



PROF MACKAY: But good afternoon and welcome.

UNIDENTIFIED MALE: Thank you.

5 PROF MACKAY: Before we begin, I would like to acknowledge the traditional  
owners of the land on which we meet and pay my respects to their Elders past,  
present and emerging. I welcome you to this meeting today to discuss the  
application for the Tahmoor South Coal Project, State Significant Development  
8445. My name is Professor Richard Mackay, and with me is my fellow  
10 commissioner Professor Chris Fell AO, and we form the panel that has been  
appointed to determine this application. Joining us from the office of the  
Independent Planning Commission, Lindsey Blecher and Kate Moore, and we may  
find that we have another officer from the commission, Steve Barry, observed part of  
the meeting as well.

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In the interests of openness and transparency, and to ensure the full capture of  
information, today's meeting is being recorded, and a complete transcript will be  
produced and made available on the commission's website, so, to help with that  
process, I would ask that anyone who speaks just says their name immediately before  
20 they speak, please, to make that transcription process easy. The meeting is one part  
of the commission's decision-making process. It is taking place at the preliminary  
stage of the process and will form one of several sources of information upon which  
the commission will base its decision.

25 The meeting has been requested by the commission panel to enable the panel  
members to ask questions and to clarify aspects of the application; it's not an  
opportunity for any party to make a presentation nor to make submissions to the  
panel, although submissions are very welcome but through a separate process.  
Meeting participants are asked to keep any introductory remarks brief and to respond  
30 directly to the commissioners' questions. And, in addition to the pre-advised themes,  
the commissioners may ask additional questions of attendees, and if you're asked a  
question and are not in a position to answer, please feel free to take the question on  
notice and to provide any additional information in writing, which the commission  
will be put up on its website.

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So, to repeat my request, to ensure the accuracy of the transcript, I'd be grateful if all  
participants today could introduce themselves before speaking and every time they  
do speak, and could we all please ensure that we just don't speak over the top of each  
other. And with that, could I please invite, firstly, colleagues from the EPA to  
40 introduce themselves.

MR DOVE: Sure. My name is William Dove, and I provide front-line regulatory  
services for the Environmental Protection Authority based in Wollongong, and one  
of my primary responsibilities has been for a number of years the front-line  
45 regulation of coal mines in the Southern Coalfields.

PROF MACKAY: Thank you, Mr Dove.

MR COULDRIDGE: Yes. My name's Andrew Couldridge. I work for William, and I deal with licensing of the coal mines in the Southern Coalfields for EPA.

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PROF MACKAY: Thank you. And it's Richard Mackay. Could I also ask the Department of Planning, Industry and Environment to – its representatives to introduce themselves.

10 MR YOUNG: It's Mike Young here. I'm the executive director of energy, industry and compliance at the department.

MR O'DONOGHUE: And Steve O'Donoghue here. I'm a director of resource assessments at the department as well.

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MS WILSON: And Sara Wilson, consultant assessment officer with the department.

PROF MACKAY: It's Richard Mackay again. Thank you, everyone. And so what we might do – and we're very appreciative of the time and conscious of the time that such a meeting takes, but it's of great assistance to the commission. Firstly, I'll provide an opportunity for EPA to make any introductory remarks that you may wish to make, then the commissioners have a number of specific questions, the content of which has generally been pre-advised, and then there'll be an opportunity I'll extend to all parties present if they've got any final remarks before the meeting concludes. So could I invite Mr Dove and/or Mr Couldridge to make any introductory remarks on behalf of the EPA, please.

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MR DOVE: Thank you. William Dove, Environmental Protection Authority. I might just give a very, I guess, quick overview, if I could, about the regulatory challenges that we've faced with Tahmoor Colliery over the last five years, and I'd also provide some information about EPA and greenhouse gas because I notice that a couple of the dot points that you would like information about relate particularly to scope 1, greenhouse gas regulation.

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35 In terms of Tahmoor Colliery, the main issues for us over the last five, perhaps 10 years has been a low-frequency noise causing problems and concerns for the local community, particularly in Olive Lane. This was coming from the washery, and it was assessed over many years, and there was a number of mitigation works installed to try and deal with that. It couldn't – it wasn't possible to get it to a level that it complied with assessments under the Industrial Noise Policy, and it was agreed that if there was ever a redevelopment of the mine, that would be the appropriate time to deal with those issues. And, interestingly enough, the people who were most concerned about that noise at the time, I understand, have since left Olive Lane.

