly, noise and dust. McPhillamys might be predicted to be technically and theoretically compliant. But based on my experience with performance at other mines, ah, the closest of homes and critically their location down slate of the mine, it is likely that the operation would be, at best, at the margins of the noise and dust compliance. Critically, [inaudible] would impact the substantial number of homes and people, just as was the case at Rocky Hill.

It is unlikely that McPhillamys could consistently comply with noise and dust limited. The reasons for this include, one, changes in meteorological conditions, including temperature inversions. And secondly, the changes in actual versus the predicted noise emissions from on-site equipment. I refer you to the Tom- Tomingley Gold Project where noise and dust exceedances soon after commencement of operations meant the whole village required retrofitting with mitigation measures. But by then, the developer had what he wanted, he'd had its approval. Temperature inversions are common, are a common occurrence in this region. I grew up in it. I query that inversions occur less than 30% of the time. Does that need to be taken into account? I kindly request that you please review this issue. Again, I remind you of the similar Rocky Hill scenario where the project was refused approval on noise, dust and amenity grounds. Visuals. The scenic rural landscape to the west of and overlooking the Kings Plains hamlet would be changed to an industrialized state by the mine. It will create signifi- a significant impact on Kings Plains residents due to the site's immediate proximity and direct line of sight. The mine will literally overshadow the Kings Plains community from the valley floor and rising up 150 meters. The overburdened stockpiles planned for the end of the mine site at Kings Plains will in turn represent a high visual impact. The Department of Planning and Environment acknowledges this and says that those visual impacts will adversely affect the quality of life and the amenity of those living in Kings Plains for at least the first six years, which is half the mine life. And a reminder, that there are more homes in Kings Plans with direct views of the mine than there were at Rocky Hill.

Light pollution. Currently, Kings Plains residents have an uninterrupted view of the evening skies set in a tranquil, rural landscape, lit only by the moon and the stars. Dusk to dawn, night lighting sources on the mine will be significantly, visually intrusive and overlook the valley and the people living below. On the amenities issue, um, I recommend the IPC follow its own Rocky Hill decision where it determined that, "Even though the project is predicted to be technically compliant regarding noise and dust performance, the project would create significant impacts on visual amenity and create noise and air quality impacts above what is currently experienced by people within the current land use." The PAC, as it then was, finds the projects is therefore incompatible with these land uses. I'd like to move on to social impacts. Social impacts, Commissioners, will be widespread and significant and unacceptably so. It is revealing that the DPE assessment report states in paragraph 189, "Kings Plains residents are likely to be impacted by the loss of community wellbeing, amenity impacts, loss of rural way of life, loss of place impacts on health and question marks around uncertainty and trust in decision-making systems." Now, I don't know about you, but there's a lot packed into that statement, I would suggest. Kings Plains locals are likely to experience heightened mental health risks of anxiety, depression and loss of place arising from having their peaceful, rural landscape disrupted by a major industrial facility moving in. Sleep disturbance and nighttime noise, dust impacts on household activities and outdoor living, the changed vista, will all be too [inaudible].

And now I'd like to move to what is a critical issue, in my view, and that is the un-levelness of the playing field for the Kings Plains community and how as a result of that they have been denied natural justice. There has been a power imbalance that has limited the ability of the locals to suc- to negotiate fair terms. Compared with the developer, they are disadvantaged because they do not have firstly the time, secondly the technical capacity, thirdly the financial ability, a- and fourthly the political clout to match the developer, which clearly benefits from all those advantages. Whilst some deals between landholders and the developer have been done, I would encourage the IPC to ex- examine the fairness of said agreements.

On one point, the fine print says, "Any buy-out would not be, of any house or any property, would not be until financial investment decision, FID." Who knows if and when that will be. The Sunrise Mine at Trumble was approved 20 years ago and still there is no FID. The Vickery Mine Project at Gunnedah was approved in August 2020 but still no FID.

Another key point on the social impacts is 50% of the occupants of the 40 homes around the Kings Plains precinct are more than 60 years of age. What if they need to sell to fund their aged care costs? Who will buy them and at what price? And a- of course for all of us, life's circumstances can change in quite dramatic fashion and landholders there may need to sell. Who's going to buy them and at what price? There are also locals with respiratory and other health challenges. Similarly, what about them? In my experience, the developer has utilized its power advantage to deprive landholders of a fair and just outcome. Is that a [inaudible] as to me. In conclusion, over the past three days you've heard sobering stories from many local people. People whose lives have been upturned by the mine proposal. Please, please hear their voices. The draft consent conditions are predicated on the assumption that the mine will deliver according to all modeling. As, as a result, there are not sufficient safeguards and checks to protect the wellbeing of locals in the event that things turn for the worse. It is simply unjust... I've got one paragraph to go, Commissioner.

COMMISSIONER WILLIAMS:
That'll be fine, thank you.

PROF WARWICK GIBLIN:
Ah, should be outsourced to locals when the miner reaps the benefits. At last, in conclusion I respectfully invite you to reflect on the Rocky Hill comparisons and as a result to, one, give my own recognition to the likely lived unpleasant and disruptive experiences for those in the number of homes within three k's. Secondly, accept the evidence, ah for Kings Plains community where they're going to be vulnerable to the amenity impacts. And lastly, please refuse the mine proposal. Thank you for listening.

COMMISSIONER WILLIAMS:
Thank you very much, Professor Giblin. Just a point of clarification from, for my own benefit. Just trying to, um, summarize the, the kernel of your argument. Ah, a lot of it is, seems to be revolving around that, the fact that effectively, if I understand you correctly, that, um, Rocky Hill is, and the circumstances are, so identical to this-

PROF WARWICK GIBLIN:
In a sense they, it was a greenfield project in the out- on the outskirts of Gloucester.

COMMISSIONER WILLIAMS:
Right.

PROF WARWICK GIBLIN:
It was a greenfield, ah, project that was contemplated, an open cut mine on the outskirts. So the similarity, in my view, is the proximity, the number of and the proximity of people's homes, ah, to that. Um, similar, in comparison to this.

COMMISSIONER WILLIAMS:
Right. So in terms of our merit assessment, you're arguing that the merits of those two mines are, are extremely similar.

PROF WARWICK GIBLIN:
Are comparable, indeed.

COMMISSIONER WILLIAMS:
Right, okay. No, thanks for that clarification, professor. Any other questions? No, no. Well, Professor Giblin, thank you very much for your time. I- if you have got a written submission, we, we would love to, ah, receive that also, ah, so we can... I mean, this will go on transcript but, ah, it's always good to have a written submission as well.

