



New South Wales Government
Independent Planning Commission

TRANSCRIPT OF MEETING

RE: CHAIN VALLEY COLLIERY CONSOLIDATION PROJECT
(SSD-17017460)

APPLICANT MEETING

COMMISSION PANEL: PROFESSOR NEAL MENZIES (CHAIR)
 MS JULIET GRANT
 DR BRONWYN EVANS AM

OFFICE OF THE IPC: JANE ANDERSON
 ISAAC CLAYTON

APPLICANT
REPRESENTATIVES: KERRIE DAVIS (DELTA ELECTRICITY)
 JOSHUA CORNFORD (DELTA COAL)
 DAVID HOLMES (UMWELT)
 PENELOPE WILLIAMS (UMWELT)

LOCATION: ZOOM VIDEO CONFERENCE

DATE: 1:00PM – 2:00PM
 MONDAY, 9th FEBRUARY 2026

THE MEETING COMMENCED

5 **PROF MENZIES:** So, before we begin, I'd like to acknowledge that I'm speaking to you from the lands of the Yuggera and Turrbal peoples where in the Brisbane River Valley. I acknowledge the traditional owners of the lands from which we're virtually meeting today and I pay my respects to their Elders past and present.

10 Welcome to the meeting today to discuss the Chain Valley Colliery Consolidation Project (SSD-17017460) currently before the Commission for determination. Chain Valley Colliery and Mannering Colliery are established coal mines located within the Lake Macquarie and Central Coast local government areas. The collieries are owned and operated by the Applicant, Delta Power & Energy (Chain Valley) Pty Ltd. The Applicant is seeking approval to consolidate the existing approvals of Chain Valley
15 Colliery and Mannering Colliery under a single consent, extend the mine life by two years, increase throughput, and allow additional coal extraction within approved mining areas beneath Lake Macquarie.

20 My name is Neal Menzies. I'm the Chair of this Commission Panel, and I'm joined by my fellow Commissioners, Juliet Grant ...

MS JULIET GRANT: Hello.

25 **PROF MENZIES:** ... and Bronwyn Evans.

DR BRONWYN EVANS: Morning.

30 **PROF MENZIES:** We're also joined by Jane Anderson and Isaac Clayton from the office of the Independent Planning Commission.

In the interests of openness and transparency and to ensure the full capture of information, today's meeting is being recorded, and a complete transcript will be produced and made available on the Commission's website.

35 The meeting is one part of the Commission's consideration of this matter and will form one of several sources of information from which the Commission will base its determination.

40 It's important for the Commissioners to ask questions of attendees and to clarify issues wherever it's considered appropriate. If you're asked a question and not in a position to answer, you may take the question on notice. Following the meeting, the Commission will advise you in writing of any questions taken on notice that the Panel considers to require a formal response. Any subsequent response or information provided to the
45 Commission will then be published on our website.

I request that all participants here today introduce 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 our transcript.

Okay, so we can now begin. So, I think it's sensible if we want to go round the room for the Applicant's people just to make sure we recognise all the voices.

5 **MR JOSHUA CORNFORD:** Yes, I'll start. My name's Joshua Cornford. I'm the Mine Manager at Chain Valley Colliery. I'll be presenting the subsequent slides. I've been the Mine Manager at Chain Valley for the best part of four years, so I suppose I'll be the main speaker as far as an overview of the project goes today.

10 **MS DAVIS:** Good morning, or good afternoon, sorry. My name's Kerrie Davis. I'm Manager Health Safety and Environment for Delta. Yes, I'm here with Josh today.

MR HOLMES: Hi, I'm David Holmes. I'm the Principal Environmental Consultant at Umwelt. I was the REEP on the EIS for the Chain Valley Continuation Project.

15 **MS WILLIAMS:** I'm Penelope Williams. I'm Principal Environmental Planner at Umwelt and I was the project manager preparing DA's and all of the assessment documentation for the project.

20 **PROF MENZIES:** Joshua, if you want to jump into your presentation. Are you happy for us to stop you and ask questions as you're working through that?

MR CORNFORD: Yes, that's no problem.

25 **MS DAVIS:** Sorry, just – you can see someone logged in as L77408 – it's Kerrie here – that's me trying to share the presentation via Zoom, which I'm not familiar in how to do. If there's any Zoom experts in the room, that'll ...

30 **MR ISAAC CLAYTON:** If it'll help, we can share the presentation for you and then you can just ask us to change the slides as needed.

MS DAVIS: That would be fantastic. Thank you.

