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TRANSCRIPT OF PROCEEDINGS

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INDEPENDENT PLANNING COMMISSION

MEETING WITH DEPARTMENT OF PLANNING AND ENVIRONMENT

RE: DARTBROOK COAL MINE – MODIFICATION 7

PANEL:	**PROF ZADA LIPMAN** **ROSS CARTER** **PETER COCHRANE**
ASSISTING PANEL:	**DAVID KOPPERS** **BRAD JAMES**
DEPARTMENT OF PLANNING AND ENVIRONMENT:	**HOWARD REED** **MEGAN DAWSON** **MELANIE HOLLIS**
LOCATION:	**IPC OFFICE** **LEVEL 3, 201 ELIZABETH STREET** **SYDNEY, NEW SOUTH WALES**
DATE:	**9.34 AM, MONDAY, 18 FEBRUARY 2019**

PROF Z. LIPMAN: Good morning and welcome. 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 and present. Welcome to the meeting today. AQC Dartbrook Management Proprietary Limited, the applicant, is seeking to modify the development consent for the Dartbrook underground coal mine. The project involves the recommencement of underground mining activities at Dartbrook using bord and pillar methods as well as the alteration of the coal clearance system to partially transport coal overland instead of using the full length of the Hunter Tunnel. The project also involves the extension of the life of mining operations for a further five years to December 2027.

My name is Zada Lipman. With me are fellow commissioners, on my right, Ross Carter, on my life, Peter Cochrane, two members from the IPC Secretariat, Brad James and David Koppers. The other attendees today are from the Department of Planning and Environment and they will be introducing themselves later on in the proceedings. In the interests of openness and transparency and to ensure the full capture of information, today's meeting is being recorded and a full transcript will be produced and will be available on the Commission's website.

The meeting is one part of the Commission's decision-making process. It takes place at the preliminary stage of the proceedings and will form one of the several sources of information upon which the Commission will base its decision. It is important for Commissioners to ask questions and to clarify issues whenever they consider it appropriate. If you're asked a question and not in a position to answer, please feel free to take the question on notice and to respond and providing the additional information in writing and we will place it on the Commission website. I request that all members today introduce themselves before speaking for the first time and that members avoid speaking over each other so that the transcript will be more accurate.

We will now begin. I will ask the members of the Department of Planning and Environment to introduce themselves. We have provided an agenda. It's in very general terms. I should add perhaps that in relation to the agency advice during exhibition, we obviously intend to include agency advice post-exhibition and after the RtS, as well. So if you could just take us through some of these items in a general sense and then if you don't mind we will be asking questions as we go along if there's anything we need to clarify. I will ask you to introduce yourselves, please.

MR H. REED: Certainly, Zada. My name is Howard Reed. I'm one of the Department's directors of resource assessment and I've got with me one of my team leaders and senior planning officers. On my right is Megan Dawson, team leader, and on my left is Melanie Hollis who's a senior planner. And these officers were primarily responsible for undertaking the assessment. In terms of the agenda, I don't think we've seen a copy yet.

PROF LIPMAN: Sorry about that. Better late than never.

MR REED: We did have some advice regarding particular questions but not the agenda itself.

PROF LIPMAN: Well, perhaps if you could slot the questions in under the agenda as you go along if that would be possible?

MR REED: Well, in terms of the modification, it's my usual practice not to go into any great depth in describing it and the background to it. The Commission has been given a detailed report and a full suite of documents. It's my practice to take those as read rather than to rehearse some of – the nature of the modification. What I would say, though, is that Dartbrook is a significant coal mine in – pretty much in the far north of the existing Hunter Coalfield. It has had a difficult history. It was first proposed as an open cut mining operation called Kayuga, I think, back in the early nineties if I remember and when that became too difficult Anglo Coal I believe it was sought to develop it as an underground mine instead with much less surface disturbance. And that was to be a longwall mine, I believe, accessing coal from three seams.

But, as it turned out, it was a very difficult mine to run for reasons I believe geological structure and water ingress but, in particular, gas in the coal seams. So Anglo shut the door on the mine. And I believe it was in care and maintenance for – I think it was 12 years. A few years ago, Anglo offloaded all its New South Wales assets and one of those was the Dartbrook mine. It was picked up by AQC, which is quite a small company – hasn't operated a coal mine in New South Wales or, to my knowledge, Australia before. It's backed by a major family from Western Australia who have made their money in another industry and they're looking to turn this shuttered coal mine into a profitable operation going forward.

PROF LIPMAN: Right. We had one or two questions about the modification. I suppose my one is the interaction of bord and pillar mining with the longwall given that they are, you know, retaining the approval. I'm just a little bit concerned. Would there be any implications if they were run concurrently or is it feasible for them to take place concurrently?

MR REED: Well, the company did – was quite clear that it didn't want to lose the approval to undertake longwall mining and there's an existing layout that was assessed and approved. It did not want to lose that approval. And the Department sees no way in which it can, in essence, take that approval away. So the approach that we've taken is to contemporise conditions regarding longwall mining. My understanding, I guess, my judgment is that companies looking to establish bord and pillar mining is a relatively low cost operation. A longwall machine is a very expensive piece of equipment, in the order of tens – many tens of millions of dollars. So it would be a major investment to reinitiate longwall mining and not one that – I believe the decision – the company would take easily, nor with the limited life that's in the current approval.

PROF LIPMAN: If they did take that on board, would it have any implications for the effects – any further implications than those already - - -

MR REED: Well, the Department has taken a view that that's an existing approval, it has already been assessed and approved and that we really don't have the power to reach into that and reinitiate an assessment over an old approval. So at this stage I think – I've outlined the fact that I consider it to be an unlikely eventuality within the short term of the proposed approval, out to 2027 - there's a question of amortising capital and so on – but if we're looking at what would be the impacts of that possibility, should it arise, then there would be much greater impacts that surface than under the proposed modification under the proposed bord and pillar mining so that subsidence impacts would reinitiate much in – well, I would presume, much in alignment with previous predictions, however the conditions that we have proposed would take care of that pretty well in that the extraction plan conditions are much more detailed, much more comprehensive than previous subsidence management system that was in the consent, or that applied in the late '80s, early '90s, and so that extraction plan would require a full and detailed set of predictions for subsidence impacts, and the department would get to consider those afresh and potentially to apply conditions on any approval of an extraction plan.