PROF WARWICK GIBLIN:
Yes, I'll follow that up.

COMMISSIONER WILLIAMS:

That we can go over as well. Thank you very much.

PROF WARWICK GIBLIN:
Thank you very much for your time.

COMMISSIONER WILLIAMS:
Thank you very much.

JAMES EMMETT SC:
The, the Commission will now take a short break to ensure the last two speakers are ready to address the Commission.

The hearing will resume now, and the next person to address the Commission, I invite Jim Beyer to the lectern.

JIM BEYER:
Uh, thanks, thanks to the Commission for the opportunity to, uh, I guess bring, bring out our view and our position to a close. Look, we've heard a lot of information ... Put, put the slides, thanks. We've heard a lot of information presented over the last few days and we have everyone who's taken the opportunity and the time, uh, to provide a submission and to participate in this process. We acknowledge that this public hearing is one part of a very long process and a process that is required by the New South Wales Environmental Planning and Assessment Act that state significant elders, of which we are one.

We acknowledge the uncertainty and the frustration that is generated by this extended approval process and the long period of time that this project has been planning and under assessment. Focusing on the positives, the pleasing thing is that the process is coming to a close. We look forward to the Commission making its determination on the project in the near future. We also note that as part of the required assessment process, considerable time has been spent collecting data, analyzing the results, preparing the detailed technical studies to present the robust and comprehensive EIS with a subsequent assessment for consideration by the relevant stakeholders and government agencies so that an informed decision on the project can be made.

In addition, this time has allowed us to reach a project design that responds to this data along with community and government input and independent technical feedback. So, what I wanted to do now is to go through some of the key issues raised and put our comments around it. Next slides, thanks. Oh, yeah, that- that's the one.

Uh, look, I'd lo- I'd like to take that opportunity, make a few points. I note ... First of all, I note that there were a number of presentations today that have provided commentary on our technical assessment. Pardon me. And some of the matters that are made are quite technical in nature. Uh, we don't agree with all of that was raised, and while we don't have the time to respond today, we will respond in detail in our written submission. Next slide, please. But there are some points we want to cover. First of all, on engagement, there's been a lot of commentary about the level of engagement by the Regis team, or more specifically, the perceived lack of it over the last few days and I want to clarify some facts. Using Kings Plains as an example, in the last two years,

the Regis team have met with many o- with every household in Kings Plains. On average, households have had 47 meetings or phone calls ranging from some that have had 16 to some that have had 164. Our written submission will provide a detailed breakdown on the extent of the engagement undertaken across this region, across the region. Uh, this engagement will continue, uh, during the next phase of the project should it be approved. Next slide, please.
Residents assessment and the negotiated agreements. There appears to be some confusion over which residents have been assessed for potential impacts of the project. As can be seen on the map, uh, on the screen, residential properties were identified by air quality and noise experts in all directions surrounding the proposed mine, including the north and the east. In total, 88 residents were identified. Now importantly, this, this wasn't just based on a simple two kilometer radius. Rather, it was based on a number of factors such as topography that influenced noise, dust and visual impacts. Predicted noise levels and dust levels were assessed at all of these residents and the results are presented in a table form in the air and quality noise assessment which forms part of the EIS and also in the amended reports. Next slide, please.

Initial predictions of the mine design considered in the EIS showed that 15 residents would experience noise levels that triggered the application of the New South Wales Government Voluntary Land Acquisition and Mitigation Policy, otherwise known as the V-LAMP. That is, these residents would be entitled to request mitigation measures at their properties. Now because of the feedback and the concerns raised, uh, during the, the process, we took these, uh, concerns and we were able to alter the mine design for which the approval is now sought, specifically so that none of those residents are now predicted to experience noise or dust levels that would formally ti- trigger the obligation on Regis to apply the V-LAMP to any residence. However, we made the decision to still offer mitigation to those residents initially identified in the EIS. And this ongoing process has taken the form of negotiated agreements with our near neighbors.
The number of agreements being offered has changed over time as some of the properties were purchased by Regis, uh, when they became available, and others were added where some notable changes in visual landscape were identified. And therefore, the decision was made to offer mitigation measures to those properties. To date, out of the 18 agreements being offered, eight have been signed and seven are nearing completion.

On the subject of springs. Next slide. Thanks. We've developed a thorough understanding of how springs operate within the catchment. While we've been able to tap into local knowledge, we've also undertaken detailed studies including six field surveys between 2013 and 19. These studies are in addition to the ongoing baseline monitoring that continues to be undertaken on a regular basis across the project site and surrounding area, as Danielle referenced yesterday. We've engaged industry leading experts to use this data to predict the behaviour of these springs during construction and operation of the mine, and this work tells us that the water in the springs within the proposed TSF area will continue to flow underground and, importantly, eventually discharge lower down in the Belubula catchment area. Next slide, please.

On the case of water and water licensing, in terms of the licensing, I want to reiterate, we have secured a pathway for all the required licenses. We recognize that water licensing is a complicated issue. Uh, there are three areas of licensing required. Now, I won't go into them today. Um, but we will provide a good summary and a written submis- ... In our written

submission to ensure that these pathways and the perm- ... Uh, how the licensing, um, so it's clearly understood. Next slide, please.

Some questions have been raised over where our workforce will come from. For construction, the workforce will generally m- be made up of short term contract employees with specialist skills. Some of these will be local, as we saw yesterday from the presentations from, uh, Port Enterprises and Macquarie Geotech. Once we commence operation, which will be about two years after constructions starts, our workforce will come from a number of avenues. Firstly, a number of people have contacted us who are interested in work and live in the local area but work on fifo elsewhere, and they're very keen and interested in returning to the region with where, with where ... From which they live.

Uh, we'll also work with training providers to train people to work in the industry. There are locals who are already skilled and there are school leaders and young adults who we expect will stay for career opportunities that we offer, rather than seek to leave employment elsewhere. As we heard yesterday from Robert Crocks, Craig Hart and Michael Yelf, mining and allied industries provide pathways for young people to access meaningful careers from semi-skilled roles to trades to university qualified roles. And finally, we know that unemploy- the employment market is dynamic. We will continue to watch it closely and respond appropriately as we work with the local community to build our workforce and provide opportunities. Next slide, thanks.