35 **MS JANE ANDERSON:** Commissioners, sorry, just before we continue. We do have Richard Wrightson and Clair Osbourne on the agenda. Can we just confirm they are not attending today?

MS DAVIS: Yes, they send their apologies.

40 **MS ANDERSON:** Okay. Thank you.

PROF MENZIES: Thanks.

45 **MR CLAYTON:** Okay, Kerrie, we've got the slides up. Can you see that or does that need to be zoomed a bit more for you?

MR CORNFORD: No, I can see them.

MS DAVIS: That's fine, thank you.

5 **MR CORNFORD:** Okay. If we just go to the next slide. So, a bit about the site history and our current operations which has just been touched on. But Chain Valley and Mannering Colliery have been mining in the area since the early 1960s. Chain Valley opened in 1962, and it's been supplying coal to – or both of them have been supplying coal to Vales Point Power Station for a number of years. There was another mine adjacent to the two collieries, Newvale Colliery. It also supplied coal directly to Vales Point, but Newvale closed and the site has since been rehabilitated.

10 So, mining operations at Chain Valley and Mannering are currently undertaken under their own consents. So, the Chain Valley consent has mining approved in the Fassifern Seam only, and it allows secondary extraction in certain areas within that boundary under the lake, under Lake Macquarie. It does require an Extraction Plan prior to that being undertaken though.

15 Mining operations at Mannering, as I said, a separate consent. It's got approved extraction areas in the Fassifern Seam but also the Great Northern Seam which sits above the Fassifern Seam. It includes again areas beneath land and Lake Macquarie. But critically, it's limited to only first workings or areas where – or mining methods where there's going to be negligible subsidence only. Now, currently there's no mining operations currently being undertaken within the approved Mannering area.

20 Next slide. So, the plan on the left there is a regional mine plan and it shows you the Lake Macquarie and some of the surrounding suburbs. It's an area that's been extensively worked over the best half of a hundred years, with a number of operating and now-closed collieries.

25 So, the yellow workings shown on the plan are from the Wallarah Seam, which is the top economic seam in this area. There's no current mining in the area in the Wallarah Seam. But the blue workings show existing workings in the Great Northern Seam which is the next seam down from the Wallarah Seam. And the purple workings show existing works within the Fassifern Seam which is where all current operations at Chain Valley Colliery are.

30 Of note is the Mannering Colliery to the north and shown in top of that plan there. And then the Chain Valley and Mannering Colliery workings are shown there. So, it does cover an extensive area.

35 Since around 2018, all the coal from Chain Valley has been brought to the surface by the Mannering Colliery workings, and as a result, is handled on the Mannering Colliery surface site. Historically, Chain Valley and Mannering were operated separately but they were joined underground in 2017, and after which there was no coal handling occurring at Chain Valley Colliery surface site. It was only via the Mannering surface site.

40 All the coal that's currently mined, we transport to Vales Point Power Station via overland conveyor. And it's shown in the figure in the following slide. It might actually be the slide after if we click through. So, this slide here just shows the two existing approval boundaries. So, the approval boundary on the left is the Chain Valley approval boundary. The different colours there, so the blue area is what we call a

5 Zone A area where, in terms of subsidence, we're limited to 20 mils. The shaded purple area is the Zone B area which is under Lake Macquarie and it's where subsidence is limited up to 780 millimetres. There is an area in between that with a seagrass protection barrier, which again is limited to the 20 mils or the Zone A subsidence limits.

10 The picture on the right or the plan on the right shows the existing boundaries or consent boundaries of Mannering Colliery, and that – the entirety of that consent is limited to the 20 mils subsidence, so the Zone A subsidence.

15 Next slide. So, just to give you a bit of an overview of the surface facilities on both sites, and they're separated by about 2 kilometres. So, the picture on the left there shows the Mannering Colliery surface site. All up, it's about 30 hectares in terms of area. Of note – and some of the numbers might be a little bit difficult to see on this – but number 32 is the coal handling plant, which essentially is just a crushing and sizing plant. There's no beneficiation, no washing of coal, no reject or tailings generated. 40 shows the final product bin, and 43 shows the overland conveyor which runs directly north to Vales Point Power Station, and we'll see that on the site tour next week; 45 over on the right there shows the discharge point for the dewatering on the Mannering site.

20 On the right-hand side picture is the Chain Valley surface area. It's about 35 acres all up. Of note, number 38 is the dewatering dams, and 7 and 6 just to the sort of bottom-right of that picture is the licensed discharge point associated with those dewatering dams.