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45 The other main – the other regulatory challenge, if I can call it that, in relation to Tahmoor Colliery relates to water discharges. And this has particularly triggered community interest over the last, I think, 12 months, in particular, but there has been

a growing interest. In relation to that, we've had a long program going back to the early 2000s whereby there have been a large number of ..... production parameters added to the licence dealing with site water, mine water and other water discharges, and I can go into more detail if the IPC would like.

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I guess that the third challenge has probably been – relates to the vagaries of the resource industry and mine changes and mines closing and staying opened and so forth. I mean, I was just looking this morning, and it appears – I believe that since the early 2000s there's been six different owners of Tahmoor Colliery. As I'm sure the commission knows, in 2016, Glencore decided to close it; they then decided to keep it open. And it was sold in '18 to GFG Alliance. I mean, this change of ownership and lack of certainty provides us with considerable challenges in our regulation of the premises, particularly when the lead time for some of the programs and the cost, in particular, in terms of water treatment, is quite considerable.

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I might, if I could, just talk – and I'll read, if I could, some information to the commission about greenhouse gas and the EPA and where we sit, and then – and however the commission wishes to then deal with the subsequent dot point questions about specific issues relating to greenhouse gas and the Tahmoor South Project. The EPA contributes to the New South Wales Government's climate change policy framework goals of reducing greenhouse gas emissions and increasing resilience to climate change, including the commitments to achieve net zero greenhouse gas emissions by 2050. This is done through specific programs under the Net Zero Plan, which is many waste-related, reporting on the delivery of the Net Zero Plan through the New South Wales State of Environment Report, and as a co-benefit of ..... industry for other reasons, but which is basically local and regionally .....

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UNIDENTIFIED MALE: Yes.

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MR DOVE: Currently, we do not routinely impose greenhouse gas-related requirements on our licences, such as monitoring and reporting; however, we are encouraging our major industry sectors to help the New South Wales Government achieve net zero emissions by 2050 by proactively reducing their greenhouse gas emissions and planning for the risks of climate change. The EPA spoke with the Minerals Council in November 2020, and it's requested information from the council about what that sector is doing to reduce emissions. And, look, while the EPA does have pre-existing policy levers it could use to directly regulate greenhouse gas, it's a significant undertaking and needs to be carefully considered as to how it fits within the New South Wales Government's climate change policy framework and does not duplicate or undermine the actions being taken by government.

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UNIDENTIFIED MALE: Yes.

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MR DOVE: The EPA's not the lead on climate change framework, and we provide advice to the IPC on the relevant policy and science areas within DPIE. And, generally, the EPA does not assess greenhouse gas and SSD documents. And, again, we can provide relevant contacts within DPIE. Potentially, yes, climate science if

the commission wishes to get more detail about those specifics. So Andrew, was there anything in particular you would like to say in terms of our opening remarks?

5 MR COULDRIDGE: It's Andrew Couldridge. No, I can't add to that, thank you.

MR DOVE: Okay. Thank you.

PROF MACKAY: Thank you, Mr Dove, for those opening remarks and, particularly, for the overview about the EPAs limited – the metes and bounds of the EPAs engagement with greenhouse gas. I think what it's probably best now is to –  
10 for the commissioners to perhaps move to some questions, some matters relating to air/water permeate. I think arising from what you've said about noise, perhaps an additional question there and then we might come back to the greenhouse gas question at the end, and thank you for the offer of the further referrals. So without  
15 further ado, I might invite Commissioner Fell to ask some questions.

PROF FELL: Thank you very much. Chris Fell speaking. My first question's about the criteria for air quality, and should the project be approved, we have draft conditions, and one of these is, in fact, about air quality, and both the PM10 and  
20 PM2.5 particle counts, if you like. And I'm very conscious that the EPA is the implementation authority in New South Wales for national environmental protection measures NEPM. And in fact, the figures that are quoted, if you like, in the draft conditions are the NEPM figures, as, I might say, is totally appropriate. But there are two points about them that I'm a little puzzled about. One is the yearly average is for  
25 both the new plant and background together, whereas the 24-hour average for both PM2 and PM2.5 is for the new plant only.

I'm kind of puzzled about how you measure the 24-hour figures to get the average in a real situation. I can understand totally why you might set up a system like that to  
30 assess a new development, but in fact, in practice, does not the measurement involve what is coming down as particles and what people are subject to? And therefore, would it not be appropriate to actually have 24-hour measurements as background plus the new development once it's functioning?