On the topic of bees in response to concerns raised by Goldfields Honey in 2020, we had experts undertake a detailed scientific assessment into the potential impacts on the- on bees of the project. The assessment used the outcome of air quality analysis to characterize the potential exposure of bees, um, from dust and also information from geotechnical assessments, uh, to also estimate the potential exposure by water interest the TSF. This report was attached to the submission report which we provided to the DPE in September 2020. The study concluded that no impacts are predicted on the bee industry from the project.

However, we are not just going to rest on this. We want to work cooperatively with all the local beekeepers, and as per the recommended conditions, uh, consent conditions, we will develop an [inaudible] monitoring and management program in consultation with these beekeepers. Next slide, please.

On the subject of greenhouse gas emissions, estimations of our emissions for the project were based on the Australian Government National Greenhouse Accounts Factors Workbook, the technical guidelines that are used for the purposes of reporting the National Greenhouse and Energy Reporting Act, NGERs, which Regis has been reporting into for many years. We have calculated our po- our potential emissions based on these, uh, established factors. As I noted on day one, Regis has a target of net-zero by 2050 and is also committed to plan to deliver on reduction targets by 2030. Additional information on this is available in the company's sustainability report, which is published every year, the last one being in ... I think it was October last year.

Uh, further, McPhillamys will be subject to carbon regulation and reduction requirements through the federal government's safeguard mechanism. This mechanism, which is in the process of being strengthened by the co- current, uh, federal government, is part of the overarching national emissions reduction target approach. I would also note that we have been approached by at least five companies offering solar projects which we would intend to pursue once approved. And I would note that we haven't progressed these discussions, uh, until we get approval, um, because, uh, that is ... We know that the opportunities are there, and we'll pursue it, uh, in due course.

Moving on to monitoring and management. Next slide, thanks. Now, looking forward to the way we'll run our business, and in reality, this is the way we run our existing business, we run with detailed environmental management plans, monitoring and complaint systems, and these will be in place for construction, operation and post closure. The proposed management systems for the project will include a combination of real-time static and attended monitoring and will very clearly described and presented in the publicly available management, uh, environmental management plans being developed for the project. All key environmental aspects will be captured by the monitoring, including noise, air quality, water parameters, biodiversity and meteorology.

The results of the monitoring will be used to inform operations. We will take proactive approach to managing these, rather than reactive, and this will ultimately result in a better outcome for the local community in relation to reducing potential impacts such as noise and dust. The monitoring results will alwa- also be used to inform compliance with key criteria and limits enclosed under the development consent and other regulatory instruments. The monitoring system and the associated management plans will be subject to regulatory approval and consultation with re- relevant stakeholders prior to finalization.

Our plans and our performance will be subject to re- regular internal audits and assessments, as well as external and third party audits, such as independent audits undertaken by the Department. As a result of the compliance results, ongoing audits and other internal reviews, the management plans and monitoring systems will be under constant review for improvement and adapted where required. Next slide, please.

So, while it may appear confusing to some now with the range of opinions we have heard this morning, it is my strong view that the process of preparation by us, Regis, and the detailed assessment by the DPE, and the other key government bodies that have been involved is what we should be focused on and, in particular, on the statement made that on balance, the Department considers the benefits and the project, of the project outweighs its residual cost and that that project is in the public interest and is approvable, subject to strict conditions of consent. Okay. So, what are the benefits that it's referring to? Next slide, thanks. Firstly, local employment. Uh, as we've said before, 480 people employed during construction, 120 during pipeline construction. After that, after the first two years, we'll settle into the operational phase where 260 plus o- uh, people will be employed during mine operations, providing 67 million dollars in annual direct and indirect household income that will flow into the Blayney, the Bathurst, the Cabonne and Orange regions. It's a local first recruitment. We'll focus on education, training, job s- readiness. We want to keep the jobs local in Blayney. Having being around the

industry for many years, I understand the impacts of fifo, and that is not the direction that we want to go. We want to keep lo- keep the jobs local.

Local businesses will benefit from direct procurement opportunities and the other flow on benefits that will occur directly from those people that are employed, uh, at the mine site and supporting businesses. But the benefits don't only flow to the people who have direct jobs or direct businesses associated with it. The Blayney community gains from its ... From the investment as well. Already, in the last two years, we've invested $80,000 into local groups, and since 2016, over 200,000. Once the project gets approved, for a start, there'll be over four million dollars paid in the voluntary payme- the VPA, which is paid to the local shire over the life of the project, and that can be used on local infrastructure and services.

But more importantly, and more valued in dollar terms, in the addition to this VPA, there will be a multi million dollar annual contribution through shire rates to the shire, which we haven't quantified at this point. But we do know, as we have seen ... People have seen from other, uh, regional mining operations, the contribution to the shire is very significant. The benefits will also flow onto New South Wales. $244 million dollars estimated in the modeling for net benefits to New South Wales. $56 million dollars to the state in royalties. And a comment was made, $56 million's a drop in the barrel. I would put forward a suggestion that $56 million dollars is a lot of money that can be spent on schools and hospitals and other requirements that society continues to build its request and requirements for. We have to recognize that that money's got to come from somewhere. And in addition to that, there will be the federal taxes that are paid corporately.

The last piece of benefit is on the environmental and the more regional benefits. Uh, we've already said, planted, as we've said a number of times, 10,000 trees with over 100,000 part of the longterm plan. Our outcomes h- have strengthened biodiversity, which has been identified in the review. And the water pipeline itself will remain a very positive, uh, infrastructure legacy, uh, for use for many decades to come.

I think the local community understands the full picture as reflected by the hundreds of positive written submissions to the Commission from the people of the Blayney LGA. In addition, we know from surveys that 70% of the local Blayney LGA partic- um, who ah, participated in the community survey supported or strongly supported the project. Next slide, please.

We, Regis, are fully committed to this project and to operate it to the highest standard. At a minimum, we will operate at, uh, in accordance with the strict consent conditions that will apply. And in fact, consistent with our values, we'll work to be better than that and we will go, pardon me, above and beyond these conditions. Thank you.

COMMISSIONER WILLIAMS:
Thank you very much. Thanks very much, Mr. Beyer. We may have some questions, um, from the Commissioners. Um, I might start off, if I can, please. You'll have a formal reply or response to submissions, I gather, um, in terms of the comments that have been presented the last three days of hearing?

JIM BEYER:
Yes. Yeah. Th- What I've spoken about here will be also submitted. But, um, you know, it will take us, uh, some days now from what we've heard today to generate our reply.

COMMISSIONER WILLIAMS:
Right.

JIM BEYER:
So, there will be a formal full written submission.

