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TRANSCRIPT OF PROCEEDINGS

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INDEPENDENT PLANNING COMMISSION

MEETING WITH APPLICANT

HUME COAL PROJECT AND BERRIMA RAIL PROJECT STAKEHOLDER MEETINGS (SSD7172) & (SSD7171)

PANEL: **PETER DUNCAN AM (Chair)**
PROF ALICE CLARK
CHRIS WILSON

ASSISTING PANEL: **LINDSEY BLECHER**
CASEY JOSHUA

APPLICANT: **NICOLE ARMIT**
ROD DOYLE
DYLAN FALCONER
BRUCE HEBBLEWHITE
CHRIS KIM
MARK LEE
LIZ WEBB

LOCATION: **VIA VIDEO CONFERENCE**

DATE: **2.32 PM, TUESDAY, 29 JUNE 2021**

MR P. DUNCAN AM: It's – good afternoon and welcome. Before we begin I'd like to acknowledge the traditional owners of the land from which we variously meet today, which for me is the Darramuragal or Darug people and I'd like to pay my respects to elders past, present and emerging. Welcome to the meeting today to
5 discuss the Hume Coal Project and Berrima Rail Project which is currently before the commission for determination. Hume Coal Pt Limited is the applicant and is proposing a – to build a new underground coal mine in the Southern Highlands region of New South Wales and develop associated rail infrastructure to support the mining operations. These two components are the subject of two separate
10 development applications made to the Department of Planning, Industry and Environment but for the purpose of the assessment they are integrated, and we will refer to them today as “the project”.

The project is located approximately 100 kilometres southwest of Sydney and seven
15 kilometres northwest of Moss Vale in the Wingecarribee Local Government Area, LGA. My name is Peter Duncan, I am the chair of the commission panel. I'm joined by my fellow commissioners, Professor Alice Clark and Chris Wilson. We are also joined by Lindsay Blecher and Casey Joshua from the Office of the Independent Planning Commission. In the interests of openness and transparency, and to ensure
20 the full capture of information, today's meeting is being recorded and a complete transcript will be provided on the commission's website. This meeting is one part of the commission's consideration of this matter and will form one of several sources of information upon which the commission will base its determination. It is important for the commissioners to ask questions of attendees and to clarify issues whenever it
25 is considered appropriate.

If you're asked a question and not in a position to answer, please feel free to take the question on notice and provide any additional information in writing which we will then also put on our website. I request that all members here today introduce
30 themselves before speaking for the first time and for all members to ensure they do not speak over the top of each other to ensure accuracy of the transcript. We will now begin. Rod, or, Mark, is – would you like to take the lead? We've got – we've got some agenda items there which we're happy for you to – to work your way through and then we can have some discussion or questions along the way, if that
35 suits you.

MR R. DOYLE: My name is Rod Doyle. I'm the project manager. My boss is Mark Lee and he's the project director. Chris Kim is the general counsel and company secretary for the organisation. We have Bruce Hebblewhite representing
40 his company, BH Hebblewhite Consulting, and three members from EMM who assisted with our entire program, right from the EIS through. So, Dylan, from Queensland, Nicole, and, Liz, both in Sydney. So we're coming from various parts of the state and various Aboriginal groups represent us all. Thank you for the opportunity to talk today.

45 MR DUNCAN: Thank you. Over to you to follow through the agenda.

MR DOYLE: We do have a presentation and we will try and keep it brief for the section associated with the – our response to the IPC findings, and with that – those introductions out the way, we’re basically following what your agenda is with the second slide there, thank you. And so we’ll go through this process of the agenda
5 items. And the third slide is a bit of an overview of the operation. It’s a low impact in terms of environmental impacts, underground coal mine and associated rail infrastructure, although much of the rail infrastructure is already in existence. Proposed 23-year mine life with the production of, on average, three and a half million tonnes per annum. The coal is 55 per cent coking coal. It’s a hard coking
10 coal and it’s the Wongawilli seam which is currently used to produce steel at Port Kembla. Our mine design is essentially such that it will not develop a goaf. There won’t be major fracture systems in place like longwalls or bord and pillar and, as a result of that, there’s negligible subsidence.

15 So no houses or cattle will be impacted by our underground mining. We will be placing our rejects back underground. That’ll go back in as a slurry or paste. And there won’t be any permanent surface reject emplacement on the surface. Proposed surface infrastructure is largely in an area that’s totally cleared. Originally it was inhabited by the Southern Highland Shale Woodlands. But they have been totally
20 denuded from the area and our paddocks effectively will be where the infrastructure goes. So there’s no significant impacts on threatened species or communities. At peak construction workforce the – the mine’ll be about 414 and during operations that’ll be 300 full-time equivalent jobs. The net benefit as identified by DPIE is \$200 million in royalties and \$194 million to the State of New South Wales. This is,
25 without doubt, a state-significant development. It will enable the supply of coal to meet the demand of the next generation and hopefully assist with making that transition to a carbon-reduced environment.

30 Noting the refusal of Dendrobium’s recent extension application and also the recent approved Tahmoor South project life of 10 years, scope 1 for the Hume Coal Project, the gas emissions will be fully offset and thereby consistent with the New South Wales Climate Change Policy Framework. And I pass over now to Dylan Falconer for slide 4, 5.