35 MR DOVE: Look, the – I guess the short answer is yes, and - - -

PROF FELL: .....

MR DOVE: - - - I think – sorry, I missed that. Sorry, if I could just elaborate. I  
40 think there's probably a slight difference in approach between planning and EPA in this regard and I think the way – the sensible way that we think this should be conditioned and regulated is as you describe, and that the NEPM health levels are defined, which include existing – I'll call it background levels of particle pollutants, plus anything that is generated from the new development, the expansion of the  
45 mine. These can be measured in real-time, and I think – and this is where we agree totally with planning – they're used to inform a trigger-action response plan. And so how that might work is that as levels were approaching – or there would be triggers

set and they could be colour-coded based on how close they are to the NEPM levels. And when those triggers are reached, there's an action, and in the case of the coal mine, they were getting to within whatever it is, within 10 per cent or 20 per cent of the NEPM level. The action might be they review wind data, they review what  
5 they're doing onsite, they review any other monitoring and they attempt to make - - -

PROF FELL: Sorry, I think we've lost you.

10 MR DOVE: ..... modify their operations, cease their operations.

PROF MACKAY: Mr Dove, sorry, you just dropped out for a few minutes. So you were just saying that there was a trigger, you know, at, say, 90 per cent of the NEPM level and then – and we missed everything else since.

15 MR DOVE: You guys have all frozen too, so maybe we're going to be in a period of instability. Yes. Whether trigger levels are set at a number of levels below the NEPM level, and those trigger levels will – each will have an action, and the action would be the coal mine working out and maybe doing some preliminary  
20 investigations as to whether they might be contributing to those elevated levels of particles. That would be quite simple in the first instance in terms of looking at wind direction, wind speed, wind strength and everything else in terms of where the elevated levels are.

25 They could then look at the operations that they're undertaking, whether there's trains coming in, leaving, coal handling, what's happening onsite. And then, based on those two steps, the triggers then the actions, if it's likely that the elevated levels are due to them, there's a response, and that response can be anything from, I guess, in more extreme cases, shutting down operations or modifying operations. And there might be a whole lot of other things they could do as well.

30 So I think – and that's where EPA and planning are totally aligned in terms of how we use that data, but I guess our view is that it's quite difficult to determine, if you like, if you've got ambient air monitoring data, the contribution from, say, a coal mine and other ambient sources.

35 PROF FELL: Thank you.

40 MR YOUNG: Can I just – Professor Fell, I wouldn't mind just sort of clarifying a number of points there that I think would be of benefit to the commission. Firstly, I'd like to say that the mine is an underground mine, so, obviously, very different to, say, an open-cut mine in terms of nature and extent of impacts. My understanding is that the predictions all show compliance with the relevant criteria; is that right, Steve? Is that as I understand it?

45 MR O'DONOGHUE: From an increment project alone point of view, it doesn't exceed 50. There is a number of houses where, if you look at it from a cumulative impact point of view, you can get an additional five days ..... exceed 50. The closest

receptor – and this isn't uncommon. The closest receptor where it's predicted to have the maximum impact is also the one receiver that has acquisition rights for noise. So in that – in this instance, because of the proximity of the receptor, there's – there are acquisition rights that are afforded to that receptor anyway.

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MR YOUNG: And the criteria that we've used are consistent with the government policy on the voluntary land and acquisition.

MR O'DONOGHUE: That's correct, yes. That's correct.

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MR YOUNG: Sorry, I'm not saying our name, sorry. It's Mike Young speaking and Steve O'Donoghue as well. I apologise. So the criteria we've used are in accordance with endorsed government policy on the voluntary land acquisition mitigation policy and reflect the difficulties in determining the source of short-term dust emissions and, indeed, recognising that background levels of short-term dust emissions can be affected by other things in the environment such as bushfires from time to time, etcetera. So I'm not disagreeing with what Mr Dove has said or the EPA is saying, but just putting it in context in this situation and from a policy perspective as well. I'd also ask whether the EPL for the site includes dust criteria at this stage.

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MR DOVE: Look, I've just got the licence in front of me now. And there is – no, there's no limits. I mean, I will say – sorry – William Dove responding. There's no dust or air limits on the licence currently.