So while most management plans that the department considers in the post-approval framework, we might request changes, or not accept the management plan until certain things have changed, but before an approval is granted – certainly in the Southern Coalfield, the department has developed a practice of attaching conditions of approval to extraction plans for Metropolitan coal mine, and Dendrobium coal mine and that precedent, I think, has been well-received in the community, and accepted by industry and we would always have that option going forward.

PROF LIPMAN: Right. Thank you. Ross, you wanted to ask about the contemporisation of the conditions.

MR CARTER: Yes. I just – I sort of note that the department has been doing that with a range of consents when they sort of trigger a modification or something, that the department works through contemporisation, but I just wanted to sort of understand where – sort of a modification is really about the incremental change, but contemporisation may go to conditions that may not be connected with that incremental change. Is that – has the department sort of considered how that contemporisation works within the powers of a modification legally? Has it - - -

MR REED: We're confidence that the conditions that we've proposed are robust and appropriate. It's our view that there are many benefits in contemporising conditions of development consents, particularly in the mining industry. The mining industry is subject to a lot of change in terms of best practice, and best practice regulation for that matter, and conditions of the date of this consent are back in 2000 or 2001: it's essentially a generation ago. With an EPL, there's the opportunity to effectively replace conditions every time the EPL is renewed, whether it's two years,

or I think they can stretch out to five. So there's that opportunity to completely refresh conditions.

With development consents, it's a little more difficult, but we consider that everyone is a winner really with the practice that the department has. Certainly, we think the environment is a winner, and the community, the regulators, the department's compliance unit and, in broad terms, the industry as well. The industry is broadly comfortable with an outcome where everybody is running to the same ruleset and we've had a regular practice of contemporising conditions. The other thing I just draw attention to is that this is a section 75W modification and the department's view is that they're quite broad powers to modify development consents under section 75W, but even if that was not the case, even if this was not a section 75W modification, I guess the department – the bottom line is that we consider it to be a low-risk exercise with substantial benefits, which is why it's a developed practice.

MR CARTER: Okay. Thanks, Howard. And it's supported by community, industry, as well as the department.

PROF LIPMAN: Did you have any other questions?

MR CARTER: That was fine on that issue. Yes. I have a couple of other questions, but - - -

PROF LIPMAN: I think a question perhaps on the mining leases. Isn't that required for .....

MR CARTER: Yes. I just found on page – 3.4 on page 7, I sort of went in a bit of a circle when I was reading other approvals where it was kind of saying that it doesn't fall within the definition of mining or designated ancillary mining activity, but then under another part, it allows certain activities to be undertaken. So I just sort of went in this circle and thought I am a bit confused how that works.

MR REED: Fair enough, Ross. So it's a fairly truncated consideration, I have to say, with the benefit of hindsight, and I could have a pretty good stab at explaining it to you, but I'm going to ask Meg to have a better go at it than I will.

MS DAWSON: Sure. I will answer. That's fine. So Megan Dawson from the Department of Planning speaking. I will try and explain the circular linkages between, I guess, the Mining Act and the EP&A Act. So the applicant's current mining lease doesn't extend to the new shaft site. So this is that small two-hectare area where they're going to put the new delivery shaft. They currently have a coal lease, which is the former mining lease, I think, under the *Mining Act 1973*, so it only has subsurface rights there. So I guess one of the key things that we look at in our assessment is, I guess, twofold. We want to be satisfied that other statutory approvals can be attained, so that's one aspect of it, and the other aspect is that any need for a mining lease under the Mining Act could also trigger special provisions of

the EP&A Act – excuse me – Environmental Planning and Assessment Regulation for mining and petroleum development.

So this links to – if a mining lease for the purposes of mining under the Mining Act is required for the new shaft site, the modification would also need to consider strategic agricultural land. So this is kind of the circular – the definitions – we rely on the definition of mining in the Mining Act to decide if they need to do further investigation into strategic plans and that would be the gateway process and the site verification process. We are satisfied that, based on advice from the applicant and looking into the Mining Act, that the proposed activity at the shaft site does not fall under the definition of mining. So the definition of mining under the Mining Act is:

> *To extract material from land for the purpose of recovering minerals from the material so extracted or to rehabilitate the land.*

MR CARTER: Okay. Yes. So that definition is about the extracted material and its purpose rather than - - -

MR REED: And restoration of the land.

MS DAWSON: Yes.

MR CARTER: Restoration. Yes.

MS DAWSON: So there's mining leases - - -

MR REED: But the more important definition is of ancillary mining activities.

MS DAWSON: Yes. So there's mining leases for mining and then there's mining leases for ancillary mining purposes, and this more clearly falls under the definition of an ancillary mining activity, which is defined under the regulation. It's ..... - - -

MR REED: It's what used to be called mining purposes. They're now called ancillary mining activities.

MR P. COCHRANE: But you're saying here it says it doesn't – sorry – it's Peter Cochrane – doesn't fall within the definition of designated ancillary mining.

MS DAWSON: So then there's twofold – so there's two types of ancillary, there's designated and non-designated, which is then when this ..... gets quite complicated.

MR REED: And this is the nub of the matter. So the Mining Act has gone so far as to say for certain ancillary mining activities, you have to have a mining lease, but for other ancillary mining activities, you don't need a mining lease and shaft sinking is one of those.

MS DAWSON: Yes. Exactly.

MR REED: Yes?

MS DAWSON: It's explicitly listed.

MR COCHRANE: Right. Okay.

MR REED: So that's the nub of the situation really. No mining lease is required because of the provisions of – or because of the definitions of what is a designated and undesignated ancillary mining activity, and it's on the basis of that definition that the interplay between a grant of development consent and the requirement to have a mining lease is not an active issue for this project. Yes?