25 Moving on to the next slide. So, the project overview, and again this was covered in the preamble, but the project involves consolidating the existing approvals for both Mannering and Chain Valley under a single consent, so bringing two consents together as a single consent. Extending the life of the operation by two years, from the 31st of December '27 to the 31st of December '29. The project actually reduces the combined extraction limit from both operations to 2.8 million tonnes. So, the combined current limit is 3.2 million tonnes, so we are actually reducing that. But it does align the coal handling from the Mannering surface facility to 2.8 tonnes, which is an increase from the current approval of 2.1 million tonnes.

30 There's no change to the coal handling from Chain Valley pit top, so it retains the 1.25 million tonnes per annum coal handling limit to the Chain Valley pit top. It also retains the road transport options from the Mannering pit top as well. And all coal handled from Mannering is going to be transported to Vales Point via existing conveyor.

35 The important point is that the project doesn't seek to change any of the existing approved mining areas or any of the surface facilities, so there's no surface development or anything associated with the project.

40 Next slide. So, one change just to dive into a bit more is extending that Zone B subsidence area in the appropriate portions of the Mannering lease. And that plan on the left there just shows the boundaries of the consolidated approval, and that red

hatched area shows the extension of that Zone B area into a portion of that Mannering lease. And that's about extending our current extraction methods that we use at Chain Valley below Lake Macquarie into the approved or existing mining areas under the Mannering consent.

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Mining methods that are going to have more than 20 mils subsidence in that area are still going to be subject to the Extraction Plan process. And that's consistent with current approval requirements. What's also consistent is, what we're putting forward is – and now just to the current approval that Myuna Colliery has for operations to the north of the Chain Valley mining area.

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Next slide. Oh, sorry, yes.

DR EVANS: Yes, before you go on. Bronwyn Evans. I just wanted to ask a question about subsidence to date. I'm interested to know in the current operations what is the subsidence that's been identified with the current monitoring programs for your current operations in those areas that you – under the lake.

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MR CORNFORD: In the Zone B areas?

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DR EVANS: Yes.

MR CORNFORD: Yes. So, currently we have been undertaking secondary extraction in the northern mining area, which is the area up under the Morisset Peninsula to the north or at the top of that plan there. The secondary extraction that we've undertaken, that's been in the last 12 to 18 months, and the subsidence monitoring that we have for under the lake is that there's been negligible subsidence. Bearing in mind the methods that we use, the surveys that we use, aren't as accurate as the ones that we can use on the foreshore and on land. But it's probably worth taking that on notice and we can get that actual data to you, if that's something that you'd like to see.

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DR EVANS: Yes, thank you.

PROF MENZIES: Just to extend that a little, Joshua. Your work's only been going for a year, it's probably unlikely that it will have reached equilibrium with the subsidence that will ultimately occur. Are there lessons from the Myuna Colliery that's been using secondary extraction for longer – what are their subsidence levels like?

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MR CORNFORD: To my knowledge, Myuna hasn't done a lot of extraction under the lake; they have done some. However, in terms of designing the system of work and the system of mining, we engage external geotechnical consultants to come up with subsidence predictions based on what we're proposing to do.

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They'll use the regional information that they get from other operations, including, you know, floor restraints, roof restraints, overlying strata, lithology and that sort of stuff, all that sort of data, to develop the subsidence predictions for the method of mining that we propose. And that's covered throughout that Extraction Plan process when we submit those Extraction Plans.

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PROF MENZIES: Okay. And I know you're going to speak specifically about subsidence later, so we'll probably have some more questions when we get to that point.

5 **MR CORNFORD:** Yes, understood.

10 **MR HOLMES:** Perhaps if I just – if I can just add something just quickly there, Neal. The secondary extraction's been occurring under, in the Zone B area under the CVC consent for quite a long time, like, I don't know, well, since it was first approved. But it was all sort of mini-wall mining initially. So, there is good understanding of the subsidence impacts in that area. We can send you the details of like how much has occurred. It's only the more recent mining in the north that's had a slight change of methodology and that's why. And most subsidence occurs pretty quickly after with the original mining, it's sort of not a long term, like, it sort of drops down after a period. 15 So, you'd expect the majority of subsidence to be observable within sort of 12 months, I guess, of mining.

PROF MENZIES: Okay. Thank you.

20 **MR CORNFORD:** So, some of the benefits of the project, just to highlight those, particularly from our perspective. We're consolidating the consent conditions or two consent conditions under a single consent. It modernises some of those conditions; that's going to simplify the administrative arrangements both for us and also government regulators as well.