COMMISSIONER WILLIAMS:
Right. Right. So, I might just have another couple of questions now, which either you might be able to answer now or could go into those - - -

JIM BEYER:
Yeah. If I can answer them, I will. If I can't - - -

COMMISSIONER WILLIAMS:
In, in the response to - - -

JIM BEYER:
Yeah

COMMISSIONER WILLIAMS:
Yeah. That'd be, that'd be perfect. Um, I've just got a question around ... We've had a lot said, uh, over the last three days about, uh, you know, the, the, the mitigation and acquisition agreements and, and so on from people in affected residents around Kings Plains. Um, the, the agreements, as they stand at the moment, I think, uh ... And I think you said there might have been, um, 15 on offer, or 18 on offer?

JIM BEYER:
There, there are 18.

COMMISSIONER WILLIAMS:
18 on offer.

JIM BEYER:
18 agreements.

COMMISSIONER WILLIAMS:
Uh, are they mitigation agreements, or mitigation, or acquisition or/and acquisition?

JIM BEYER:
Uh, of the 18, 16 are mitigation and uh, acquisition.

COMMISSIONER WILLIAMS:

Right. So, it's either - - -

JIM BEYER:
And dual mitigation.

COMMISSIONER WILLIAMS:
Right. So, so, in 16 of those cases, it could be mitigation or acquisition.

JIM BEYER:
It's a combination. We mitigate.

COMMISSIONER WILLIAMS:
Yeah.

JIM BEYER:
And then if, in the event that the, um, individual or the, the household is not satisfied, then the option, um, I think it's within the first 10 years, they can elect to, uh, sell.

COMMISSIONER WILLIAMS:
Okay. No, thank you. Um, the, the ... We had a statement also made yesterday about negotiations with, with the pipeline, that they're nearly completed.

JIM BEYER:
Yep.

COMMISSIONER WILLIAMS:
One question I don't know that ... Addressed anywhere, if the project was approved, what's the future arrangements for the management and maintenance of the pipeline?

JIM BEYER:
Sure. Um, well, well, perhaps to answer that first part of the question, which was, uh, uh, the agreements of the pipeline. All have required, uh, private landholders agreements have all been signed. The only ones that are outstanding are the ones that involve dealing with various government authorities that, um, as you're probably aware, take a while to work through. Um, some of them, um ... And, and we're progressing those. It really just, uh ... In some instances, they won't find final approval until we give them the final design of the pipeline so they know exactly what they're proving, you know, the, the true final design once they've been installed. So, our, our position, we don't see that as being an issue. We've got ... It's positive engagement. It's, you know ... There's no issues outstanding there that we're expecting to be a problem.

In terms of the pipeline, um, uh, the construction of the pipeline will be something that we're responsible for, and the operation of that pipeline is something that we will be responsible for. But it will be done in conjunction with, um, uh, Centennial Coal, and also with, um, Energy Australia were the two, uh, other parties at the other end of the line.

COMMISSIONER WILLIAMS:

Right. Thank you. Questions?

COMMISSIONER MENZIES:
Uh, question continuing on about the, the pipeline, specifically the water that goes into it. There's been a lot of concern expressed about, you know, it's not good quality water etc. I know that you have multiple possible sources there. Could you give us a bit of a stance on, on how you're going to select the water that you're taking? You know, what the quality of water that's likely to be, whether it's going to vary through time etc. What, what you know about the water that's going to go into the pipeline.

JIM BEYER:
Yeah. I mean, I can ... Certainly the submission can give some, some detail around that, but probably a little bit, uh, too detailed to get into now. But, but as a whole, uh, process, fundamentally, there are two key sources of the water. There's the water that comes from Centennial, which is the underground coal, and that comes from old workings. So, there is an old, old area that's completely flooded. They're very weak mines. They make a lot of water. We've had, um, hydro surveys done. We're not concerned that, uh, area will run out of water.

Uh, and while they're not operating there, we'll draw o- water from underground from a certain area. And if they want to pump it dry and start mining from there again, there is another place that they would be abandoning to, uh, from the underground workings. This is all coming from underground. It's not coming from, from open pit mines. And as a result, the water is, uh, quite good quality.

Uh, the other source ... The, the other major source of the water is coming from, um, uh, the, um, uh, the power station where they, they take the same water from the underground mine that, uh, we would be using, but they put it through, uh, an RO plant to ... Because they need to have, um, very high purity water to use in the steam turbines. And the mat- the, the, uh, the byproduct of that, which is the brackish material, because that's what RO plants do, that's what we bring out, and that basically gets mixed with the, um, the, the non-brackish water that's coming from the underground. The... Basically, the, um, uh, the condition of the water that we'll run on is that it, it, uh ... As we've said in our submission, is it has to be stock quality water.

So, that's the, that's the standard of the water and we'll have online monitoring. There's been a lot of discussion about how that will be, um, instrumented and managed and that's all part of the, part of the process. I mean, we... Frankly, we, we need and we want to know, um, what's coming down the line.

COMMISSIONER WILLIAMS:
Um, uh, Mr. Beyer, the, um ... So, there'll be reverse osmosis treatment of some of the water further up the line, so there'll be no need, or - - -

JIM BEYER:
No. Oh, the- there may be very minor uses for portable water use on the mine site. Um, and, and to be honest, I'm not even sure whether that's a requirement. That might be something that somebody might know. But we don't need it for the actual process. That water, as it's delivered

from, um, from the, uh, from the source, is fine. Um, brackish and saline water is not an issue for processing. In fact, in Western Australia, um, the process plants are all using hyper-saline water, which is many times, uh, higher salinity levels and, um, they don't cause any operating problems. You just have to make sure you've got reasonable treatment of your seals so it doesn't rust.

COMMISSIONER WILLIAMS:
Right. So, and any other uses of the water post mining that would not affect, um-

JIM BEYER:
Oh, for, for coming down that pipeline?

COMMISSIONER WILLIAMS:
Yeah.

JIM BEYER:
Look, I think the, I think the, the reality is that when we finish and the pipeline is then, uh, an unrequired asset, um, the options of the water coming down the pipeline, um ... As I was saying before, the water coming out from the underground is very good quality water. Um, what's an option? Well, an option is just to take that water and not bring water ... There's no obligation to take the RO, uh, byproduct from Energy Australia once we've finished. There's, um ... In fact, the options are, are very broad and wide as to what ... Where the water might come from. It is a 90 kilometer pipeline. Um, you know, in terms of water security for the region, I think it's a, I think it's an asset that people will be looking at in 30 or 40 years time and going, "Thank goodness that was, uh ... Happened to be sitting there for us."