MS DAWSON: Yes.

MR CARTER: Great. Thank you.

MS DAWSON: But that's .....

MR COCHRANE: That clarifies that. Thank you.

PROF LIPMAN: We might continue with the agency concerns before and after. I was hoping you might perhaps take us through the – maybe both of the councils' attitudes and conditions, the EPA and especially OEH - - -

MR REED: Sure.

PROF LIPMAN: Okay.

MR REED: Meg, do you want to handle that or - - -

MS DAWSON: Yes. Sure.

MR REED: Yes?

MS DAWSON: I will just open that section of the report. So section 4.3 of our report summarises the advice we had from agencies both during exhibition, post-RtS and in developing the conditions. I will leave OEH to the end. But, essentially, EPA reiterated the concerns raised by the community about air quality. And in response to that, that was – the main reason why the applicant committed to sealing the entire route of the haul road ..... as that was the main issue from the EPAs perspective, that was – consider resolved - - -

MR CARTER: Can I just ask a question around the management of that cumulative impact because the – sort of the sealing of the haul road, sort of, reduced it to a very marginal potential exceedance of the criterion on cumulative impact, but I was a little confused as to how the Mount Pleasant consent interacted with this consent on acquisition because it talks about it being secondary or - - -

MR REED: Ross, can we come to that in – after we, sort of, go through the agencies, in general? Is that okay?

MR CARTER: Yes, that's fine.

MR REED: I think it's probably neater.

PROF LIPMAN: That might be better?

MR CARTER: Yes.

PROF LIPMAN: Yes – in relation to the issues, yes.

MR REED: Yes.

MS DAWSON: If I jump now to the councils. Upper Hunter Shire Council has a position to not support any open cut – sorry, any mining in their LGA.

MR REED: Any coal mining.

MS DAWSON: Any coal mining in their LGA. So they objected to the modification.

MR REED: In principle, if you like.

MS DAWSON: And they also reiterated some of the concerns around air and noise, but they were really open to renegotiating the Voluntary Planning Agreement with AQC and those negotiations were undertaken directly between the applicant and the councils - - -

PROF LIPMAN: How far has that progressed? I notice it has to be finalised within six months.

MS DAWSON: So they've agreed in principle to the terms, which we've reflected in the conditions of consent. So we don't perceive that there should be any sort of - - -

PROF LIPMAN: Right.

MS DAWSON: - - - hiccoughs with coming to that agreement.

PROF LIPMAN: Okay.

MS DAWSON: So that was a really good outcome for both Upper Hunter Shire Council and Muswellbrook Shire Council. There was a lot of back and forths and both sides were happy with the outcome of the VPA. Again, the concerns raised by Muswellbrook Shire Council – we were satisfied that they had addressed. They also

related to air, noise and some minor matters related to how visual aspects and the shed that would be built around the shaft site. So if I just come back. The main agency that we had a lot of back and forth with towards the end was the Office of Environment and Heritage. We were able to resolve the matter related to Aboriginal cultural heritage. There was just a bit of confusion over some sites – some extant sites that were still on-site and - - -

PROF LIPMAN: Were those the ones adjacent to the road?

MS DAWSON: They were, yes. And thanks to the good advice from OEH, they were able to ..... like ..... notify the applicant that they were still in place and, in fact, fenced and quite noticeable. And the applicant has committed to avoiding those sites when they seal the haul road - - -

PROF LIPMAN: They're currently fenced off?

MS DAWSON: Yes, they are. Yes.

PROF LIPMAN: Right.

MS DAWSON: With signs that says, like ..... so I guess the main matter that was discussed was flooding and – in relation to the proposed shaft site. I'm not sure if you wanted to - - -

MR REED: No, no, no.

MS DAWSON: - - - take over from there?

MR REED: Yes. I will hop in if I have something to say.

MS DAWSON: Sure. So the applicant proposed to construct the shaft site to convey the 100 year average recurrence interval flood. This included building the shaft site up on a mound to avoid if the flood levels rise. It wouldn't – the water wouldn't in-flow into the shaft. OEH came back quite concerned that it should also convey the Probable Maximum Flood and this was – like, interesting advice because this is in common from most of our development controls within the floodplain. So it's common – it's more common – and in relation to the floodplain manual that you design controls and mitigation works for the 100 year flood and then you have – the PMF is really for emergency response procedures.

So OEH, I guess, took the stance that ..... mitigate the PMF, which is physically and economically difficult to do. We were satisfied that – with the applicant's response that they could implement emergency response procedures and then because it's not going to be manned – the shaft is not going to be manned, it's really – I guess a low risk. It would only be in times of maintenance or construction when there would actually be personnel down the shaft. So we were happy in ..... like that for the PMF

that really – they had an emergency response plan in place, that we were satisfied that there would be a low risk to human safety.

MR REED: Some of the other factors that played on my mind were that this approval, including the extension of the current consent, is really only till 2027. So we've got seven or eight years of mining – something like that. And so it seemed to me that avoiding flood-related risks for a one in 100 year average recurrence interval was a sound basis for planning. And PMF, as Meg was saying – I understand the floodplain manual says quite straightforwardly that it's not a design tool, it's not a planning tool, that – in fact, it says that it's often not appropriate or not - - -

MS DAWSON: Yes, not physically .....

MR REED: - - - economically achievable, not feasible to avoid those kind of risks which is why – well, we were so surprised to receive the advice that we did. And I looked up this morning, you know, just what the definition of a PMF is. And there's no standard definition for a Probably Maximum Flood but it begins at 1 in 10,000 years and may go as far as 1 in 10 million years. It – but, in reality, it's often not mapped by those figures. That is, if you like, the translation as to risk. But, in terms of managing to PMF, basically, people map the floodplain and say, "Well, the entirely of the floodplain is the area that would be subject to flooding in a probable maximum flood" which makes eminent sense.