35 MR D. FALCONER: Thank you, Rob. Yes, Dylan Falconer from EMM Consulting. So in – in response to the commission’s agenda, I mean, we’re – your item 2 here is just a – a brief summary of the Hume Coal response to the commission’s initial report. And so extensive work was undertaken in response to
40 the commission’s initial report and responded to all recommendations made that were directed to Hume Coal and then also some that were directed to the department where that was beneficial to the report. The following slides outline a number of key takeaways and summarised discussions from that report with reference being made to – back to where that information can be found within the response to report proper.

45 So as you can see here, independent peer reviews were performed on the mining method – which we discuss later in this presentation – groundwater modelling, and the economic impacts and benefits, including a forecast for the market of coking

coal, and additional technical assessments were performed for surface water, noise, air quality, greenhouse gas, visual impact, historic heritage, biodiversity, and social impacts. With respect to mining method, recommendations 1 to 3 in the commission's initial report, Hume Coal engaged a new independent expert, Russell
5 Howarth which, yes, his – to respond to concerns related to safety, resource recovery and an updated risk assessment. The findings of that independent expert are – some excerpts from the findings are presented here and they're detailed in full within appendix A of Hume Coal's response report. This'll be discussed further at agenda item 5 later in the presentation.

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Regarding the groundwater modelling, recommendation from the I – from commission's initial report, Dr Lloyd Townley was engaged as an independent expert to review the groundwater modelling that had occurred for the project. He
15 concurred that the modelling that was performed was fit for purpose, and that concurred with the findings of multiple independent experts that were appointed by the department. Again, this'll be discussed further later in the presentation. And the findings of Dr Lloyd Townley's review are presented in appendix B of the response report.

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MS L. WEBB: It's probably worth adding there, Dylan, on the way through, that the model previous to the Dr Lloyd Townley review had been reviewed several times by some of the world leading modellers in – Hugh Middlemis was engaged by the department for an external peer review, internally the model was originally reviewed by Noel Merrick, the original Coffey model. Noel Merrick then took that model on
25 and with Franz Kalf's review, did another version which is the one that Middlemis reviewed and Neil Manuel as well. And then since then, where this slide comes in, is Lloyd Townley. And all the – in all of those reviews every step of the way the model was deemed fit for purpose, but some of the other questions that were asked were just added on for the model. So the model is an exceptional model and world class
30 uncertainty was undertaken on that model. So just some background.

30

MR FALCONER: Thank you, Liz.

35

MR DUNCAN: Thank you for that. Okay, we'll continue on.

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MR FALCONER: Thank you, Peter. Regarding recommendation 6 in the commission's report for make good, extensive work, again, was undertaken in the Make Good Framework for the project. In terms of the conclusion of that work, it concluded that it was a credible – and achievable pathway did exist and that all the –
40 the Make Good Framework was technical feasible and implantable. Again, contained in full within appendix B of the Hume Coal response report. Surface water was also examined in response to recommendations 7 and 8, particularly to confirm whether – that a water treatment plant formed part of the project. As part of the response, yes, Hume Coal confirmed that it was being removed and did not form part
45 of the project. A – recommendation 8 related to the identification of how long the primary water dam has in terms of capacity if underground emplacement of water was to cease. And it determined that there is a 9.6 years of capacity under the 107

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climate modelling scenarios that were analysed. Greenhouse gas was also examined, and I'll pass over to Nicole Armit for the – for these next two slides.

5 MS N. ARMIT: Sure. Thanks, Dylan, yes, Nicole Armit, from EMM. So there
were two recommendations in the commission's report relating to greenhouse gas so
an additional assessment was done in response on the greenhouse gas emissions of
the project. And what that involved was using in situ gas data from exploration
bores so we could have some real certainty around those greenhouse gas emissions.
10 And that data confirmed the really low gas content of the seam to be targeted by
Hume Coal. And the particular point here is that the emissions predicted for this
project are incredibly low compared to other recent projects in the Southern
Coalfields. And we've got a table there that just shows a couple of recent ones, so
Tahmoor South which was recently approved by the commission in April, the scope
1 emissions for that mine are – were around 19 million tonnes. For Hume Coal
15 they're in the order of 180,000, 178,000, so you – significantly lower.

And the second part of the commission's recommendation there was around
mitigation. So Hume Coal embarked on quite a detailed investigation of what
mitigation measures and offset measures could be put in place for these emissions.
20 So most notably, the ventilation gas, the methane in the ventilation gas which – it's a
scope 1 emission, will be – Hume Coal have committed to fully offsetting that by a
tree planting. And also looking at offsetting the scope 1 emissions from diesel and
petrol use as well. There's a commitment there for scope 2, to source electricity
from renewal generation sources and, with regards to scope 3, Hume Coal have
25 committed to only selling product coal to Paris Agreement signatory countries only.
And they're the key points on greenhouse gas, thanks, Dylan.