25 It enables production from our combined operations to align with Vales Point requirements. Coal transfer from Mannering via conveyor being the primary means of the transport of that coal. But it does retain the supply option to export and domestic customers should there be a significant supply disruption associated with Vales Point. 30 And that obviously mitigates any impacts on employees in the mine associated with any of those unplanned shutdowns.

35 The change to the Zone B subsidence area. The existing boundary for that secondary extraction is based on a line on the page, it's based on a historical mining lease boundary, and it's unrelated to any of the potential environmental impacts. Those changes, they provide greater flexibility in terms of mine planning but is or will improve resource recovery opportunities for us. They're not going to have any material changes on the environmental impacts relative to what we currently do.

40 Of note, as I've said before, there's further approvals under the Extraction Plan process before any of that extraction can occur below the lake which is going to have a subsidence impact of greater than 20 mils.

45 The next slide. There's obviously ongoing economic benefits at a range of levels there. Ongoing employment of 330 people and ongoing contributions to the local economy. Of note, the project doesn't extend the life of Vales Point. If it's not approved, alternative supplies of coal are going to have to be sought from 2027 onwards for Vales Point.

5 Now, Chain Valley doesn't necessary provide or always provide the cheapest coal for Vales Point, but there are a number of benefits to Vales Point and to the broader community for the current arrangement continuing. And we're going to be less susceptible to those international price drops that we saw in 2022–23, less susceptible to third-party supply constraints or particularly disruption from logistics.

10 So, we're not going to be railing coal. We're not going to be sending that coal that we would otherwise mine from Chain Valley down the Great Northern Railway Line to Vales Point. It reduces the impacts of transporting that makeup coal, you know, noise, air quality and greenhouse gas emissions from other sources to Vales Point. And also, Vales Point's rail handling facilities are probably less suited to supplying other domestic coal than it is to transporting that coal across a conveyor belt a couple of kilometres distant from the mine adjacent.

15 So, Vales Point is going to remain a key component of the electricity grid going forward. It is not going to be forever. But reduced coal supply and price risks for Vales Point – if we can do that, it's going to continue to mitigate potentially higher electricity prices during the energy transition that's occurring.

20 **PROF MENZIES:** Joshua, that all makes sense to us. But we are intrigued by the difference in timing. The power station closing in 2033, but the requested extension here only being for two years.

25 **MR CORNFORD:** Yes, that's a good question. This project was put together and submitted in 2022. In 2022, the life of Vales Point was 2029. In – and I'll be corrected here – but I believe it was at some point in 2023, it was announced that Vales Point would operate longer, subject to commercial viability. Given the project had already started its assessment and its process through this approval project, a decision was made then not to alter that date but to leave it as is.

30 **PROF MENZIES:** Okay. Yes. That explains how we got here, Joshua, but it does seem peculiar.

35 **MR CORNFORD:** Okay.

40 **MR HOLMES:** Neil, maybe I'll just say. We were actually hoping for a relatively quick approval because we didn't think it was going to be that much of a complex project in many ways, because it is largely an extension and, I guess, we were hopeful that that would keep having. But as it's dragged on, probably it would have been prudent to have amended perhaps. But time/life of mine is also an important factor in this.

45 **MR CORNFORD:** Next slide. So, the EIS provides the analysis of the potential environmental and social impacts of the project. Now, both mines have got a long operational history. The project's essentially a continuation of those operations. So, there's a fairly good understanding of the environmental and social impacts, and that's been informed through the EIS engagement process.

Some of the key issues identified both in preparing the EIS as well as the submissions we got during the exhibition period, particularly related to subsidence, noise quality – noise, sorry, air quality, water quality, and greenhouse gas and climate change impacts.

5 Importantly, the project’s potential environmental impacts are pretty well associated with a longer period of operations rather than any change in magnitude or scope to the existing approved operations. And that’s, in our view, quite an important point, and it goes to what David said before – we sort of saw this in 2022 as a pretty straight-forward process.

10 Now, a large number of the submissions received on the EIS, particularly those related to the climate change impacts concerned impacts concerned with the continued operation of Vales Point, which isn’t part of the project as such.

15 Next slide. So, just in summing up, I guess, an overview of the project. Both mines have been operating since the early 1960s, so over 60 years of operation. The project really is – it represents a pretty minor increase in the life of both of those operations, and that life is associated with the extended life of Vales Point.