But, in terms of looking to avoid risk, it seemed to me to be unnecessary and inappropriate to manage that risk – seven or eight year risk to 1 in 10,000, 1 in 1 million, 1 in 10 million level of risk, particularly when there are other management measures proposed. So I think the critical thing here is appropriate planning to ensure that in persistent wet weather, men and, for that matter, important pieces of material, are not subject to an elevated risk and our understanding is that that is what the company has done with its proposals for not only the flood plan – not floodplain but flood plan and – even to cover the shaft in appropriate weather conditions.

MR CARTER: And that's directed at mitigating the risk to their workers and staff and their infrastructure, so there was - - -

MR REED: Yes.

MR CARTER: Was there any inference in the OEH advice about the structures causing elevated flooding or impacts elsewhere or was it really confined to – how do we deal with that risk?

MR REED: That's my understanding.

MR CARTER: Yes.

MR REED: That they were concerned about water going down the shaft.

MS DAWSON: Yes.

MR CARTER: Okay.

PROF LIPMAN: Yes. Some of the submissions expressed concern that constructing a structure in a floodplain actually exacerbated the flood levels. Is there any substance in that?

MR REED: Well, I think I will – perhaps Meg or Melanie have some matters of detail, but it's really not the shaft in that respect. It's the pad on which - - -

PROF LIPMAN: Yes.

MR REED: - - - the shaft would be - - -

PROF LIPMAN: Yes.

MR REED: - - - that – on which the shaft would sit.

PROF LIPMAN: Yes.

MR REED: You know, it's the size of the pad. But from there, it's a question of how large the floodplain is at that area, were there any constraints. Is there anything you would like to add, Meg?

MS DAWSON: My understanding was in - the surface water and flooding assessment concluded that it wouldn't increase or affect or amplify the flood event but perhaps I should check that and get back to you .....

PROF LIPMAN: Yes. I think there might have been some – I'm not sure how sound the statement was, but they did actually suggest that it did elevate it slightly in those circumstances. Is it appropriate at this stage to discuss the risk of fear to the alluvium there or should we discuss – would you prefer to discuss it in relation to the issue of water generally?

MR REED: No, no, no. That sounds appropriate.

PROF LIPMAN: All right. Perhaps - - -

MR REED: So your – I'm not quite sure what your point is .....

PROF LIPMAN: Well, perhaps the question is that if there – I know that they are going to do a preliminary test bore to see whether there would be any interference with the aquifer or the alluvium. If that is the case, what are the implications there and how can that be addressed?

MR REED: I understand the shaft is to be concrete-lined.

PROF LIPMAN: Right.

MR REED: It's to be sealed. That's my understanding.

MS DAWSON: Yes. So they are going to do a test - - -

MR COCHRANE: If they intersected the .....

MS DAWSON: If they intersected it.

PROF LIPMAN: If they intersect - - -

MS DAWSON: Yes.

MR REED: Yes. Yes.

PROF LIPMAN: Would they need an approval then under the Water Management Act for interference with an aquifer?

MR REED: I would think so. Yes. Yes.

PROF LIPMAN: And that's likely to be obtained, is it?

MR REED: I would think so. Yes. Yes.

PROF LIPMAN: Yes.

MR REED: Yes. Where - - -

MS DAWSON: They have a current licence because of the ingress already going into Hunter Tunnel, so there might be capacity there or they would seek a new licence.

PROF LIPMAN: I think it's a separate licence, isn't it? I mean, that's - - -

MR REED: That would be - - -

PROF LIPMAN: An approval – a separate approval. Yes.

MR REED: - - - an aquifer interference approval as against the licence.

PROF LIPMAN: Yes. Yes.

MR REED: Yes, yes.

MS DAWSON: Yes. For bore.

MR REED: Yes, yes.

PROF LIPMAN: All right. So that's not likely to be any risk to further flooding issues or anything?

MR REED: I don't believe so.

PROF LIPMAN: Right. Thank you. So any questions – further questions on that, Ross?

MR CARTER: No.

PROF LIPMAN: Peter?

MR COCHRANE: Do you know if their water licences are high security or general security?

MR REED: I can't answer that.

MR COCHRANE: I might ask them that.

MR REED: Yes. Yes. I think that's a good question to ask.

MR COCHRANE: Because I've been reading the Hunter Valley Water Strategy, which came out late last year, and they ..... drought is their number 1 risk in the already over-allocated high-security water, and so presumably – I mean, it's a risk to the mine I suppose, but it's a question for them in terms of whether they have included that in their risk management. And I'm still not clear whether they're actually, overall, taking water or generating water, because they talk about both. They have got licences to take water, but they have also got a major disposal of water issue as well, so - - -

MR REED: Well, they do have a major water disposal issue. Sometimes it's a question of quality.

MR COCHRANE: Yes. Because the Permian is saline, isn't it, or the ..... is saline.

MR REED: Yes. Generally speaking. Yes. Not always, but generally. Yes.

MR COCHRANE: Yes.

MR REED: So they would certainly be taking water from the coal seams - - -

MR COCHRANE: Yes.

MR REED: - - - and there would be some leakage into the tunnel from the overlying alluvium. Beyond that, they would have needs for rehabilitation that couldn't be satisfied with mine water.

MR COCHRANE: Yes.

MR REED: It might be able to be satisfied by the surface water capture - - -

MR COCHRANE: Yes.

MR REED: - - - but I don't know the site well enough to answer that.

MR COCHRANE: Unless that's sort of evaporation of the dam, I think, rather than capture for any other purposes. I'm intrigued why Hunter Valley Water – Hunter Water Corporation didn't actually make a submission on this, given, I guess, every coal mine interferes in some way or other with water supply.

MR REED: I think Hunter Water normally makes submissions in regard to its storages or the areas that it pumps from for domestic supply. It's normally the Department of Industry, Lands and Water that, if you like, looks after the amount of water that's in the catchment.

MR COCHRANE: Yes. It seems to me that the bigger risk, if you read this, is drought rather than floods. I think they have seriously underestimated the frequency of major droughts, and the frequency of drought seems to have increased in recent decades. So they're – I think it seems less likely than floods.