So, if we drill ... If, if we wanted to use that water, or if we, the community, wanted to use that water after we shut down, we don't have to use the water that's coming at the quality that we- we're happy with to put in our process plant. We can use different quality water by, um, bringing in less of the water from Energy Australia. And when I say we, I don't mean Regis, I mean the community.

COMMISSIONER WILLIAMS:
Right. Okay. Um-

JIM BEYER:
Sorry. There's nothing locking in that quality.

COMMISSIONER WILLIAMS:
Right. Thank you. Uh, look, sorry, just to go back again, sorry, uh, to, uh ... You had a map where you identified all the properties within a two kilometer radius, and I think it's, uh, 88 properties, uh, residents.

JIM BEYER:
Yeah. So, I'd just like to emphasize a point there. Um, the term of the two kilometer radius has been expressed a number of times.

COMMISSIONER WILLIAMS:
Yes.

JIM BEYER:
Um, that's not ... We didn't get a compass and draw a two kil- two kilometer circle around. Um, the ... When we did the ... And I'll, I'll paraphrase, um, which I'm sure is making everybody over there a bit nervous. Um, but we, uh, we got ... When did the modeling for noise and dust and, um, and lighting, we got the experts before they started and said, "Have a look at this layout and tell us, how far out do you think we should go for us to check on that modeling?" And so, they ... There was that estimated ... And I think the, the chart that was up there, um, probably can't get it back up now, but, uh, it was identified as all of those houses.
Now, there may be houses that are inside this-
Commissioner Williams:
Mm.

JIM BEYER:
... so called two kilometer radius that go, "Well, why aren't we in there?" Well, the reason was, you weren't identified as being a potential, um, area that had a ... That might have been a problem. So, we, uh ... The experts said, "Have a look at these houses."

COMMISSIONER WILLIAMS:
Mm-hmm.

JIM BEYER:
We did all the modeling to look and see, are they impacted by noise, by dust, by light? Um, the reality is that the vast majority of them in the first, in the first instance were not impacted anywhere near the trigger point. However, in ... When we, when we did the first round for the EIS, we identified that the group in Kings Plains were, and that's where we said, "All right. Well, we'll need to do wi- with V-LAMP." But then when we got the feedback from, "Oh, you know, c- what can you do about the noise? What can you do about this?" And we sat down and had a look at the mine design and we changed the schedule. Um, in fact, we slowed the mine down and we, we took the shovel away, which, um, has impacts on, on a number of, uh, commercial things, but we did that. And we also, uh, changed ... Made some changes to where the ramp's located, which all sounds fascinating, but what it does do is it changes noise levels and where it comes out.

And as a result of those design changes, we actually meant that the areas that triggered that, um, V-LAMP obligation, uh, withdrew came in ... I don't know what the ... You know, shrunk, and those houses that we, that we had identified as poss- as being impacted were no longer impacted, but we decided to stick with them anyway in terms of, um, uh, basically being consistent with our, our approach on the mitigation agreements.

COMMISSIONER WILLIAMS:
Mm-hmm. So, but they originally did consider potential impacts on 88 residents, and that is the residents to the south, west, north and east of the site?

JIM BEYER:
Yeah. I think what we're seeing on that diagram there are, are all, all the, all of the groups that we, we looked at and put into our modeling to make sure that, that, you know, were they impacted to a point of a trigger, and that's, that's how we came up with that. As I said, it wasn't ... A compass wasn't drawn around to say exactly two kilometers. A lot of work was done. Uh, input was provided by the people, by the experts who do the modeling and we said to them, "All right. Which of these do you think we need to make sure ... How far out do you think we should go?" And they said, "Uh, these ones here." "What about that one there?" "No, that's on the other side of the hill."

You know, that ... I mean, that's sort of making it sound maybe a little bit more, um, kitchen mix than, than it was. But it was ... You know, these are, these are, um, important decisions that they were making, uh, and I think they made the right decisions because when they did the modeling, it was found that they, you know, they were well below the trigger points.

COMMISSIONER WILLIAMS:
Okay. Thanks, Mr. Beyer. Any-

COMMISSIONER SYKES:
No.

COMMISSIONER WILLIAMS:
... questions?

Once again, thanks very much for your time to present to staff members, Mr. Beyer.

JIM BEYER:
No, thanks for the opportunity.

COMMISSIONER WILLIAMS:
Thank you.

JIM BEYER:
And thank you for- - -

COMMISSIONER WILLIAMS:
Thanks.

JIM BEYER:
- - - the last three days.

COMMISSIONER WILLIAMS:
Thank you.

JAMES EMMETT SC:

The, um, last person to address the Commission is Clay Preshaw on behalf of the Department of Planning and Environment. I invite Mr. Preshaw to the lectern.

CLAY PRESHAW:
Good afternoon. Apologies, I've only just come in. I did plan to come earlier today, but there were some mishaps working out flights. I have not prepared a presentation, I just was asked that. I was here to answer questions that you might have and any answered your questions.

COMMISSIONER WILLIAMS:
So, Mr Preshaw, is there anything you want to say, at the beginning of, in support of old, the application or?

CLAY PRESHAW:
Yeah. Look, I think I might just make a few general comments - - -

COMMISSIONER WILLIAMS:
Sure.

CLAY PRESHAW:
- - -um, about the assessment process and about this project, um, and then I might be able to take questions from there.

Look, um, I think it's important to say that this, this project has been comprehensively assessed. It's been a whole government process has taken a long time and there's been a number of tricky issues to deal with. And, and the project itself being a Greenfield Mine is, it is a difficult one and it has presented all manner of issues that you can you, can have with a state senior project like this. So I do want to be open and transparent about the difficulties and the complexities that we faced with this assessment, and we certainly haven't made our recommendation lightly. But I do stand by our recommendation and I did think it was important for me to be here today, given I made the final sign off on the assessment report and the recommendation. And as I say, it really presented all of the potential issues that we see on on any project. And that explains why it took so long for us to get through the process. But, um, again, I feel very comfortable that we've, we've made a strong recommendation that's based on technical advice that's supported by the relevant experts within government. That's probably all I'll say as a, as an opening statement. I'm happy to take any specific questions you have.