20 Obviously, consolidating those existing consents has a number of benefits. Updated and contemporary approval conditions, as well as a simplified regulatory arrangement both for us and for regulators as well. Importantly again, the project’s not going to result in any material changes to the environmental and social impacts other than those associated with extending the duration of that mine life. Extending that mine life, it
25 extends employment and economic benefits to the local and regional community, and it also continues to secure coal supply for Vales Point, and then there’s the associated benefits that that provides to New South Wales’s energy security as we transition to a lower carbon energy grid.

30 So, that’s, I guess, a bit of an overview of the project. And the other material in the slide pack really has been put together, I guess, to try to address some of the points that were included in the meeting agenda that was sent out last week. So, I don’t know if you just want to have a general discussion about that or if you’d like to go through those slide-by-slide, it’s up to you.

35 **PROF MENZIES:** Fellow Commissioners, I’m inclined to continue through the slides because some of the key aspects we’re interested in are covered.

40 **DR EVANS:** Yes, that works for me. Thanks, Neal.

45 **MS GRANT:** Can I – sorry, can I ask one question, Neal. So, when you were talking about the public benefits just before, Joshua, you mentioned that the rationale behind the extension is to serve the extended time from the Vales Point Power Station, and that one of the benefits is the fact that you can then continue to use the conveyor belt and there’s no additional traffic impacts. But then also in the same application we’re talking about retaining the ability to export overseas. So, that seems a little bit contradictory. Could you explain how that works?

5 **MR CORNFORD:** Yes, I understand where you're coming from. We're an integrated business – Delta's an integrated business and Delta owns Chain Valley and Mannering to supply coal to the power station. Now, existing consent conditions, or one of the existing consent conditions is that ability to provide coal to other customers via road transport, and that's been a historic choice that owners of Chain Valley have made from time to time.

10 Since Delta's operated the mine from 2019, there hasn't been any transport of coal over road to any other customers. But it is a condition that we think is beneficial to retain within the consent, because it does give us options should there be any long-term impacts or long-term issues with the primary customer which is Vales Point.

I don't know if you'd like to elaborate on that any further, David?

15 **MR HOLMES:** Yes. I guess the point to make there, and it's highlighted a bit by what's happening with Myuna and Eraring at the moment, is that if you're solely limited to one supply factor and there's a shutdown or some reason you can't supply to that particular unit, then the operation itself has to fully shut down. And then that has lay-off implications for employees and you're still generating costs associated with managing ventilation and operations.

20 So, the ability to have an alternate supply or sales market allows operations to sort of continue and maintain the ongoing operation and viability of the mine. Otherwise, you get this sort of up and down effect which is, you know, you want to try and avoid for everybody really, if you can, because it's – it's not desirable from a socio-economic impact to lay-off employees.

25 **MS GRANT:** So, how often might that occur, that the plant would have to close that would have that sort of consequential impact? And obviously hasn't since 2019, if you haven't need to rely on that option.

30 **MR CORNFORD:** Yes, that's correct, that was the point I was going to make. It's not something that's happened since 2019. There's not, in terms of the operation of the power station or my knowledge of the operation of the power station, any intent for any significant plant shutdown period between now and the end of 2029 that would necessitate that option being utilised by the mine. However, it's an existing approval condition that, from a business point of view, it's prudent for us to maintain.

35 **MS GRANT:** Okay, understood. Thank you.

40 **MR CORNFORD:** So, moving onto the subsidence part. So, we've just tried to lay this out as per the agenda that was sent through. So, the first point was related to subsidence.

45 Now, it's important to note that Newvale next door did have an unplanned subsidence impact on the foreshore around Chain Valley Bay in the late '80s. So, as a result of that, it is something that we remain focused on and is a focus for ongoing operations both at Chain Valley and Mannering.

5 So, our mining operations in recent times, you know, Chain Valley/Mannerling in the Zone A area under our existing conditions haven't had any observable surface impacts, and that's classed as less than 20-mil subsidence. Now, the conditions actually – or the proposed conditions going forward don't actually have that 20-mil subsidence, it's been substituted for negligible subsidence based on the advice from the Independent Expert Advisory Panel for Mining. Just in terms of how you measure that, because 20 mils is very difficult to measure when you take into account ground swell and everything like that. And I think that might be covered on another slide and I may have just jumped ahead there.

10 But subsidence, yes, so no material impacts on the benthic environments have been determined through historical mining in Zone B under the existing consent. We have acknowledged that the potential for soft floor and roof conditions can result in higher-than-expected levels of subsidence in the Fassifern Seam, and that was an area of focus for the IEAPM as well.