MR FALCONER: Thank you, Nicole. Dylan Falconer, again. In regards to
recommendation 15 made by the commission, which was to undertake a further
30 visual impact assessment of the project, a significantly updated visual impact
assessment was performed and is contained within appendix E of Hume Coal's
response report. This was done in accordance with the Guidelines for Landscape and
Visual Impact Assessment, a UK document used as an analogous guideline for an
Australian VIA. And I've identified – just taken a screen grab out of that VIA to just
35 exemplify the impacts along Medway Road which are referred to by the department
as potential amenity impacts. As you can see by that small excerpt there, there's four
directly impacted residents. And the shading there is based on what's the – a digital
surface model which was based off lidar of the project area. And then there's a
representative artistic montage, a photo montage, of that Medway Road alignment
40 with the mine features in that image.

So in appendix E of the response report there's a significant amount of photo
montages and visual future analysis was undertaken. So I invite reading of that. A
number of recommendations were made in regards to historic heritage and
45 biodiversity, recommendation 16 through 18 and recommendation 19. These
recommendations asked Hume Coal to identify the potential impact on water table
drawdown on heritage items, address recommendations by the Heritage Council –

Heritage Council of New South Wales – prepare a revised statement of heritage impact, and undertake an impact assessment on the potential impacts on proper gardens, exotic trees, and native vegetation from a declining water table. All of those recommendations were acted upon and are contained within appendix F and
5 appendix G of the response report.

Some key findings of the groundwater impact assessment that was performed on – to identify potential impacts to heritage gardens and vegetation in the project area, and it was found that all heritage gardens lie above the Wianamatta Shale which is a
10 highly impervious layer between the Hawkesbury Sandstone underneath. And outside of heritage – identified listed heritage places, depending on the groundwater model percentile you’re looking at, 50th is what I’ll exemplify, 9.8 hectares of native vegetation is projected to be impacted. The social – a revised social impact was also prepared in response to recommendations 25 – 24 and 25 by the commission. And
15 this was done to reflect the updated guidelines released in September 2017 which were not around at the time when the original SIA was produced. The findings of that SIA are going to be discussed further, or later in this report – in presentation. And that concludes the recap on the response to the commission’s initial report. So at this point I’ll pass over to Nicole Armit.

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MR DUNCAN: Thank you.

MS ARMIT: Thanks, Dylan, yes, Nicole Armit here. Okay, so we’ve been through the DPIE assessment report and we focused on the conclusions, the key conclusions
25 of that assessment report, which were outlined in item 325 of the assessment report. That item did state that the department did not consider – or:

Does not consider that the incumbent benefits outweigh the projects actual potential of environmental and social impacts.

30

So the reasons that DPIE have put that forward are in those items below in item 325. So the next few slides will step through the responses to each of those points, about a dozen points or so. But just to comment on the economic benefits, so the project – the economic assessment found the project will have a net benefit of 194 million to
35 the State of New South Wales. Now, the – that net benefit factors in a huge number of best practice environmental management measures that Hume Coal have committed to, so that’s accounted for in that net benefit. And some of those measures have come at a significant cost. So, for example, having a mining method without a goaf rather than a longwall, and that was specifically to avoid subsidence.
40 Things like covering coal wagons to avoid dust emissions from trains, underground reject emplacement to reduce the surface visual air quality and noise impacts.

So Hume Coal committed to that to achieve a project that, on balance, achieves effective resource recovering with acceptable residual impacts which also still
45 delivers that significant benefit to the – economic benefit to the community. So if we go through each of these items, so there were two – the first two bullet points that DPIE put forward are – were in relation to groundwater, particularly around

unacceptable groundwater drawn and impacts and the make good measures that would be required there. So Hume Coal have provided a huge amount of information to demonstrate that there is a credible and technical feasible pathway to make good each bore. And that the predicted number of bores – and I think this is an important point – is actually comparable or less than other approved mines. Again, we’re going to go into detail, so we’re moving quite quickly so that we can get to this real critical issue which is going to be addressed in item number 4. So unless there are questions, we can move to the next one. Thanks, Dylan.

10 The next point was related to surface water and around unacceptable uncertainty around potential surface water impacts. So a couple of key points here, number (1) the mine has been designed to be a nil discharge site. Dylan mentioned before that the project has been amended to remove the water treatment plant from the project. So we would put that there is not unacceptable uncertainty relating to the mine design risks which the department mentions in relation to those surface water impacts. And we’ve got Bruce Hebblewhite on the line to discuss that mine design. So that’s the second key point, really, that we want to get to shortly, so we’ll get to that in a sec. Notwithstanding, in relation to those surface water impacts some extra work has been done. So the Goldsim water balance model was used to estimate the length of time that the primary water dam – so the mine has a primary water dam to store water that’s pumped from underground and then the water will – water will be reinjected for storage underground when void space is available.

25 So the Goldsim water balance model was looked at to see how long it would take for that water storage facility to become full if, for some reason, reinjection was not available underground. Now, the longest duration – the model showed that the longest duration for that dam to reach capacity was around six and a half years, so it’s a very long time if, conservatively, reinjection was to cease in the first mining year. And the shortest duration – so looking at the full range of modelling estimates – the shortest duration for the – for the dam to reach capacity was around 9.6, so almost 10 years, again, if reinjection was to cease. So this modelling shows that there is substantial capacity in that dam to safely store water in the event that reinjection is available for a period of time. So there is a robust contingency available to – there to ensure impacts are avoided to the catchment. Thanks, Dylan.