PROF LIPMAN: They have got to keep watering the coal.

MR COCHRANE: And they have got to keep watering – well, they're not proposing to water the coal, I think was .....

PROF LIPMAN: Well, they are. They are required – the EPA require - - -

MR COCHRANE: For dust, yes, but not for washing.

PROF LIPMAN: For dust. No. Not for washing.

MR COCHRANE: Yes. Yes. Just – yes.

PROF LIPMAN: Any idea why they have dropped that requirement for the washing?

MR REED: No. I can't answer that, Zada.

PROF LIPMAN: Yes.

MR REED: Yes. Yes.

PROF LIPMAN: I suppose the next thing is to move on to the next point in the agenda if there are no more questions on that. Mark, just – if you could just run us through some of the key issues and the major points that come out from those.

MR REED: Well, it might be a good time to pick up the air quality modelling - - -

PROF LIPMAN: Yes. Yes. Yes.

MR REED: - - - and the relationship with the different consents. The department has difficult decisions to make from time to time in regard to who pays for what in terms of mitigation or acquisition for noise impacts or air quality impacts, and I think I would be the first to say that that's not always easy when consents or modifications are not dealt with at the same point in time, but we try to be fair to mining companies, as well as holding the welfare and amenity of residents in the highest regard. So there are situations where a company will just add enough impact to an airshed to take you over a limit, whereas the primary impact comes from other contributors within that airshed, indeed, commonly, but not always, other coalmining companies, so there's a question of equity there.

That's not quite this situation, because Mount Pleasant, being the nearest neighbouring mine that's going to impact these communities, has been in with the department recently for a modification, and we actually slowed down significantly finalising that modification and also one for the neighbouring Bengalla operation when we insisted that those two companies do a combined interactive air quality modelling exercise that essentially updated and combined their air quality modelling. So we were assured that it was done under not only contemporary conditions, but the same assumptions. So that gave us the basis to rejig mitigation and acquisition conditions for both Bengalla and Mount Pleasant. That really means that the Mount pleasant conditions, which is the point I'm coming to – the Mount Pleasant conditions are recent and are accurate, as far as we can be confident, and they provide for the acquisition of a number of people on air quality impacts and, in particular, PM2.5.

So if you think about Mount Pleasant being a large – or largish open-cut mine not too far to the south and Dartbrook being a small underground mine, the difference in dust generation between the two is massive. A lot of the coal clearance system here will be underground and the haul road where there are trucks moving will now be sealed, and so there's a question of - there's only a limited number of places where you really can control dust, where it's coming out of the underground portal, where it's being loaded on to the trucks along the haul road, where it's being dumped into the shaft and then, from the CHPP, on the other side of the highway. So there are a limited number of places and sources for dust generation. In these circumstances, it seemed appropriate to the department that, notwithstanding that there were small emissions of PM2.5 from the Dartbrook operation, that – and that, therefore, this should lead to a requirement to acquire the affected properties, because an

exceedance is an exceedance, what we like to do in those circumstances is to establish a primacy if we possibly can between who has to – who's the primary contributor and that they should carry the can for their emissions. So, in this case, the primary contributor is – when you ignore background is Mount Pleasant and so there are already acquisition conditions in Mount Pleasant. We've put the same acquisition conditions in the Dartbrook consent but for all bar one property I think it is - - -

MS DAWSON: Two.

MR REED: - - - we've said – all bar two properties - - -

MS DAWSON: .....

MR REED: - - - all bar two properties, we've said while ever there are acquisition conditions in the Mount Pleasant consent, they have to be acted on first. So that really means while ever the Mount Pleasant consent is in existence or it covers a coal mine of – that is similar or equivalent to the current mine, that is, I cannot foresee any circumstance where those acquisition conditions would be stripped out of the Mount Pleasant consent. Even if they were, then they would still have an operation here in the Dartbrook consent. So we think it's a pretty good way to manage both the impacts and the equity arguments that individual companies could well bring to us. Yes, Dartbrook has to acquire but it only has to acquire two – if the landowner comes to it, first up, if the other – I think it's six landowners or maybe more – is it eight – if the other landowners come to Dartbrook for acquisition, then Dartbrook would be right to say, "Well, you have to talk to our neighbours first". Equivalent conditions, same acquisition framework, no impact on the landowners – it's just really a matter of which coal mine you talk to.

MR CARTER: Okay. So it's sort of work through the equity of how do you share the cumulative impact contribution - - -

MR REED: Yes.

MR CARTER: - - - and the Dartbrook proposed conditions point to the Mount Pleasant conditions - - -

MR REED: Yes.

MR CARTER: - - - as first cab off the rank?

MR REED: Yes.

MR CARTER: Okay.

MR REED: That's it in a nutshell.

PROF LIPMAN: So the – you can't envisage a situation where the Mount Pleasant consent might still exist but not require acquisition by Mount Pleasant?

MR REED: No.

PROF LIPMAN: For example, if they were in care and maintenance or, say, insolvent or anything, what would the situation be there?

MR REED: Well, if it was under care and maintenance, then the conditions would remain as they are unless they sought a modification.

PROF LIPMAN: Yes. But would they, in fact, then be regarded as - not obliging Dartbrook to acquire their property, would Mount Pleasant be required to acquire it if it was in care and maintenance?

MR REED: I believe so, yes.

PROF LIPMAN: And - - -

MR REED: Yes.

PROF LIPMAN: - - - what if they were insolvent, say, Mount Pleasant?

MR REED: Then that would be a question for the administrators. I would think that the requirement that – would continue but it's a question of law, something I really can't answer. We haven't had this question before, but – and it would be a question for the administrators - - -

PROF LIPMAN: Yes.

MR REED: - - - and the relevant body of law.

PROF LIPMAN: I was just a little bit concerned - - -

MR REED: Yes.

PROF LIPMAN: - - - that – you know, that the residents may fall between the cracks if some of these contingencies had to arise.