Just jumping ahead –

20 **PROF MENZIES:** Just before we move on. The soft floor and roof condition, it certainly did come up in the Independent Expert Advisory Panel for Mining's reporting. You must have data from – David, you were saying some of the other areas that you're mining have been mined for several years or some period of time. Do you have data that sort of establishes, for example, the rate of collapse that everything's happened within a year, and that you will be able to meet the 780-millimetre subsidence target?

MR HOLMES: Josh, did you want to do that first or do you want me to ...?

30 **MR CORNFORD:** Look, the data and the – I guess, the empirical knowledge that we've gained over a number of years gives us a fair degree of confidence or a very good degree of confidence in what we predict. And I'm by no means an expert at predicting subsidence, there are geotechnical engineers that are far cleverer at this than I am. But quite a lot of work does go into that, and we are still in the process, and we are continuing down the process, and we've done this the last few years, of actually taking floor samples and using those floor samples to get [URS straints? 00:36:38] of those claystone bands in the floor that can be then put into the subsidence models to, I guess, verify the results that we're seeing and the predictions that we're making.

40 **MR HOLMES:** Yes. I guess, the only thing I would add is that some of the earlier responses to the IEAPM's comments included some detailed surveys and modelling or results from the earlier mini-wall mining. There was one area there back early in the consent where they did have a higher-than-expected level of subsidence. There was extensive work done to understand what happened there and why. There was no – monitoring hasn't indicated any impacts from that, like, adverse environmental impacts. But the design changed significantly after that to include further consideration of floor, wider chain pillars between the panels to sort of provide additional support.

45 As I said, it's this understanding of, you know, it's a constantly evolving practice of what's happened, you observe what happens, you understand what happens, and then

you move on. So, I guess the point I want to stress here is, up until 2027, the current consents continue, they operate. The extended area of extraction, moving forward, so that extra two years, there's nothing special about that particular area that's different here. It doesn't impose new or additional risks in terms of subsidence. It's the same continuity of issues and as the mine moves into those areas, it gets further data around the site-specific information which then informs the detailed design, which goes into the Extraction Plan. And then that's considered by the resources regulator in deciding whether or not to approve that particular plan.

The important part about that, and the IEAPM process is that specific additional requirements are being identified and included in the draft conditions now that require that further information to be included in the Extraction Plan process. And that's very specific to these points about the floor, but also important in relation to the conglomerate layers above the mining which have a sort of bridging effect which manage subsidence impacts.

So, it all depends on site-specific information. What occurred in one area is not necessarily directly analogous to another area, but it's part of an iterative informed process. And the mine design being proposed to be carried forward is essentially one that is more adaptable and more manageable to these impacts than the old mini-wall process as well.

Just on that. The extension into the additional area. One thing that that adds to the project in terms of a benefit is that it actually allows greater flexibility in the design of these mine plans, to manage these sorts of risks as well. It's not bound by an artificial sort of line which is just drawn based on an old mine boundary, say, northwest or northeast of this line you can do this. It sort of says we can – Chain Valley or Delta can come up with a mine plan which crosses that old boundary that delivers a better outcome in terms of resource extraction and also subsidence management, which, you know, was artificially constrained before.

DR EVANS: So, I just had a question on the second-to-last dot point there about the impacts on benthic environments. And I just would like – what's the nature of the existing seagrass and benthic monitoring programs and how will that change in the future?

MR CORNFORD: Do you want to answer that, Kerrie?

MS DAVIS: Yes. So, we do annual monitoring of our seagrass beds in Lake Macquarie and biannual monitoring of benthic surveys, which haven't identified any material impacts associated with mining in those areas. Moving forward, there's no proposed change to the level of monitoring that Delta undertakes as part of the approval conditions.

Did you want to add anything to that, David?

MR HOLMES: No, look, I mean, we can pull the information out a bit more. My memory is that the biodiversity assessment includes an analysis and a detail of that monitoring that's been undertaken to date. And there's quite robust statistical analysis

undertaken – it's being supported by ... The Fisheries and CPHR were both satisfied with the approaches and proposed monitoring. I think they wanted an extended period, we're looking at sort of slimming it back because we didn't think it was necessary, but they've basically sort of said, look, there's a bit more monitoring required.

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I think there needs to be some ability to have that flexibility in that if ongoing monitoring indicates that it's continued monitoring in some old areas is probably not delivering anything. The assessment's pretty comprehensive and runs through what those methods are that have been used to date.