35 So the next point was about mine design. So once again, we’ll get to that shortly in agenda item 5 but I think a – a key point there is that a number of experts – like groundwater – have looked at the mine design and they are in reasonable agreement on the majority of all the issues. There were some residual points of disagreement related to the model and the issues of local instability so Bruce will get to that in just a couple of slides. I’ll just finish this DPIE assessment report conclusions. So the next couple that DPIE discussed was amenity, that the project would have some significant amenity impacts. So just to clarify there, Dylan has touched on it before, that the visual impacts – the visual impact assessment shows that there could potentially be impacts to four landholders on Medway Road. Now, that’s without mitigation. So a tree screen has been planted along Medway Road to help mitigate that impact.

And then in regards to noise, the noise model predicts impacts to 11 landholders on Medway Road. These are all to varying degrees, the vast majority of those are marginal impacts in accordance with the VLAMP rating system. So those nine landholders would be entitled to voluntary mitigation noise measures under the VLAMP, which Hume Coal have committed. Two – so just two dwellings are predicted to experience significant impacts and would therefore be entitled to mitigation and acquisition. Now, one property has been purchased already by Hume Coal. So some huge progress has been made there. And it is noted – and it's accounted for in the model – that the infrastructure is just adjacent to the motorway, the Hume motorway which creates, you know, adds to the noise environment, there's 25,000 movements per day along that motorway. And just another point there, that it's not unusual for those approval conditions.

You know, approval conditions are a proven method for addressing residual risk in many jurisdictions so notwithstanding DPIE's comment on that aspect. And this is the final ones before we move into the critical items of mine design and groundwater. So there are a number of conclusions the department made around the social impacts of the project and the suitability of the site. Dylan touched on before about the heritage impacts. We've done a lot of work on that which Dylan's been through already. And an updated social impact assessment was done to make sure that that assessment was in accordance with the 2017 DPIE SIA Guidelines, that SIA drew on a huge amount of inputs, community engagement activities, submissions, research and, of course, all our technical studies. And that social impact assessment did find that those residual impacts could be effectively mitigated and – which I've – have spoken about the majority of those, so the visual, the noise, the make good for groundwater bores, can be effectively mitigated was the key finding of that study. So they're the key points we wanted to make for the DPIE's assessment report, so we'll move into the critical issues of groundwater and mining method if there's no questions on that. I can - - -

MR DUNCAN: Let's - - - -

MS ARMIT: - - - pass over to Liz Webb who's our - - -

MR DUNCAN: Let's just hold there for a moment, Nicole, to check. Chris, or, Alice, do you have any questions at this stage?

PROF A. CLARK: I didn't, thanks, Peter.

MR DUNCAN: Thanks, Alice. Chris? No, we'll - - -

MR C. WILSON: No, I'm right, thanks, Peter.

MR DUNCAN: Okay, thanks, Chris. All right, let's keep going. Thanks, Nicole.

MS ARMIT: Thanks, Peter.

MR DUNCAN: So mining method – groundwater, thank you.

MS ARMIT: Groundwater.

5 MR DUNCAN: Yes.

MS ARMIT: Yes, so I'll – Dylan, if we can move to the next slide. If – I'll hand over to Liz Webb, our principal hydrogeologist.

10 MS WEBB: Thanks – thanks, Nicole. It's Liz here, again. Groundwater, from an impacts point of view, the message is that groundwater impacts for the Hume Project are less than other mines. So if we look at the three key aspects of that, you're looking at the peak annual inflow to Hume Coal is equivalent to the average inflow from a group of 29 mines. So this was having a look at other approved mines. And
15 so the peak inflow to Hume equals the average inflow from those 29 mines, so it's not – it – it's within that average band. If we look at the extent of the two-metre drawdown contour of Hume, so that's how far out that drawdown cone extends from the edge of the mine, and if we look at that if – within a group of 10 mines, Hume is half the average extent of drawdown. That's got a lot to do with the mining method
20 not causing subsidence. So the impact from drawdown is much less, so less than half the average from 10 mines.

If you look at the other key – when we're looking at groundwater and recovery – is the time for the groundwater to recover back to the two-metre drawdown cone. And
25 that Hume Coal Project's, it's less than a fourth of the average from a group of 15 mines. So that's – that's a – basically it – it's a very fast recovering mine and the recovery is in the order of decades rather than centuries, or even up to the thousand – over 1000 years for a lot of other mines. So you can see, if you're thinking about the impact of the project on the environment, the inflows are – on average, the extent of
30 the drawdown is half the average and the time is a quarter of the average. So we, therefore, you know, define that as less than other mines and minimal impact. Next slide thanks, Dylan. So if we move on to make good, which was one of the key points that we wanted to discuss today. So the key point here is DPIE recognise that make good is technically feasible. So therefore it can be done. So – and that – that's
35 been agreed so that's not in dispute.