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PROF FELL: Thank you both for those very helpful comments. I guess the residual worry I have is once the plant is up and running, we measure a figure, and that figure is what you actually have a TARP on and take action on. To unravel into background and new plant because extremely new difficult, if you follow me.

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MR DOVE: Yes.

PROF FELL: And I think we've confirmed the difficulty that I've been wrestling with and maybe we have to talk more about how we put the a's and b's on that particular condition.

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MR YOUNG: Well, as I said, the conditions that we've recommended are consistent with government policy that's been endorsed and gone through a significant review process, including consultation with the EPA. Secondly, I would say that the criteria there are dust criteria that assessment goals are not necessarily ambient goals that the EPA sets for the assessment of industrial project, and the like. They're not necessarily hard and fast criteria that necessarily are imposed through licences, which is – and I understand your question, Professor Fell, I just think it's important to clarify this - - -

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PROF FELL: Well, thank you - - -

MR YOUNG: - - - which is why I asked the question that it's not on the licence because of those difficulties. And, secondly, the more important thing to measure and to manage is the annual average, which is where the potential for chronic health impacts and other impacts can occur; that's been shown in the literature and the science and that's why, in particular, the annual average, there's difficulties in.  
5 What's more, you can provide that with greater certainty as to what the overall impacts are on receivers and to be able to determine the potential contributions of the mine.

10 PROF FELL: I understand – Chris Fell speaking. I understand exactly what you're saying, Mike, but I believe asthmatics and others are affected by what happens on the short term. So it is a small point. We can discuss this offline - - -

MR YOUNG: Sure.  
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PROF FELL: So that we have some consistent condition. And maybe we have to actually explain in the condition why it's set up the way it is.

MR DOVE: William – sorry, Steve. William Dove here. Look, it might help the Commission to know about a situation in Wollongong where there's a large area of stockpiled materials. It's very close to residential areas and the regulatory regime that we have in place there is – I will call them an airfield real-time measurements. So they have dust tracks. They're called dust track devices that provide real-time data at the points of the compass basically. And so – and they inform a TARP. So  
20 this is something, I guess, that provides resolution to the operator that the wind is from the north and real-time monitor on the south, which is close to the boundary of this premises, is elevated. Not all of that particulates will be coming from the activity. We understand that. However, it provides data – reasonably objective data – which then can inform, you know, again, that TARP process.  
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30 So maybe, Mike, in terms of the Tahmoor Colliery, they've got, I guess, the source – the main source – of dust mesh and I suspect would be from the stockpile area and the backend of the CCHHP and train loading. It might be possible that they could have quite targeted real time monitoring in the near field, close and to the – where  
35 those activities are being undertaken, which could then be used to inform whatever response mechanism is decided upon. And that might go somewhere towards addressing the concerns, Professor Fell, that you've suggested.

MR YOUNG: And, certainly, William, I didn't finish. I think Steve was about to talk to the fact that I think we've recommended exactly something very much along those lines in the condition. Steve, is that right?  
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MR O'DONOGHUE: Look, Commissioner, I was just going to just discuss how the conditions work together. So in terms of the – there's the condition B11, which with the air quality criteria. And, again, that comes down to applying all reasonable and feasible avoidance and mitigation measures. So it is tied into – you know, it's not a hard and fast limit, but it is tied into, you know, applying, you know, best practice  
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measures, you know, for dust minimisation. So in conjunction with that, there's the air quality operating conditions, which puts an onus on the applicant, you know, to take all reasonable and feasible steps to minimise dust emissions from the site, you know, from all the sources, like William was talking about. And also there's a  
5 requirement for the air quality management plan, which, again, brings it back to, you know, putting in trigger action response plans and what practices they're going to do to minimise emissions. So part of that, as William outlined, a lot of the mining sites will have dust trackers as well as TEOMs around a site. They'll be monitoring dust, you know, dust emissions and, if there's spikes - - -

10 MR YOUNG: And if we – Steve, it's Mike Young here. Have we recommended real-time dust monitoring or we've left that open to the preparation of the monitoring plan at this stage?

15 MR O'DONOGHUE: We do have in there – just let me see.

MS WILSON: I will have a look. It has been recommended.

MR O'DONOGHUE: Yes.  
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MR YOUNG: It has. Yes.

MS WILSON: Yes.

25 MR YOUNG: Yes. So exactly - - -

MS WILSON: .....