COMMISSIONER WILLIAMS:
Okay, um, we, um, uh, did have some, some, uh, evidence yesterday or day before I think it was, uh, just in relation to, um, safety, um, in relation to access roads, um, a- around the site, um, particularly, since the, um, the proposed access to, site access to, to roads into the mine, uh, has, has been moved further down towards, uh, Pound's Lane. Um, and concerns about, um, the access on and off the site, um, like the, right hand left hand turns you might make on and off the site. They port to the overtaking lanes that exist on, on that, that length of the highway. Um, uh, we, we, we know that the last discussions we can see with the RMS was before those changes, appeared before those changes were made in terms of the, the access to, to, to the site. Uh, could

you just confirm all the [inaudible] uh, correspondence or consultations has occurred with the RMS in terms of the, the road safety aspects of the, around the mine?

CLAY PRESHAW:
Sure. And look, in terms of the specific back and forth with the agencies, I may have to take that one out and come back to you. But I understand that we have been to RMS and/or transport New South Wales. Each time, there's been a document exhibited.

COMMISSIONER WILLIAMS:
Mm-hmm.

CLAY PRESHAW:
So the EIS, the submissions report and the amendments. So I know the transport from South Wales did provide advice on the submissions support and the First Amendment report, um, with the new mine access into the site and didn't raise any concerns specifically about Pound's Lane, which I understand was raised. I think that's what you're referring to there, around the actual treatments, um, uh, at the intersection or the proposed intersection upgrades for the mine site. Um, so as far as I'm aware, and again, I can come back to you in writing if necessary. The, the advice that we have from the relevant government agency being transport at this point, um, is that it is that the, the upgrade is in accordance with the relevant guidelines, the AUSROAD treatment guidelines. And, and that's the latest that we have. But again, I can come back to you if there's a, if you think that there's a particular missing link there.

COMMISSIONER WILLIAMS:
It, it, it appears to us anyway that, uh, since that and that's an important change, uh, and, uh, obviously, we'd like to see some, what the, uh, the abuse of, of you know, in terms of roads RMS transport of New South Wales, however, in terms of, um, the, the latest proposal in terms of access to the mine.

CLAY PRESHAW:
Yeah, but my understanding is that, you know, given that the accesses from the highway and the contribution of, uh, project traffic is relatively low in the context of the highway itself. Um, a-along the way, the, the [inaudible] road agency kind of raise concerns about Pound Lane, but Pound's Lane, but I will, I will confirm that we've got that, I guess, last time advice from the agency.

COMMISSIONER WILLIAMS:
Thanks. We've also heard a lot about community consultation over the last couple of days, um, and there's been a little bit of criticism. Um, could, could you comment just on the consultation process that the Department has gone through and, and, and what's, what's been the Department's efforts to, to consult with the community?

CLAY PRESHAW:
Sure. Um, I think, as I flagged at the start, this is a tricky project, um, and it does have impacts on the community, which I think we've been very clear about in our assessment report and all along the way through reassessment process. Uh, obviously, we've done the statutory

requirements in terms of engagement, in, in terms of using documents. And we've been, I guess, rather conservative about exhibiting all the different changes that have occurred or along the road with the assessment pathway. Um, I understand that before I came back to the Department, which is about two years ago, we had met with the community on a few occasions before I came back. And since I've been back in the Department, I know that Steve O'Donoghue and some of the team have been meeting and talking over the phone regularly with key residents, including the HP, uh, community and other, other members who are concerned about the project.

So I guess it's, when it comes to these types of projects, we try to have a very open door sort of policy where we happen to talk to groups that have concerns, um, at each stage. And I feel, um, that that certainly has been the case with the way Steven has operated and the way his team has responded to requests. We also receive, I should say, a lot of correspondence in, in my branch, which is the energy and resources stays. But we've, we've received quite a lot of correspondence through ministerial and other admittance to the Department, which we've had to respond to, um, over the course of this assessment. And, and I guess that's another way that we try to engage directly with people that are affected by, by this project.

COMMISSIONER WILLIAMS:
Thank you. We've also heard a lot over the last couple of days on, um, various, uh, economic and social impacts. Um, and, uh, the, the, economic impacts presented in the assessment report has been very positive, um, and we simply can have positive economic benefit. But also, a number of, uh, adverse economic and employment, uh, consequences have also, uh, been raised as well, in terms of, uh, in fact that might be skills shortages, job shortages, competition for workforce, um, greater demand on services - - -

CLAY PRESHAW:
Mm-hmm.

COMMISSIONER WILLIAMS:
- - -um, that might be created as well. So we've been presented with a picture that, uh, yes, there may be benefits, but also, there may be costs that need to be considered as well. Could you comment on that point, please?

CLAY PRESHAW:
Yeah, so I think that that question touches on a, on a lot of things, and probably goes right to the heart of the way that we do assessments. So, um, it was interesting listening to the videos Barisan this morning, talk about what it is that our task is to do at the Department. I think in some ways, um, she reflected quite accurately about what it is. In some ways, I may, may not have agreed with her sort of assessment of what we need to do. But certainly, the, the, the task that we have under Section 4 and 5, the primary task we have in assessing a project is to balance up the social, economic and environmental impacts and benefits. And, and that is not a simple process, um, and I think videos Barisan talked about, you, you know, um, some comments from, um, [inaudible] being an intuitive synthesis kind of approach. I would take issue with that to some extent, because I do think there are a number of technical tools and technical guidelines and technical criteria that we assess projects against.

Um, when you get to the point of trying to weigh those up, I guess that is where some level of qualitative assessment or subjectivity could be brought into the mix. Um, but as much as possible, we try to keep things completely quantitative and objective. But when you talk about economics and you talk about social impacts, that is, those are areas where it does get tricky. I'll be honest about that. Um, in terms of the economic impacts, there are obviously tools that we can use that are accepted and are, they are, you know, guided by policy etc includig cost benefit analysis. But, but as, as I mentioned this morning, you know, that, that is just a tool. That is just one way of trying to measure what the economic benefits or impacts of the project are. That is not the only way that we assess the project as a whole. We do that balancing up exercise. Um, so absolutely, I agree with what you're saying, which is there are clearly some benefits and there are clearly some impacts even when you try and narrow to economics. But I think overall, um, the tools that we had at our disposal and the, and the ones that I, I, you know, referenced in relevant policy, including cost benefit analysis, have demonstrated then our role purely within an economic prison. There are overall benefits to the, to the project.

Now, when you turn to that balancing up of benefits and impacts, whether that's social or environmental, or, or, um, economic, the, the weighing up process is tricky. And the social impacts' side of things particularly important with this project, clearly. And, um, I think that given this project went through a robust social impact assessment process that actually followed a set of guidelines. That's a benefit that we have during the assessment process that we haven't had in projects that, that in particularly the Greenfield Mine projects that, that predate this one. Um, and so what would that look like, I think, when we look at social impacts is, there are certain aspects of the impacts to the community that we can measure quantitatively. Um, and those are things like air quality, noise, et cetera. And, whats demonstrated throughout our assessment is that those aspects are in accordance with government policy.