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DR EVANS: Thank you.

MR CORNFORD: The next slide. So, in response to the Independent Expert Advisory Panel for Mining, we did a subsidence and geotechnical assessment. What was put forward was that secondary extraction beneath the lake can comply with those existing measures. That second dot-point there, the panel indicated it wasn't concerned with that 20-mil limit, but as I was saying before, differentiating that with natural ground swell is difficult, so they've proposed a consent condition that requires negligible vertical subsidence rather than that 20-mil subsidence in Zone A.

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The panel completed a review of the associated data provided for our pillar stability. It was satisfied with the design and the methodologies, and the draft conditions include specific geotechnical issues to be considered as part of that extraction plan process that we go through if we were going to be planning to mine in that Zone B area and subsiding more than 20 mils or beyond negligible subsidence.

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The next slide is just a bit of a diagram, I guess, it's the Zone A/Zone B system and how it works in terms of seagrass protection barriers, high water mark, etc. Okay.

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The next slide just makes a few points on rehabilitation. So, the project doesn't change what's proposed as far as rehabilitation, other than delaying it based on that closure date. The primary objective of that rehabilitation is to restore it to native bushland other than the easements that cross the site.

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PROF MENZIES: Yes.

MR CORNFORD: Okay. So, moving onto the environmental context. Greenhouse gas emissions. So, a greenhouse gas emission assessment was prepared as part of the EIS. It was done in accordance with the methodologies used at the time. The majority of the Scope 1 emissions are generated by fugitive emissions from coal seams as well as diesel combustion. The IEAPM did raise some concerns with the approach to fugitive emissions assumptions and there were some revised calculations that were provided in terms, from a request for information back last year. And the revised assessment's based on maximum production rates rather than assumed production rates.

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The next slide's probably a good one to talk to in terms of just breaking down Scope 1, Scope 2, Scope 3 emissions, what's approved, what's proposed, and the difference. So, the difference in Scope 1 and Scope 2 emissions is an additional 1.66 million tonnes of

CO₂ equivalent. And that's pretty well solely attributable to the extra two years of operation. Eighty-five per cent of the emissions associated with the extension are Scope 3 emissions, which is pretty well all attributable to the combustion of the coal at Vales Point, and that's going to occur whether the project proceeds or not.

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The next slide talks to the local impacts of greenhouse gas emissions. So, all areas are going to experience impacts associated with climate change. The project's Scope 1 and Scope 2 emissions from those extended years equate to 5.6 million tonnes of CO₂ equivalent, which obviously represents a very small fraction of global emissions over that period.

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In applying – and this is probably – you might jump in here, David – but applying US EPA social cost calculations to it gives a social cost to New South Wales of around \$50,000 over the life of the project. The project's got very small contributions to global emissions and as a result of that, the contribution to climate change locally is considered effectively negligible.

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PROF MENZIES: Yes, this is one that we ...

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MR CORNFORD: Did you want to add anything?

PROF MENZIES: ... are certainly tasked with thinking about. The straight calculation of that per cent of global emission is never actually helpful, because even huge projects still come in with 0.00 something. So, we do have to think a little bit more deeply than it's a low percentage.

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MR HOLMES: Yes. I take that point, but it is ... Climate change impacts are the result of both emissions that have occurred over the last, well, since the industrial revolution, but more importantly the last 30 years because of the way that CO₂ and methane cycles through the atmosphere. And the carbon budget is, so what we've sort of picked as a number here, which is that budget to – I think it's to get between less than 2 degrees was that budget number. So, having what the project's incremental emissions are in that period of time gives a representation of what the project's impacts towards, or contribution towards, all of the global impacts that contribute to a climate change impact which is reflected in the community.

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So, the project's incremental contribution to that is this very small number here. And when we're talking about, you know, a couple of degrees, say, 2 degrees warming, I can't remember what the exact number is, but let's call it 2 degrees, slightly changed number of hot days, increased bushfire risk. It's still a remarkably, remarkably small number and remarkably small component contribution to that predicted impact.

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It's not saying that there isn't a contribution. What it's just saying is that it's actually so small as to be really not worth, you know, not a measurable amount in any degree. And the cost – I guess the cost component is a good way of looking at it because that applies quite a large number for the social cost of carbon per tonne of CO₂ emitted, and then it works out what that would reflect it on the broader community within that costing. And a \$50,000 incremental cost to the entire country in terms of the predicted

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social impacts of climate change is very, very small when it starts getting pulled down into the local community.