MR YOUNG: - - - what William is proposing is, I guess, what we'd envisage in the  
30 monitoring program once it was set up.

PROF FELL: If we, in fact, agree on that, that will resolve the problem. And thank you very much for the very useful input from both yourself, Mike and Steve and William. That has clarified the problem. I do have one other – and that is this, I  
35 think – yes: it's to do with the water improvement program. And I realise that's not part of this current assessment, but will be quite useful for us to have some feeling for that. I understand the EPA has been working with the Tahmoor – North Tahmoor mines to actually improve the quality of water that is dropped into the local EPL. And I'm just wondering if we have a feel when this new plant is put in place,  
40 whether in fact the quality of the water will meet the ANZECC guidelines for disposal, if you like, to a freshwater environment?

MR DOVE: Look, I might – William Dove here. I might just give a little bit of an overview, if I could, and then Andrew has the technical knowledge in terms of  
45 ANZG and also ANZECC and the limits that we attached. Look, I guess, by way of context – and apologies if the Commissioner is aware of this – there's been a very long and I would say torturous history in terms of trying to resolve the water quality

issues at Tahmoor Colliery. And it goes back to the early 2000s. And they actually did install and build a plant that was incredibly sophisticated to treat the mine water and get it to a standard that was appropriate for discharge. And this plant was – it didn't produce any waste stream. The solids that came out of it went back onto the coal stockpile, so it was just almost like the holy grail and it worked very well, but only for a week unfortunately, and then there was problems associated with that. This was then compounded by various ownership changes and other factors in terms of the mine.

10 But what we have done is added a new pollution reduction program to the mine which directs that they achieve defined water quality limits for the discharge into Tea Tree Hollow and into the Bargo by a defined timeline. And that, in terms of the limits, they are, we consider, appropriate for the receiving environment and making reference to ANZECC criteria. And we can certainly go into more detail if the  
15 Commission wishes. There's been a number of programs at Tahmoor over the years. They had a large number of discharge points and ways were all modified and they have one discharge point now from the mine and a couple of overflow discharge points. So in terms of surface water from the emplacement and the pit top area, they have done some improvements. They've also installed a water recycling plant,  
20 which allows them to treat water for reuse underground, and that was under the terms of a PRP, and that has been quite successful.

But the big issue that – the very important issue for the community and, I think, everyone is resolving the issue of the discharge of mine water into the Bargo river, and that's the PRP that we – or the special condition, at least, which we have added to the licence. And following the completion of that, they will do a biological assessment on the receiving waters to determine or to check or to confirm that the limits that have been added to the licence are, in fact, appropriate for that receiving environment.

30 PROF FELL: Now, that is a very helpful comment. Chris Fell speaking. I raise the issue simply because I note in the water studies that they do have an excess water problem, so they'll be needing to actually discharge water, and I now understand where we're going with that. Thank you very much.

35 MR DOVE: .....

PROF FELL: By the way, with the reverse osmosis treatment, they end up with a concentrate stream, and I wonder where that is proposed to be disposed of? I mean, obviously, it is quite concentrated.

45 MR DOVE: Look, yes. It's William Dove here again, and this is the – you've identified the constraints of reverse osmosis. It produces a brine stream, a large – quite a large volume of brine often, and that needs to be managed. There's one reverse osmosis plant operating currently in the Southern Coalfields, and that's operating at the South32 mine, Appin West, and that plant has been there for quite a while. The brine stream from that plant is put into road tankers and carted down to

Marley Place, Unanderra; it is then discharged by a licensed discharged plate – point into Allans Creek, which discharges into Port Kembla Harbour.

5 In terms of what happens with the brine stream from Tahmoor, there is not a resolution on that issue at the moment. They have done preliminary investigations. They have been to Sydney Water at the Coniston plant to see whether or not it could be discharged via one of the pipelines at Sydney Water's plant; the answer was no. They had been, I think, and looked at whether or not they could utilise ..... other infrastructure in Port Kembla, and that process is continuing, and it will – I understand, Steve – and please correct me if I'm wrong – it'll go through a development consent process to assess - - -

MR O'DONOGHUE: .....

15 MR DOVE: Yes.

PROF FELL: Look, that's a helpful overview, which ..... in understanding, well, your water problem. I mean - - -

20 MR DOVE: Look, just – sorry.

PROF FELL: That's all right.