That's not to say that there won't be impacts, you know, just because a project can comply with the relevant, uh, Noise Criteria or the project noise trigger levels doesn't mean that there won't the noise. But in terms of what applying policy that we have, it does comply with those particular aspects of the impacts, social impacts. But of course, that's not the full story. And we accept that when it comes to a project, a new project in an area like this. There are residual social impacts, and I think we spent a lot of time in our report trying to draw some of that stuff out. And certainly, the SI process, um, and the SI that was provided as part of the, the IS process and our internal advice from social impact advisors was that there will be residual social impacts even if they're complying with technical criteria. And so then that, that, to draw that back to what I was saying around our overall task of weighing things out, it is difficult to take, I guess, that somewhat subjective, qualitative impact, residual social impact, putting aside the, the ones that are quantitative, and to balance it up against, you know, economic benefits and, and other benefits of the project.

Um, and, you know, I guess that, to, to bring it full circle, that's, that might be where, you know, it's achieved us the process of where it is going, this idea of intuitive synthesis. You just, at the end of the day, you do just have to stack things up against each other and in, in our assessment, um, and using all the qua- quantitative tools we can, we've, we've, I guess, come to the conclusion that the project should go ahead on balance. Um, but that's again, as I said, at the start of this, it's, it hasn't been an easy process. It is a very tricky assessment in any Greenfield mine, I

guess faces that challenge. Um, I think that addresses sort of questions you're asking, um, particularly around social and economic impact. You've got more specific questions i'm happy to answer them.

COMMISSIONER WILLIAMS:
Well, follow-on question with economic impact. We've heard a lot about the, the environmental impacts, uh, in terms of potential environmental impacts to the mine, uh, in terms of dust, noise, uh, groundwater, um, loss, um, water quality, um, contamination, pollution, so on and so forth. And the impacts that might have on the surrounding businesses, whether they be, uh, cattle, uh, horses, whatever. Um, so the extent to which you're satisfied that the potential impacts and concerns that have been identified can be addressed?

CLAY PRESHAW:
Yeah. So it's sometimes useful to sort of separate out impacts into environmental, economic and social, although they clearly overlap in a lot of ways. Uh, if we're talking about environmental impacts, alone, and, and we're tryna sort of put that in one bucket. I think where we've landed is, uh, for most, if, you know, pretty much for all like environmental impacts, there is clear policy guidance now in the contemporary assessment system around what is deemed acceptable and what's not. And there's pretty clear quantitative criteria for most of the issues that we deal with, and particularly with this project. A- and, and to reflect on, you know, when I first started doing this type of work, you know, 15 years ago, so mistakes didn't work. I think back then we didn't have clear criteria around a lot of things when it came to noise inequality, water impacts, um, biodiversity, like, most of those policies have come in over the last five to 10 years.

So the question that we have to ask ourselves in the Department when it comes purely to environmental impacts is, does the project comply with the relevant criteria and policy that we have in that space? So when it comes to noise and air quality, as I say, for the most part, this project complies in the sense that the impacts would be negligible. So for noise, it would be, you know, there are exceedences, but they're within the one to two decibels above the criteria noise trigger levels. Um, when you, when you talk about water impacts, there's, there's no exceedances, um, that don't comply with the applicant policy, for example. The biodiversity clearly, they will be clearing. And there clearly would be, uh, impacts to biodiversity, but there's a regime in place to allow for, um, offsets i- if we're satisfied that they've sufficiently avoided or minimized. And so, I guess, in terms of the environmental impacts, the conclusion withdrawal for each step along the way is, is yes, this adequately complies with the relevant policy and the relevant criteria that's been set by government. And, and, you know, as a, as a sort of seasoned public servant, that's my role. I have to just apply the policy of the day.

Now, what I would say is, it's, it's, it's pretty hard not to try and compare these projects to other projects. And, and that's, I guess, a fraud process, because every, every project is subject to, you know, question of fact and degree and the circumstances are different. But in my experience, for Greenfield mine, the environmental impacts of the project are significantly less than we have seen in other approved projects. Again, being open. Clearly, there are impacts, still, but they're in line with what we have in, in terms of government policy. And, for example, the, you know, the amount of clearing that's required for this project is, is a lot less than other examples we've seen. And we, we did accept the proponents' argument in this case that they had done a reasonable job

in avoiding as far as possible, when you're talking about a fixed resource, um, having envi- having the environmental impacts in that biodiversity space.

So that's just one example, I guess, of, of where if you were to look at the environmental impacts of this project, A, it, it complies with the relevant policy. And B, if you were to try and do some sort of, you know, back of the envelope comparison to other projects, in my view, this stacks up quite well. And, and the thing that I guess is not, uh, is not clear to the public sometimes, and really not relevant to a community that's going to be affected by an individual project, is that there are lots of other projects that don't get up, and that never make it through the assessment system. And, you know, I heard this morning that, you know, there was sort of this accusation and Department and, and government wants to just get all of the minerals out of the ground. But that- that's clearly not the case. And we see plenty of, uh, prospective projects come to us that had environmental or social impacts that we straight off with that considered to be, to be unacceptable, and, and they just don't progress in the system to this point.

COMMISSIONER WILLIAMS:
I've just got one, two more questions.

COMMISSIONER SYKES:
Oh, do you want to keep going? I think I might have one more question.

COMMISSIONER WILLIAMS:
Just one final question.

COMMISSIONER SYKES:
I've got one question, but you can.

COMMISSIONER WILLIAMS:
I'll just finish mine quick.

COMMISSIONER SYKES:
(laughs)

COMMISSIONER WILLIAMS:
Um, while I remember. Um, we also have heard some, um, differing evidence and submissions and comments in relation to, um, Aboriginal cultural heritage, um, and, uh, particularly Orange Aboriginal Land Council, and then also, the, the traditional, uh, owners and elders, um, of, of, of this area of, of the... Um, uh, are you happy with the level of consultation, and who have you consulted with in terms of the local Aboriginal community?