A credible achievable pathway to make good each bore is – has been undertaken to look at each bore individual and make sure there's a potential pathway for each bore. Now, the next point 3, that there's a detailed make good strategy which outlines that
40 approach for each bore, has been developed. And this is a lot of up-front work that – that's been done in consultation with landholders. I know for a lot of other projects that is more of a – well, the project goes ahead and then landholders, when they are impacted, come in. But in this case, Hume was very up front about contacting and predicting the impacts and also looking at the solutions for each bore. And there's a
45 choice in that. So some landholders may want a replacement bore, other landholders may not want a bore they may want a tank, some may want cash. So there's an

option and choice and there's not just one way to mitigate the impacts and provide make good provisions at each site.

5 If you look at the number of bores to be impacted – and, again, this is comparable or less than a nearby approved mine – so if we look at the 50th percentile, and we've looked at that because the Tahmoor Bulli Seam Operations looked at the 50th percentile – so you look at the 50th percentile, you're looking at 84 bores for Hume and at Tahmoor Bulli Seam you're looking at over 200. So if you're comparing apples with apples across those mines, you can see Hume is less than that nearby mine. And you'll note there's a difference in the 67th percentile, which is the more conservative number that Hume have looked at throughout most of the assessment, and that's why the 94 number bore comes up because that's 67th percentile. But we've used 50 here – 50th percentile – here to compare apples and apples and that's where the number of 84 comes from, which is a bit different to what you may have seen.

20 Hume is absolutely committed to achieving mutually agreeable make good solutions tailored for each bore, and that's been – right from the start of the project that's been something that has been on the agenda for the project. Baseline monitoring has commenced at approximately 20 landholder bores. So this is make good monitoring which is different to baseline monitoring which is much more extensive. And these have been agreed by landholders. And if we apply the concept of make good for landholder bores, the drawdown effects will be mitigated. The landholders' access to water, should they require that ongoing access for farming and other purposes, won't be compromised. Thanks, Dylan. The Make Good Strategy, so the make good strategy if we look at that for Hume in detail, the drawdowns for each bore has been looked at in detail. And if you – if you're – if you have a look at that on average, about a third of the bores will require additional payments for electricity costs.

30 That's because the drawdown in the bore means that it costs more to pump that water up, so they're pumping from the greater depth but there's no loss of access to water in the bore that they're originally in. So 30 of the bores out of the 94 are able to be made good with increased electricity pumping costs. The next third will require a lowering of the pump. So this is where a – and the estimation of the depth of the pump in the bore is made quite conservatively that we may have to lower that pump to allow ongoing access from that same bore. So that is another third of the bores can be made good with that. And the remaining thirty are the ones that are more likely to require redrilling to facilitate similar flows, and that might be, you know, two bores on the property, deeper or shallower at slightly different locations to maintain that supply, or other options like dam – dams or tanks or other options that the landholder may decide is a better fit for them. So that breaks that down in that it's not 94 bores for replacement, it's – you're looking more at the number of 30. So I hope that gives a bit of a summary for the groundwater and the make good. Thanks, Dylan. And I think it's Bruce now; is that correct?

45 MR B. HEBBLEWHITE: Okay. Thanks very much, Bruce Hebblewhite here to talk about the mining method, so if we go straight the next slide, Dylan, please.

MR DOYLE: I just wonder, Bruce - - -

MR HEBBLEWHITE: The first - - -

5 MR DOYLE: Excuse me, it's Rob Doyle - - -

MR HEBBLEWHITE: Yes.

10 MR DOYLE: - - - I just wonder whether we should offer the commissioners an opportunity to ask any questions of that – of Liz or others, on the water before we get stuck into the mining method.

PROF CLARK: Peter, you're on mute.

15 MR DUNCAN: Thanks, Rod, and there was a question on my mind about the make good. You mentioned that – and the department says – said in the assessment report, that it's technically feasible but it's not practical for such a large number of landholders. Do you – would you like to make a comment on that, on the practicality of it and probably, I guess, the issue of dispute comes into it and how you resolve
20 that.

MS WEBB: Yes, that – that's a good point, Peter, and we might address that in the submission because it's quite complex. But I'll point out that you – you're absolutely correct, technically feasible and there's a pathway but practically not
25 feasible due to, I guess, a combination of the number of negotiations, the – and I guess the willingness for – for everyone to enter into those negotiations is probably another reason why it's not as practical. And having a dispute resolutions process defined up front is – I guess it's an – it's an uncertainty piece, I would suggest, Peter, is that practicality's coming from how that will – how that will be managed, having
30 not really gone down that path to this degree before in New South Wales. So we can address that more in the written submissions but that - - -

MR DUNCAN: Okay.

35 MS WEBB: - - - I guess, is a bit of a summary of the difference between feasible and practical, I guess, in my mind.

MR DUNCAN: That would be good. And the number you showed – I think you said there were around 20 that – where you're holding agreements now; is that an
40 ongoing process or where's that up to?

MS WEBB: The - - -

MR DOYLE: If I could add to that comment – and Peter, it's Rod Doyle here again
45 – we do not have any agreements in place with any of the landowners.

MR DUNCAN:

MR DOYLE: And for them to actually sign up to a process before the mine gets approval is really a bit of a fool's errand to try and achieve that. What we do have is some 20 landowners that have given verbal approvals to undertake the baseline monitoring which we have been doing for probably two years now. And it's
5 certainly our expectations that others will certainly come on board once the approvals are in place so that we can get that baseline established and measured before mining takes place.