MR REED: Well ..... the normal practice is that most people with acquisition rights take them up fairly quickly. It's not always the case. There – you know, there are people who – scattered across the valley who have had acquisition rights for a long time and have not taken them up, but most people do.

PROF LIPMAN: Yes. Fair enough. Yes. Yes. It's a difficult question. I can see the dilemma. I just had one other question in relation to the air quality. I note that – you know, when I looked at the environmental assessment that the applicant provide

an air quality assessment which contained no reference to greenhouse gas emissions. It ..... quite strange, without any statement as to how they would be managed. And I was also intrigued that in the RtS in relation to the submissions on climate change, the response was to say that there were lots of coal fired power stations out there and more are being built. So I'm just wondering if you have any indication from them of how these are to be managed generally. The only thing I could find, the only reference, was in their economic impact statement.

MR REED: Well, the primary sources of greenhouse gas emissions from coal mines in the ordinary case are scope 1 and scope – well, they are scope 1 and scope 2. And within that framework, most of them are either diesel or electricity. It's a different thing with an underground coal mine. Not all underground coal mines have large quantities of gas in the coal seams, though I do believe that gas was an issue here in the historic mining, but I'm afraid I'm not in a position to say whether that gas was primarily carbon dioxide or methane because that varies along a spectrum as well. I think the first, sort of, answer that I would give you really is that there will be less greenhouse gas emissions from the bord and pillar operation which by its nature is a much lesser level of production than there would be from the longwall mine. So I think is a very pertinent fact in a sense – well, more than in a sense. This mine is an approved mine. It has been approved to emit a level of greenhouse gas associated with a much higher level of production. So it's not in that sense a new impact. Be that as it may, the Department is very cognisant of the judgment by the Chief Judge of the Land and Environment Court Friday week and a half ago and is there anything more you would like to say?

PROF LIPMAN: No. Thank you. I did note that you have put in a condition requiring - - -

MR REED: We always do.

PROF LIPMAN: - - - an Air Quality and Greenhouse Gas Management Report.

MR REED: It probably bears saying that for most mines – like, for both – if there is a lot of carbon dioxide and methane in the coal seams, then mines have to manage that for the purpose of ensuring the safety of their workforce. A lot of gas underground is dangerous, whether it's explosive or just carbon dioxide can cause - high pressure carbon dioxide can cause the wall to blow out in an underground tunnel. So whether it's carbon dioxide or methane, which is explosive, of course, there are very important reasons why mines have to manage that. As soon as there's a large amount of - - -

MR COCHRANE: ..... they – would they manage it by venting it?

MR REED: Or flaring – well, if it's carbon dioxide, that's all that can happen. If there are high quantities of methane, then it can be flared or it can be captured and used. And there are a number of coal mines where that is the case, for example, Mandalong, Appin – a number of underground coal mines. I don't know what the

company's proposals are for gas management below ground. In terms of above ground operations, we find that there are many economic incentives for companies to minimise their greenhouse gas emissions. It's not – it doesn't operate by way of a – you know, a carbon market but, you know, every tonne of diesel that is bought is a cost to the operation, every megawatt of power that is bought is a cost to the operation. So the normal efficiencies that all business apply to the management of materials have a real impact on mines in terms of reducing either – or – transport-related emissions and electricity issues.

PROF LIPMAN: Thank you.

MR COCHRANE: In your – in the, sort of, summary here, you say:

> *…the Department recommends AQC continues to investigate and implement measures to minimise greenhouse gas emissions, such as .....*

etcetera. That doesn't figure in the condition, though, for air quality – the section headed Air Quality and Greenhouse Gas Management Plan doesn't actually mention greenhouse gases at all. It's all about air quality and dust. So there's a little bit of a disconnect between recommending that they investigate and implement measures to minimise emissions to really just requiring an Air Quality and Greenhouse Gas Management Plan which only seems to deal with air quality.

MS DAWSON: The way we link is that operating conditions - - -

MR COCHRANE: Okay.

MS DAWSON: - - - so in the operating conditions, they say:

> *…take all reasonable steps to minimise greenhouse gas emissions* - - -

MR COCHRANE: Okay.

MS DAWSON: .....

PROF LIPMAN: Actually, there were a few aspects to that condition that I wanted to add to slightly, but I thought perhaps we would do it at a later stage when – you know, if there's anything else that we're going to ..... I mean, nothing major, just - - -

MR REED: Yes. It also is caught in the plan via the best practice management that is being employed. So – and it has – the plan has to give effect to the operating conditions as well, so, yes, that's the critical linkage.

PROF LIPMAN: Swept further down the line when we consider some of the other aspects. There might be other conditions that we might ..... so we might just - - -

MR REED: Sure.

PROF LIPMAN: - - - suggest a few extra words in that condition at a later stage.

MR COCHRANE: Yes. Given the coal – these coal seams seem to have a bit of an issue with methane and/or carbon dioxide content. Are there any other equivalent situations where you would ask them to deal with fugitive emissions or those – you know, that question on flaring or capture of methane?

MR REED: Ordinarily, fugitive emissions – well, actually, fugitive is probably the wrong term to use in this case, because fugitive implies, if you like, leakage and there would always be a measure of methane that came out of an underground coal mine in what's called the mine ventilation air, which is the air that's – you know, you pump air in at one end of a coal mine commonly through a shaft, it comes another part in the coal mine out of another shaft and there's a ventilation system that drives that airflow. So there's always a certain amount of, if you like, fugitive methane that is entrained in that flow, but most methane is captured in what are called gassy coal mines through three forms of mine gas drainage.

So the first form, which might not be applied – it depends on how gassy the seams are – is to mine – is to drain gas ahead of mining, and that can be done either through in-seam drilling within – from within the mine – horizontal drilling within the seams hundreds of metres ahead of the area that's going to be worked, and I think – don't take this as gospel, but I think that would be the more likely situation in a bord and pillar mine than in longwall mine, but the other way is to drill from the surface and put in a network of bore holes that allow – vertical bore holes that allow gas to be drained before particularly a longwall mine reaches that area. And each of those forms of mining – or gas drainage, I should say, are connected to pumps and pipes, so you're capturing that methane and it's conveyed safely out of the mine if it is in-seam drilling and gas drainage, and conveyed by pipeline across the surface in the other case.