CLAY PRESHAW:
Yeah, look, I might answer that in, in two ways. Uh, firstly, in terms of differing evidence, that probably I would say is a theme of this project and difficult projects like this that reasonable people disagree on, on important issues. And that's, yeah, I guess, a large part of what we're trying to do in that Department in preparing our assessment of trying to unravel that and come to some reasonable conclusion. So that's not unusual. The second way that I would answer that in

terms of more directly about Aboriginal Cultural Heritage, ACH [inaudible] that's probably one area where disagreement is the most common, and in some ways, is inherently part of the process. Um, now, I can't... Uh, I'm absolutely no expert in Aboriginal Culture Heritage, and that's where we need to rely on the relevant experts within government.

And so what we've been told through the process is that the engagement that was undertaken in terms of agriculture heritage was sufficient and was in, I think, in many cases, best practice across the industry. And I guess, we, we need to take that advice from the experts. And we can't question that unless, um, there's a really strong reason to do so. But I would say, and this is, again, reflecting on some of the things that I earlier said, earlier said. There are some parts of the assessment that are very quantitative, and they're fixed numbers, you know, air quality, noise, water. There's specific volumes of things that you can measure. Aboriginal Cultural Heritage, and in fact, all heritage assessments, as I'm sure the Commission is aware from sort of recent decisions is probably not one of those highly quantitative areas of EIA, Environmental Impact Assessment generally. And so is, I guess, one of those areas where qualitative evidence comes into play. And that, you, you know, fundamentally is gonna bring some level of disagreement between people who have a different perspective on things. But to answer your question directly, I'm confident that the engagement we've undertaken was sufficient, um, and that's what we've been told by the experts within government.

COMMISSIONER WILLIAMS:
Thank you.

COMMISSIONER SYKES:
Thanks, Clay, I just had one, uh, question. Um, there has been some, um, comments made throughout the submissions over the last, um, few days that has made reference to the New South Wales minerals' strategy. Um, and, and also, the New South Wales critical minerals and high-tech metal strategy. Um, and, and also comments made that the McPhillamys project, being a gold, probably a gold project doesn't necessarily fit within the critical minerals and high-tech metals' strategy. Um, it, it would be beneficial if, if you could just explain the relationship between the two, um, policy or strategies or frameworks. And, and, um, maybe provide some guidance around the significance of the project, um, in terms of the commodity type, and why it doesn't fit within the critical minerals' strategy, but it does fit within the minerals' strategy framework.

CLAY PRESHAW:
Sure. Um, it's probably three things I'd say in relation to that. And, and I'll preface this one by saying, I'd like to seek some more information from the relevant [inaudible] government, which has made that the mineral exploration to the site's design division. But yes, there's three things I'd say. Firstly, gold is actually mentioned in that strategy. Um, i- it's mentioned, I guess, in relation to its co-location with other minerals that are yet to be developed, or kind of in the, in the infancy of being developed in New South Wales. So I do think that, um, there's a question as to whether gold is, you know, def- defined as one of the critical minerals within the parameters of that strategy, uh, and I don't know the answer to that exactly. I, I would think that the reason some of the other critical minerals have been listed is the same as gold, at least, in some of the uses of gold, but I'll have, I have to seek some advice on that.

But it is mentioned, it is relevant in some ways to that strategy in particular. But probably more importantly, the second thing I'd say is that that's not the only policy around minerals in New South Wales. So you know, you can kind of read too much into, we may have mentioned that in our report somewhere, but it's not the only policy around minerals in New South Wales. And, um, I was just having a quick look on, on, on the way up. There's, there's maps for all the different types of minerals in New South Wales. It may well be that there isn't a "gold, gold strategy" because it is already such a well-developed mineral in New South Wales. And I guess, there, there may even be an acceptance that gold is, of course, an important mineral to extract because that's historically been the case. Um, so for example, you could go online, you can find a map that look, that the New South Wales Government has prepared that identifies future deposits of gold, and is essentially encouraging industry to go and explore and, and encouraging to develop where possible. And of course, these resources identified in there. And as we've said in our report, is one of the most important resources in New South Wales.

The final thing I'd say in relation to that is, and this again, we'd need to check with me, but all of the advice we provided that we've got from [NEC] through the process has been, this is an important project. This is an important resource. Whether or not it's important, specifically because of a a particular document that they prepared around critical minerals, or whether it's just important because it is, and it's gold, and it will bring in significant royalties, et cetera. I'm not exactly sure. But very clearly, in all of their advice along the way, it has been, this is a very important resource for New South Wales. So, again, I'll come... I can come back to you with probably a bit more clarity around the high-tech metals and the critical minerals. Some of these words do get bandied about in politics. And I'm often asked, like, what's happening with high-tech metals? And it's interesting, because I'm not exactly sure what, which ones are in and which ones are out. But, but it is... Look, I think it's clearly established in, in the mineral space within government and gold is and important resource to extract.

Commissioner Sykes:
Mm-hmm. Okay, thanks.

COMMISSIONER WILLIAMS:
Uh, I think that's all the questions, Mr. Preshaw. So I thank you very much for coming out to Blayney to, to talk to us to the panel this afternoon. We appreciate your attendance. Thank you.

CLAY PRESHAW:
Thank you.

COMMISSIONER WILLIAMS:
Thank you. Can I just before I formally conclude today's and the three-day hearing, um, if you feel as members of the local community that, uh, another sort of tendency that was any matter, uh, that you, you want to raise or any information you think the Commission should have asked or, or queried more, more closely, um, please include that in, in your written submissions, um, if feel there's any gaps at all, that still need to be filled. Um, and I extend that invitation to, to everybody. Um, that, that will certainly help us a great deal. Thank you.

Um, well, thank you. Um, that brings us to the end of this public hearing into the Gold Project. Uh, thank you to everyone who has participated in this important process. Um, Commissioners Clay Sykes and, and Neil Menzies and, uh, and I have all appreciated your, your input in these three days. Uh, just a reminder that it's not too late to have your say in this application, uh, as we've said many times. Uh, you can submit your comments using the make a submission portal via our website. And I'll repeat again that the deadline for written submissions is, uh, 5 PM Australian Eastern Daylight Time on Wednesday 15th of February 2023.

Uh, in the interest of others and transparency, we making a full transcript of this public hearing available on our website in the next few days. At the time of determination, the Commission will publish its statement of reasons for decision which will outline how the panel took the community's views into consideration as part of its decision-making process.

Uh, finally, a quick thank you fellow Commissioners Clay Sykes and Professor Neil Menzies, and also, to out Councilor assisting, James Emmett, Sydney Council. Thank you, also, for watching. Uh, from all of us here at the Commission, enjoy the rest of your day.

Thank you, everyone.

END OF TRANSCRIPT