25 MR DOVE: William Dove here again, and, look, I don't want to take up the commission's time, but the community and the Bargo community is rightly concerned about the quality of the water and the impacts from the Tahmoor discharge, and a new concern has raised just in the last six months from the Wollongong community about the brine stream and the elevated metals and everything that's just being discharged into their Port Kembla Harbour, so it's an interesting point for us. I mean, we're trying to resolve issues on the sandstone geology in the Southern Coalfields, and we're, in the community's eyes, creating another problem for them and the Port Kembla Harbour, but - - -

35 PROF FELL: Thank you very much.

MR DOVE: - - - just by way of context.

40 MR O'DONOGHUE: Commissioner, just Steve here, just to add, certainly, we'd have to see the detail of – you know, as part of the – my understanding is, as part of the special condition in the EPL, there's a requirement to prepare a, you know, brine disposal strategy, and I guess we'd see then what the role of the department is in terms of any, you know, approval pathway for that. Just the other thing I wanted to add, just in terms of how the consent links into the EPL, we do have a condition B29 in our consent that doesn't allow the commencement of second workings at – for 45 Tahmoor South until the commissioner – you know, the water treatment plan required under the EPL, so there is a direct link.

PROF FELL: Yes.

MR O'DONOGHUE: No. So there is a constraint on them commencing any developments of secondary workings until that's done.

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PROF FELL: No, that's very sensible.

PROF MACKAY: Thank you. It's Richard Mackay here. Thank you all. That's helpful and informative. Professor Fell, can I just check whether you want to ask about the storage of mine water as well on the – in the Tahmoor North mine?

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PROF FELL: Look, I think there's still an issue underdevelopment. There's not much served at the moment by asking this question, and it will be controlled through a different approval process, not ours, but it's simply worth knowing what the general ideas for the future are. Thank you.

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PROF MACKAY: Thank you. Richard Mackay again. Could I just ask quickly about the noise receivers. And we've had the opportunity to travel down the laneway, Olive Lane, yesterday and see the receivers that are identified as still exceeding trigger levels after attenuation. So the – obviously, we're mindful of the attenuation opportunities. We are aware of the department's conclusion that they should be accelerated, but we are turning our minds to the fact that, even if that happens, there are a number of receivers who are still above the trigger thresholds, and I'd be very grateful if our EPA colleagues could make some brief commentary on that and approaches to addressing that issue.

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MR DOVE: William Dove here again. When the noise issues, I guess, were at their height, the residents – you may have seen the house when you went down Olive Lane. If you're going down Olive Lane, it's at the very end on the right-hand side. It was – I suppose I'd describe it as a Queenslander. It was on piles, and it was elevated above the ground and – but the people who lived in this house were particularly impacted by noise from the colliery, and - - -

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UNIDENTIFIED FEMALE: Yes.

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MR DOVE: - - - I think it may be that the noise was propagated up through the floor or there was various compounding factors that created, I guess, more of a problem for them than the other residents because, even though there's a group of people living in quite close proximity, we only ever had noise complaints from the resident at that one house. Yes. Look, I guess I would just confirm our position that – and there has been quite a lot of discussion with the proponent and Planning and ourselves that this is the time when they can resolve those low-frequency noise issues which are being produced by the CHHP, the coal handling and preparation plant. Andrew, you – do you have any particular comments that might be able to help the commission?

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MR COULDRIDGE: Not – sorry, Andrew Couldridge. Not really. I mean, in terms of – it’s been a little bit unfortunate in that the process of application has taken so long. There have been new noise guidelines introduced, the Noise Policy for Industry, and so I guess the noise assessment levels changed in relation to VLAMP  
5 in that period. But, I think, as a – we both, us and Planning, agreed to adopt the new guidelines, which does mean, I suppose, a change in the mitigation for certain houses, in particular, on Olive Lane.

10 So the people who were originally affected at the end probably wouldn’t get as – you know, as much mitigation as they would have done previously, but, apart from that, I guess we’re hoping that the general noise reduction that’s proposed to be achieved will actually be achieved. It’s very difficult to reduce low-frequency noise, even with cladding on washeries, so I suppose – I think there are some .....

15 PROF MACKAY: Mr Couldridge, I don’t – can you hear me? I don’t know if someone who’s monitoring is playing a game, but you’re coming through at a very low frequency and we can’t understand you.

MR COULDRIDGE: All right.  
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PROF MACKAY: That’s better. Would you mind just repeating the last couple of sentences, please.