MR DUNCAN: Okay.
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MR DOYLE: So that's a realistic aspect, I believe, having spoken – as the – previous exploration manager for the company, I've had a lot to do with the different landowners personally. I know the difficult ones, if I can use that expression – might be an unfortunate word – but there will be some people that will not allow us on their
15 properties and that's just the luck of the draw. But I think most people are very willing to talk to us once we have our approvals in place

MR DUNCAN: Thanks for the clarification, Rod. Thanks.

MR DOYLE: Thank you. Alice, or, Chris, have you got questions at this stage?
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PROF CLARK: I did have one follow up there just from what Rod was talking about there. And I think my question was around that other 85 per cent of the landholders to signing up for access to the baseline given that baseline does take a
25 number of years. I'm wondering, the people that you are aware of there, Ron, and have experience with, just to confirm you – your view is – is that they would have no problem with baseline or no – I guess I'm wondering why so few have agreed for baseline sampling to this point.

MR DOYLE: Rod Doyle again. There has been a fairly active program of opposition of the landowners, as you may be aware. We – as attempts to contact all of them we've sent emails, we've sent letters to them, and we've done door knocks and spoken with different landowners. The opposition groups have certainly made it clear that they didn't want to encourage agreements with the company. So we do
35 have to overcome that residual opposition, I daresay. And I'm pretty sure and certain that once approvals are actually in place that people will come to the party in terms of talking to us more frequently and signing up to the make good. I should stress that the 15 people – 15 per cent – come from all different walks of life. We've made a – an obligation to them that we won't name them or tell – give any indication of who
40 they are but they're obviously within our footprint.

PROF CLARK: Thank you.

MS WEBB: If I can add to that, just for a point of clarification, the baseline for the
45 groundwater – groundwater data for the project, the – we've got 54 bores in for that and they've been monitored for over 10 years now. This is the baseline for just the

make good of landholder bores that we're talking about on this slide so that's why the number's a lot smaller. And the other point I wanted to make is - - -

PROF CLARK: Okay.

5

MS WEBB: - - - some of the impacts from this doesn't occur for, say, 10 or 15 or 20 years into the project, even after mining commences. So you – you're thinking of a landholder that's got a graph in front of them that may not be impacted for 20 years from the day they're sitting there. I guess there's a reluctance to sign up to a deal now that's so far into the future with that much uncertainty about what they may want to do with their property at that time. And I guess that's why we don't see locked in contracts this far out from the mining actually (a) being approved and then starting and then the impacts manifesting at that bore. So guess – I guess having the contracts signed up front is probably a little impractical from both sides of the parties' view. I – and I'm – and I'm figuring that's why there's not contracts signed in this case, if that makes sense to the panel.

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MR DUNCAN: Yes, it – it does, thanks, Liz.

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MS WEBB: Thanks.

MR DUNCAN: And understand the point. Okay, well, maybe - - -

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MR WILSON: Peter, just one question, sorry, Peter.

MR DUNCAN: Yes, sorry, Chris, yes.

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MR WILSON: Probably best for Liz to – Liz to answer this one. Liz, I'm just trying to make – understand, the department says that the impacts on bores is more significant or – is not comparable to existing mine operations in New South Wales and you're saying, no, it's much less than other mining operations in New South Wales. Well, is there a difference in the way people are – the two organisations are assessing the impacts, or – what – what's the fundamental difference between the two ways of – because they're not comparable but – the department's saying one thing, you're saying the other - - -

MS WEBB: The - - -

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MR WILSON: - - - I'm just wondering what the point of difference is.

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MS WEBB: Good point, Chris. I think the term that was used in the past was "unprecedented". And at that time when that was made it related to the project having the most amount of bores up front clarified that would be impacted by two metres. So that's – that's that point. And I guess the two-metre number has only been in use since the Aquifer Interference Policy came in, in 2012. So previous to that, you know, there isn't a record of how many bores a mine would impact. But the – that term "unprecedented" was the comment. But since then, Tahmoor have

come out and Bulli Seam Operations with that EIS and you can see on this slide here that the 50th percentile with the 200. So I guess from that we're saying, well, it is, you know, comparable to other mines that are – that are close by. I guess that's – if that gives you some clarification. It is – it is more than some other mines, absolutely, and a lot of those other mines, I guess, are in places like the Hunter where the density of bores is much less. The density of bores here is more, so there's more bores. But if you compare the environmental impacts, it's less. So I guess that's where that confusion in terminology, Chris, is and which lens you're looking at it through, if that helps. We - - -

10 MR WILSON: Yes.

MS WEBB: - - - can unpick this a bit more in the submission if you like.

15 MR WILSON: Yes, appreciate that, thanks.

MR DUNCAN: Right with that, Chris? Yes.

20 MR WILSON: Yes, thank you.

MR DUNCAN: Okay, thanks. Well, now we might move on to the mining method. Bruce, we've been keen to understand a little bit more about this so look forward to hearing from you.