The other form of gas drainage is called post-mine gas drainage and that, again, is used in the case of longwall mining where the roof collapses into an area called the goaf, the collapsed roof in the area that has previously been lined, and because that's a large area with a lot of broken rock in it, no one goes there. It's quite unsafe and it is – and it's inefficient for mine ventilation if that area is open to the general ventilation system - - -

MR COCHRANE: It's presumably sealed off .....

MR REED: - - - so it's sealed off. I'm going into a little extra detail here for the benefit of the tape, I guess. So that area is generally sealed off and sometimes it can be managed through different ventilation systems to make sure there's a negative gas flow and that kind of thing. And if there is a lot of gas in the goaf – what's called the goaf, that area of collapsed mine workings, then you will put in more vertical holes to drain that. So that also is a form of gas capture. So if it was released without

flaring or turning to some beneficial purpose, then, yes, it becomes a fugitive emission - - -

MR COCHRANE: Yes. Question - - -

MR REED: - - - but it doesn't have to be a fugitive emission, because it has been captured in a pipe network, so it can then be, usually, flared without any great expense or difficulty, which reduces the greenhouse gas value back to – well, one molecule of methane becomes equivalent to one molecule of carbon dioxide, whereas, before, it was equivalent to 20 or 21 molecules of carbon dioxide.

MR COCHRANE: Yes. So presumably when they are ventilating the air flow, the would be monitoring methane levels as a safety measure - - -

MR REED: Absolutely. Absolutely.

MR COCHRANE: - - - so they would have an idea of what they were releasing then.

MR REED: Constantly. Yes. Well, in terms – I believe that's the case with mine ventilation air, but most of those measurements are taken underground.

MR COCHRANE: Right. And we don't know whether this would be – this resource would be classified as a gassy coal or not?

MR REED: Well, it – I believe the working is – the proposed bord and pillar workings are in the same seam where the longwall mining was taking place and they closed down, so I think the answer to that is yes.

MR COCHRANE: Yes.

MR REED: It's a question of whether it's carbon dioxide or - - -

MR COCHRANE: Methane.

MR REED: - - - methane rich. Yes. Yes.

MR COCHRANE: I mean, it would seem to me that there would be the potential for the release of greenhouse gases from a coal resource itself could exceed their energy use and fuel consumption figures.

MR REED: In – well, that's a question I can't answer, Peter.

MR COCHRANE: Yes. But it's one we should ask, it seems to me.

MR REED: It's – I think it's a very legitimate question.

MS DAWSON: If I just go back a step. It was really the Wynn seam. So the first - - -

MR COCHRANE: Yes. That was – the Wynn was a problem one. Yes.

PROF LIPMAN: Yes.

MS DAWSON: - - - seam, that was the problem seam.

MR COCHRANE: And Kayuga is lower - - -

MR REED: That's the bottom seam.

MS DAWSON: The bottom seam. Yes.

MR REED: Okay.

MR COCHRANE: - - - gas.

MS DAWSON: Yes. Which is why they moved away from the Wynn seam, but the Kayuga seam still, I think, has - - -

MR COCHRANE: Still has some gas.

MS DAWSON: - - - presence of gas.

PROF LIPMAN: Yes.

MS DAWSON: Yes. Just not as bad as the Wynn.

MR REED: Thanks.

PROF LIPMAN: We don't have much time left, but there are a couple of other issues. Does anyone have any – Ross or Peter, do you have any questions on the noise and other aspects, or any other issues?

MR CARTER: No. All that's fine.

PROF LIPMAN: I was just – maybe if you could just say something on the social impact assessment and the economic impact assessment.

MR COCHRANE: Zada, actually – sorry – just before we get there. Just going back to dust briefly, something you said, Howard, has triggered my mind. So we've talked mostly on the dust from the extraction and the transport, but you actually mentioned – and I hadn't thought about it – it's actually then dumped down the shaft, isn't it, which is probably the major dust generating activity on the surface, would it not?

MR REED: The coal would normally be wet.

MS DAWSON: Yes.

MR REED: Yes.

MR COCHRANE: Okay.

MR REED: It would – so it's conveyed out of the mine in a wet state to keep dust down underground and - - -

MR COCHRANE: And then dropped down the shaft damp.

MR REED: Yes. Yes. Yes.

MS DAWSON: They have got sprays on the shaft – on the bin and shaft.

MR COCHRANE: Okay. Okay. Sorry. Thank you.

MS M. HOLLIS: In the building - - -

MR COCHRANE: Yes.

MS HOLLIS: - - - .....

MR COCHRANE: Well, it's just partially enclosed, I think, not fully enclosed, so I'm just wondering what partially enclosed means. Screened from public view probably.

PROF LIPMAN: I think it's a drive-through thing with a roof, from what they were talking about - - -

MR COCHRANE: There's an open side - - -

PROF LIPMAN: - - - and there's some sort of a top that they're keeping at the side that they can put on it. I'm not quite sure how all that works, but - - -

MR COCHRANE: I guess we can ask them to describe what it will look like.

PROF LIPMAN: We can ask them to discuss it.

MR COCHRANE: Yes. Okay. Yes. Sorry. Back to noise.

PROF LIPMAN: No. We're off – unless there's something particular, Howard, that you would like to mention in relation to noise and water, at this stage, I think we could move on to the social impacts assessment and its adequacy, and the economic impact assessment and any issues that you identified there.

MR REED: I might defer to Meg, I think, or Mel.

MS DAWSON: No, there are no major issues. We definitely pay particular attention to the social impacts and with those two assessments, we thought it was important, and we agree with the applicant's approach of comparing it to the base case in this case was care maintenance, and that's particularly important because that's going to be what the community perceives as like the mine reopening. So that's what the assessment focus on, whereas air and noise we focus on what's approved, almost as if it's operating right now.