MR COULDRIDGE: I said we – it’s – I suppose, my general comment was that it’s  
25 difficult to achieve reductions in low-frequency noise, and we hope that they will meet what they proposed.

PROF MACKAY: Yes.

30 MR COULDRIDGE: If not, I guess there should be mechanisms to – I’m sorry, I lost my screen now. There should be mechanisms to come back and see if additional mitigation measures can be offered to people if those levels aren’t achieved.

PROF MACKAY: Okay. That’s helpful. Thank you. It’s Richard Mackay here.  
35 Thank you. That’s helpful.

MR O’DONOGHUE: Commissioner, could I - - -

MR YOUNG: Yes, Steve – if Steve could just add – because I think we’ve  
40 anticipated some of these issues in our condition as - - -

PROF MACKAY: You have, yes.

MR O’DONOGHUE: I just really wanted to add that, I guess, the – under the noise  
45 policy for industry, I guess the first thing is that how you calculate low-frequency noise has changed, so there has been changes since the industrial noise policy in terms of determining what’s low-frequency. The other thing, I guess, in terms of the

limits we've set, you know, the limits do include – if there is a penalty for low-frequency noise, they are added, so ..... is required to comply with the additional low-frequency noise penalty, whether that's, you know, two-decibel inclusion or five, but they'd need to do the proper analysis on that when they're doing the noise  
5 monitoring to see whether they need to include a low-frequency penalty. But certainly, their predictions do include that any low-frequency component is already included in their predictions.

10 So probably the other thing to say is that, I guess, with the mitigation that they're proposing, there has been a substantial reduction in – sort of in our table 9, and I think you've got the info, but there's – compared to what's there at the moment, there are substantial reductions in, you know, both people who can get mitigation rights and acquisition rights. So, you know, it's 47 residences with mitigation rights and one with acquisition compared to 106 – 100 mitigation and six under the current  
15 sort of scenario where there's been a lot of complaints.

And certainly, again, we have – in conjunction with the noise limits, there's the operating conditions about minimising noise. There's the noise measurement plan, including real-time monitoring to be undertaken and compliance monitoring to  
20 demonstrate they're complying with the limits. And there is also, you know, acquisition rights afforded based on monitoring, you know, and independent reviews depending on compliance. But certainly, we'd be expecting that they – you know, all reasonable efforts are taken to comply with the noise limits to demonstrate, you know, they can meet it.

25 PROF MACKAY: It's Richard Mackay here. Thank you. Sorry, Mr Young, did you want to comment again?

30 MR YOUNG: No, that's fine, Commissioner. I was – the only comment I was just going to make – it's Mike Young here – was that, yes, we've certainly – we're very aware of the issues that the EPA has raised in terms of the historical concerns and impacts around noise, including low-frequency noise, and whilst we certainly understand the new application would, I guess, continue some of those noise impacts, we do think that the measures and the analysis of that and the additional mitigation  
35 and the monitoring and so forth means that, actually, overall, there's an opportunity to use this process to regulate those impacts in accordance with the contemporary guidelines and more strictly and arguably get a better outcome than is currently the case for receivers, noting that, of course, you are talking about prolonging the operations, obviously, if this is approved, yes.

40 PROF MACKAY: It's Richard Mackay. Thank you for that. I just have one group of questions and they are about greenhouse gas, and I think that in your preliminary remarks, Mr Dove, you've probably already framed the answer to this, but the commission is very interested in advice about potential monitoring and managing  
45 mechanisms, especially in relation to the fugitive greenhouse gases. I mean, by any measure, this is a gassy mine, and there's lot of intent, there's lots of expressions of commitment, but in terms of framing up rules through consent or through operating

plans, are there precedents for setting monitoring and enforcing thresholds? You know, particularly the scope 1 emission, fugitive emissions.

5 MR DOVE: So – William Dove here again – can I just clarify; when the commission is referring to fugitive emissions, are these emissions from vent shafts – ventilation shafts and I guess what I would call point sources, or more – sorry, or more from maybe surface expression of subsidence cracking or something like that? Sorry, I just want to be really clear.

10 PROF MACKAY: Well, I think we're potentially drawn to the vent shafts and we're conscious - - -

MR DOVE: Okay.

15 PROF MACKAY: - - - that for this mine that, you know, there is a large amount of methane predicted to escape that is not going to be either harvested for power generation or flared. I mean – and indeed, there's a residual, you know, that if it's not harvested and not – and cannot be flared, there's that escaping as well. So whether it be from the vent shaft or the residual from the harvest process.