25 MR HEBBLEWHITE: Okay, thanks, Peter. So, yes, firstly, the point here is that the DPIE experts – and here we're referring to Professors Galvin and Canbulat – are both actually in reasonably close agreement with Hume Coal on the vast majority of the issues. When I say with Hume Coal, particularly with myself as an independent expert appointed by Hume and then also, we – we've had Dr Russell Frith of Mine
30 Advice as the designer working with Hume and, as mentioned earlier, a more recent independent reviewer, being Russell Howarth. But particularly, Galvin and Canbulat state in their most recent September/October reports that they are in agreement on the majority of issues with myself especially. They both acknowledge that the method is extremely flexible. This is where it is a method which is very different to what you
35 might come across in, obviously, a longwall mine application where longwalling is known for being an extremely inflexible mining method.

Very large scale production but very inflexible in terms of once you have a layer you're committed to it and at great cost and disruption if you need to change it. This
40 method is very flexible. It can be changed throughout the planning process and it can be changed throughout the mining process based on evidence as to how it is performing. So they both acknowledge that the plan dimensions can be readily modified to maintain compliance with the project's objectives. They also both acknowledge that the overall method in – as it's outlined – is safe, and I have quotes
45 from both of them here. Jim Galvin says that:

The method is amenable to utilising changes in these dimensions as engineering controls to safely deliver both the hydrogeological and the substance objectives.

5 And Ismet Canbulat talks about:

The majority of issues that are currently being addressed –

which he's addressed before –

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are now in hand in terms of Hume studies to achieve a layout that is both robust and safe.

15 So in terms of the overall picture and the overall method, what they're saying to DPIE in their most recent reports is that essentially the overall system is a safe, robust but flexible, method. The method is a variation on other partial or secondary extraction methods already in use, not this specific layout but certainly it is of a similar nature to others and will be treated by the New South Wales Resource Regulator as a secondary extraction system. We'll come back to that. Next slides
20 thanks, Dylan. There are though, as there have been for some time, some residual points of disagreement and they particularly relate to the numerical geotechnical modelling that has been carried out and also some issues of local instability as opposed to regional stability issues. On the modelling they are very much extremely technical issues in terms of the underlying equations used in the models, the
25 underlying strength, and assumptions built into the modelling.

30 But, again, they accept the model results in terms of, firstly, using an appropriate numerical model, the lay model package that was used, to represent this 3D modelling task and that the overall regional stability is not likely to change regardless of any fine detail that they might question. The fine detail relates to potential – particularly the web pillar stability issues and maybe whether a web pillar needs to be slightly larger than has been modelled at this point in time. But it is that level of detail. As I say, they both accept regionally though that the system is robust and stable. On the issue of local instability, the – the concern is about underground
35 safety in relation again to the production panels, the web pillars, and the potential if a failure were to occur in one or a group of the web pillars what that might create in terms of an unsafe work environment. But it essentially is no different to any other form of secondary extraction, pillar extraction, where you are actually removing pillars from the mine and allowing roof falls to occur.

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45 Yes, the phenomenon is slightly different but the risks involved, the issue of instability, are dealt with or will be dealt with by Hume in the same normal process of robust operational risk management plans. That leads to procedures and obviously still goes through an approval stage which we'll come to again. One further thing that this method has that most other secondary extraction – or any other extraction – in underground coal in this country doesn't have at the point – this point in time is a significant remote control plan for the operations of production. So we're actually

seeing that personnel will be removed from that work area, still requiring management plans to make sure that work practices are appropriate but that is an added risk control factor. The next point I think is important to understand. The stage that we're at, at the moment, of seeking approval for the project is a very early stage
5 before getting to a point where a mine is actually operational.

It's, in fact, normal practice for any new mine not to have everything down to the last detail in terms of the mine plan at this point, but to continue to review the mine plan, refine the mine design, the details of the plan as the project proceeds into the next
10 steps of detail planning, design, feasibility. I have no doubt – and it's up to Hume to confirm – but I have no doubt that Hume will proceed, if approval is given, through this next stage of mine design and that will include further review of the mine layout, review of the pillar dimensions. And I would assume – and I think it's only
15 reasonable – that they will take account of these detail issues that both Galvin and Canbulat have raised to take account of those as they refine the final mine plan and mine layout prior to mining. I should also say also then that once mining starts – and it has been acknowledged by Jim Galvin already – that the method still allows for monitoring to continue the refinement process once mining's under way.

20 Just to the next slide which is the last mining methods slide. So the claim by DPIE that there is considerable uncertainty is difficult to support. In fact, it's not supported by the very appendices that are provided which include, for example, the Galvin and Canbulat reports. Any mining activity involves a level of inherent or residual risk. That's – that is normal an accepted reality of mining. It's a reality of anything we
25 do. The role of mine management is to ensure that that risk is managed to an acceptable and safe level. And that's where we come to the role of the Resource Regulator and particularly the inspectorate. And, in fact, the Chief Inspector of coal mines actually made in response to an earlier set of documentation back in 2019, Garvin Burns, the Chief Inspector, made some very helpful comments. He said:

30 *It cannot be inferred that the method is unsafe on the basis that it has not previously been applied.*

That was one of the points that DPIA – DPIE raised in an earlier report. That just
35 because it hadn't been used it could potentially be unsafe. He went on to say:

40 *There's no information in the submission which suggests that Hume Coal may not possess the necessary expertise and capacity to identify and implement the required controls to manage the various risks associated with the method.*