PROFESSOR LIPMAN: I noted that you did have some problems with it because you sought additional information from them which they did supplement to some extent, supplement to the SIA.

MS DAWSON: I guess I was talking conclusively like at the end we were satisfied with the assessment, but yes, we did go back after exhibition and ask them to do a social impact assessment in accordance with our new guideline.

MR REED: And that was probably the key reason for that was because of the level of community concern. So we're in a state really of transition. The department – well, I think the department's view is that it's always assessed social impacts. The impact of noise emissions or air quality emissions or visual impacts or lighting impacts on neighbours is clearly a social impact. But there hasn't been that headline, if you like, in the department's analytical framework of social impacts. The department is rectifying that. It's employed a couple of social impact assessment experts and produced social impact assessment guidelines that at this stage only have application for the mining industry and coal seam gas and extractive industries. They're not – have not yet been applied more broadly. So if – I think it's fair to say that social impacts of largescale mining in country areas we've seen as the itch that needed to be scratched, if I can use that vernacular. So the guidelines are in existence, but really we're in a transition between a situation before there weren't any guidelines, and now there are, there was a formal transition framework. It's a question for consultants becoming familiar with the guidelines and applying them appropriately. So we're in that in between area, and given a community concern over reopening a long-closed mine, we thought it was a good idea to push the company to do social impacting assessment.

PROF LIPMAN: All right. Thanks. And with the economic impact assessment, just from – what came out of that for me is that it's a fairly marginal type of operation profit-wise, at least for the coal mine company. What are the implications of that?

MR REED: Well, I think you should talk to the company about that, but our judgment of this proposal is that it's short-term; it's based on generating cash flow, I believe, for the operation, and that the company clearly has an eye to doing the assessment and obtaining the approval for a larger mine going forward. I think it has been open about that. The community know that and I think that's part of the reason

why the community is concerned about the reopening of the existing mine. I dare say that not so many of them are critically concerned about short-term bord and pillar operation. They're primarily concerned about the company's long-term proposals. Company has been upfront about that. This is a short-term operation, in my opinion, with a high value on some cash flow while it's developing its other proposal.

PROF LIPMAN: Thank you. Ross, any questions?

MR CARTER: No .....

PROF LIPMAN: .....

MR COCHRANE: Just in – I'm sorry. I'm going to go back to greenhouse gases because you say that the comparison here wouldn't significantly increase allowable greenhouse gas emissions as it's already been approved for extraction, but – so, I mean, there are other situations where the base case actually changes where its standards change, community expectations change, and yet the base case for greenhouse gas emissions is actually what was originally agreed in 2001 and, in fact, technically it's only got three more years to run to 2022, so it's actually – its base case has got a little bit different now in two respects: (1) it hasn't actually doing what it originally was approved to do; and secondly, I think community expectations have changed quite a bit over that time.

MR REED: Well, I think the critical factor there, Peter, is whether or not there's a policy framework that would allow the department to effectively say you can run a coal mine but with very limited or - - -

MR COCHRANE: Higher standards .....

MR REED: - - - lower number of greenhouse gas emissions than was previously approved, so - - -

MR COCHRANE: And we don't have that.

MR REED: Well, no, we don't.

MR COCHRANE: Yes.

MR REED: In regard to air quality, standards have changed.

MR COCHRANE: Yes. Yes.

MR REED: In regard to noise - - -

MR COCHRANE: Yes.

MR REED: - - - standards have changed. There's existing policy framework - - -

MR COCHRANE: Yes.

MR REED: - - - that can be applied in a decision taken in 2019, and the department has made every effort to apply - - -

MR COCHRANE: The contemporisation.

MR REED: - - - those contemporary standards.

MR COCHRANE: Yes.

MR REED: Yes.

MR COCHRANE: Yes. But they haven't actually shifted for greenhouses gases.

MR REED: Well, I don't believe there's a basis on which we could do that - - -

MR COCHRANE: Yes.

MR REED: - - - in – unless there was a – you know, like, even the government's greenhouse action plan – the 2050 one – zero net emissions.

MR COCHRANE: Yes.

MR REED: If you look carefully at that document, it doesn't – it makes no statement - - -

MR COCHRANE: Yes. There's no guidance .....

MR REED: - - - in regard to the broader economy. It's directed solely at actions taken by or on behalf of the government itself.

MR COCHRANE: Yes.

MR REED: So that's where that commitment to zero net emissions lies, and in the absence of clear policy framework that governs greenhouse gas emissions - - -

MR COCHRANE: Yes.

MR REED: - - - then I believe we have to treat all emitters alike.

MR COCHRANE: Yes .....

MR REED: Within the principles that are established across ..... regarding greenhouse gas management being best practice.

MR COCHRANE: Yes.

MR D. KOPPERS: I've got one question.

PROF LIPMAN: Yes.

MR KOPPERS: So if you could – just for clarification. The base case for the economic analysis – was that based on approve or the new extraction in isolation to that?

MS DAWSON: It's from care and maintenance to the proposed operation.

MR KOPPERS: So I assume that it's .....

MR REED: So it's from what the mine is currently spending - - -

MS .....: .....

MR REED: - - - and the care and maintenance. Yes. So there are a certain number of employees and there's a certain amount of local expenditure, but that will be quite low.

MR KOPPERS: Okay. So the environment impacts - - -

MR REED: Yes.

MR KOPPERS: - - - just to confirm have been assessed based on the mine as approved and operating versus social .....

MR REED: No.

MS .....: No.

MR REED: No. As approved and not operating.

MR KOPPERS: Approved and not operating.

MR REED: As approved and – but under care and maintenance. So it's not comparing the benefits of an operating efficient long wall mining – long wall mine with the proposed small bord and pillar operation. The comparison is between a closed mine with a few workers and minimal expenditure and the proposal here.

PROF LIPMAN: No more questions? Well, thank you very much.

MR REED: Okay.

PROF LIPMAN: We will close the meeting now.

RECORDING CONCLUDED **[10.43 am]**