20 MR DOVE: Yes. What – William Dove here. Maybe it might not answer your question but might provide some context, I guess. A number of years ago, a South32 mine called Westcliff at the time installed the plant that was called WestVAM and what it was was quite a large and sophisticated bit of equipment which took  
25 ventilation air – so this is air with low levels of methane – and used it to generate electricity. I'm not exactly sure of how it was funded, but I believe that there was quite a large proportion of Commonwealth and also state money which went into it, and this plant operated for quite some time.

30 I think it was – I'm not sure if it was commercial. It was certainly functional; I think it did what it was supposed to do, but it's not operating any longer. I think it was – perhaps the technology and maybe the costs of running this plant were outweighed by – it just didn't balance, basically. So in terms of the ventilation stacks – this is air ventilation from the mine – it does have methane, various concentrations of methane,  
35 of course, but not enough, is my understanding, that it can be used easily to harvest that methane and generate electricity.

In terms of the monitoring, I don't – I'm not aware – and perhaps this is a question we will take on notice as to whether there could be monitoring in the ventilation  
40 stacks for key greenhouse gases. I'm sorry, I don't – I just don't know how easy that is or whether it would be possible.

45 PROF FELL: Just on that, if I might say – Chris Fell – the whole aim of the ventilation is to keep the methane level low, like below the lower flammable limit, so, you know, bleeding itself immediately. I guess our thinking was, really, further towards the higher concentrations. In other words, one might even consider blending some of the higher-level methane to get a stream back up to above the LFL to flare it.

And that might have benefit. But the whole question is one of a multistage optimisation. It's not just about capturing methane; it's about capturing methane and also limiting greenhouse gases.

5 MR DOVE: Yes .....

PROF FELL: It's an interesting question, I think, for gassy mines.

10 MR DOVE: Look, I – as the commission knows, the EDL plant is operating there and it's obviously generating electricity and that has been there for some time and – so in terms of the emissions from the mine that are very, very high and methane, they are currently harvested and used to generate electricity, which is good, and that will continue. But yes, I take your point that they don't capture – or I don't believe they capture – all the methane from pre-mine drainage, and there would be emissions up  
15 at ..... entry points to the mine and also, of course, up in the ventilation area via the ventilation .....

PROF FELL: Thank you. It's very helpful. Chris Fell.

20 PROF MACKAY: Thank you. Thank you for that. Could I just check, firstly, with Professor Fell and the Commission officers if there's anything else that you would like to ask or raise during the meeting?

25 PROF FELL: No. It's been a very helpful discussion. I thank everybody who's been involved.

PROF MACKAY: Yes. And then - - -

30 MR BLECHER: Nothing, Chair.

MS MOORE: Nothing further.

35 PROF MACKAY: Yes. It's Richard Mackay, I should have said. And could I just check with Mr Dove and Mr Couldridge whether there's any further arising from this or otherwise that you'd like to communicate to the Commission, please.

MR DOVE: William Dove here. Look, no. Just thank you for the opportunity to contribute to the process. It's – they're always challenging, coal mines, aren't they?

40 PROF MACKAY: Well, no, thank you for the benefit of your advice and commentary. And could I ask the department officers whether there's anything further that you would like to add in light of these discussions?

45 MR YOUNG: Nothing from me, Commissioner.

MR O'DONOGHUE: Nothing from me, Commissioner, either. Steve.

PROF MACKAY: And Sara, I'm - - -

MS WILSON: No. I'm fine. Thank you.

5 PROF MACKAY: - - - interpreting the silence as acquiescence. So, look, can I say  
thank you. I mean, clearly there are some challenging matters to be considered and  
issues to be resolved in relation to the matters that we've discussed. But it is  
extremely helpful to the Commission to have the opportunity for this direct  
10 interaction, so for that we thank you. As I've already said in other meetings today, in  
the event that the EPA did want to communicate further, we would welcome those –  
any submissions. We would need to receive them by the 24th of February. But,  
basically, all I would like to do is say thank you very much. I wish you all well.  
And declare the meeting closed. Thank you.

15 PROF FELL: Thank you all.

MR O'DONOGHUE: Thanks, Commissioners.

PROF MACKAY: Thank you.  
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**RECORDING CONCLUDED**

**[2.07 pm]**