And then a final comment from Burns:

45 *Inherent risk cannot be the sole determinant as to whether a mining operation will be safe or unsafe. Such a determination must be based on the adequacy of risk controls identified in principle hazard management plans. These are the plans that the company would be expected, in fact, would be required to produce during the next stages of the project prior to operational approval.*

5 *Hume Coal will be required to submit detailed mine plans the Resources
Regulator under the existing prevailing provision of legislation and for
secondary extraction as the method has been classified – that is, a high-risk
activity – which is nothing abnormal about that. The – such applications go in
all the time and that would take place prior to extraction commencing.*

10 So I guess the point there is that it really or in fact in terms of a lot of detail to a
lot of other secondary extraction operations. So hopefully that answers any issues
but I'd happy to answer any questions you might have.

10 MR DUNCAN: Thanks, Bruce. Alice, you have any questions at this stage?

15 PROF CLARK: No, Peter. I think at this stage I want to just soak up some of the
stuff that Bruce has said there and perhaps come back with some questions later, if
that's okay.

 MR HEBBLEWHITE: yes.

20 MR DUNCAN: We will most likely come back with some questions. And I
didn't mention as well, Rod, that we'd like to get a copy of the presentation after the
– today as well, if that's possible.

 MR DOYLE: Not a problem.

25 MR DUNCAN: Yes. Chris, have you got any questions for Bruce?

 MR WILSON: No, I'll save them for later, Peter, when I have more of an
understanding of the mining

30 MR DUNCAN: Okay. Yes, well, that's – I guess that's what we're still working –
well, I'm still working through. So, Bruce, on that point, could you just – you've
mentioned that it's a very flexible method.

35 MR HEBBLEWHITE: Yes.

 MR DUNCAN: Could you just highlight what you see as the key differences with
this method compared to traditional methods? Flexibility is one, obviously.

40 MR HEBBLEWHITE: Yes, flexibility, I guess, applies to a lot of bord and pillar
which are the continuous miner-based mining systems. So this method is not unique
as being flexible in that sense.

 MR DUNCAN: All right.

45 MR HEBBLEWHITE: Most bord and pillar methods allow flexibility. The fact that
we're not actually extracting and – as was mentioned earlier – creating a goaf
formation, we're not even wedded to hard and fast dimensions to ensure that we get

goaf falls occurring. So it is more flexible than other bord and pillar methods but it is an order of magnitude more flexible than a longwall mining method where, as I said earlier, the longwall panel dimensions are laid out well in advance, the equipment is designed to operate in a certain face length for example, and longwalls
5 aren't friendly beasts when it comes to having to be stopped and relocated and started again. So that's where a lot of the flexibility issue – whereas a continuous miner operation can stop and – on one shift – and be up and going again in a new location, if not the next shift certainly in the next day or two, which just doesn't happen in longwalls which might be weeks or even months.

10 MR DUNCAN: Okay. All right. Well, we – we're on a process here and obviously we will come back to you with some questions, I think. Rod, is there something else you'd like to provide us with at this stage?

15 MR DOYLE: Just a comment, if I may, regarding the – the FAR itself. To say we were disappointed with what has been produced would literally be an understatement. And this comes, to some extent, about a couple of the questions that have been asked. And it's not just a case of refusal. You know, we're all adults
20 around the table. If the IPC comes back and refuses the project and states their decisions behind it like they have for Dendrobium, then we'll perfectly accept that. But what's been prepared in this FAR is far from being fair and reasonable and we will be making some submissions to bear that out and we'll provide those in the immediate aftermath of the public hearings.

25 MR DUNCAN: Thank – thanks. Look, we appreciate you outlining that and there will be a period of up to seven days after the meeting at least where you can make that submission, so you have some time to go through that process. Okay - - -

30 MR DOYLE: Thanks very much, Peter, you mentioned you're likely to come back with questions; would you hazard in this process when that's likely to be? We still have an issue of trying to get information together for a online site visit, so to speak.

35 MR DUNCAN: Yes. Look, we'll – we will – we're meeting again on Friday after this meeting so we will endeavour to come back to you by the end of the week with some questions and we do understand the timeframe. We had – we are still wanting to – at least if we can do it in a virtual way – do the site inspection before the public meeting. I think that helps inform. So we do understand it's difficult circumstances at the moment. Whatever material you've got – and it's been mentioned that you have some earlier dated material, we're happy to see that, do whatever you can. And
40 - - -

MR DOYLE: Thank you.

45 MR DUNCAN: - - - hopefully we can something next week.

MR DOYLE: Thanks very much.

MR DUNCAN: Okay. Thanks – thanks, Rod, and thanks, Mark, and everybody involved today. Really appreciate it. And as we said, we'll come back to you quite quickly with some further questions and look forward to discussing it both next week and at the public meetings on the week of the 12th.

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MR DOYLE: Thank you very much, Peter, and thank you, Commissioners, Lindsey, and Casey, thank you.

MR DUNCAN: Thank you, all the best.

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PROF CLARK: Thank you, everyone.

MR DOYLE: Thank you.

15 MS WEBB: Thank you.

MR FALCONER: Thank you.

20 **RECORDING CONCLUDED**

[3.29 pm]