5 So, it's not to say that there's no impact; it's just, in terms of assessing materiality of a whole heap of other impacts, it is really very immaterial, that additional incremental impact.

10 **MS GRANT:** Sorry, can you just clarify. So, is it not significant because, you're saying, because it's considered on that global scale, but from what I understand, that recent cases we need to think about this at a local scale. So, if it's insignificant big scale but we're focusing down on local, does that not make the impact bigger?

15 **MR HOLMES:** So, the point about the recent cases is to say that because climate change has, you know, the CO₂ emissions from the project, will contribute to climate change, and climate change will have an impact on the locality, the requirement in the Act for the impacts of a project on the locality means that you must consider what the impacts of climate change are on that particular locality associated with the project. It's the project's contribution to that. It's not all the climate change impacts; it's just the project's contribution.

20 And while, putting my old lawyer hat on, I believe that's a correct legal interpretation of the point, that doesn't take away from the fact that it's largely an immaterial local impact. It is an impact but it's so small as to not be quantifiable or measurable in the scheme of things.

25 So, there's a legal requirement to consider it, but that doesn't mean that the impact itself is significant. And that's the point I kind of want to stress here, that, you know, you're right to consider what it is but you can also then say, well, yes, it's a very small impact and then move onto the next item of consideration.

30 **MS GRANT:** And would it be fair to say the impact is generated, as you just said, I think it was 85% is from the actual Scope 3, the burning through the power station. So, if this extension of time for the mining didn't occur, that there would be just an alternate source of coal, so those impacts would still occur. Is that the implication?

35 **MR HOLMES:** That's why we haven't included the Scope 3 emissions in that number there. We could add the Scope 3 emissions in, and it would bump up that 0.00003 to maybe 0.0001 perhaps. So, I haven't actually done that maths.

40 But yes, the point is that this is a – Vales Point will continue irrespective, it's also subject to New South Wales and national guidelines and regulation, but Vales Point will continue irrespective. And while alternate coal could come into New South Wales which wouldn't otherwise be burnt somewhere else, we're also not at a peak production with all other mines as well. So, they can supply both Vales Point and their existing markets. So, this project is really just a continuation of the existing project in that regard.

45 **PROF MENZIES:** I'm very aware of the time, we've only a few minutes left in our scheduled time. So, I'm going to suggest that we pick out individual things that we are

interested in talking about. So, fellow Commissioners, if you want to give some thought to anything you want to speak about.

5 I'd like to talk about the water resources slide, so if we skip forward to that one. And my interest here, several submissions have talked about the mine water discharge to – and I'm not going to be able to remember the name of the creek ... Anyway.

10 **MR CORNFORD:** I don't remember the name of the creek anyway. I know the creek you mean.

MR HOLMES: Swindler Creek, I think it is.

15 **PROF MENZIENS:** Thank you. The discharge is there, I mean, have been going on for a long time, but nevertheless will have been having an adverse environmental impact on the creek and ultimately with the water discharging into Lake Macquarie and impact there. Could you comment on that one?

20 **MR CORNFORD:** I mean, we are subject to conditions in terms of what the quality of water is that we can discharge. And those conditions will continue. I would point out that a sewage treatment plant does discharge into that creek upstream of us and, you know, we, in the course of the time here, we have sampled water upstream and water that we discharge, and the water we discharge is generally of a better quality than what's going down that creek ordinarily.

25 Did anyone else want to advance on that?

30 **MR HOLMES:** No. Look, I guess it's regulated by the EPA. The project has made, you know, the operations have made significant commitments, well, advancements in improving water quality from the site over recent years. There used to be an on-site sewerage management system which discharged in, that's no longer there from CBC, it's been connected to the broader network, so there's some improvements there.

35 It's constant, you know, it's monitored, it's measured. The long history of impact, so it's a disturbed system already and I guess this is the point, that it's an extra two years of the existing operations' improved regulation really as well. In terms of incremental impact, yes, there's an additional two years, but it's also into a receiving environment which is used to it at this stage, and also it's fairly well regulated.

40 **PROF MENZIENS:** Thanks, Joshua. Just a follow on there. You referred to the quality of water that you discharge. The quantity is also important – has the quantity been changing with time, with more extensive workings, are you needing to extract more water and just extending that with the change in the way that you're mining. Does that produce more or less water over time?

45 **MR CORNFORD:** In summary, no. So, the total volume under the licences isn't going to change, and we discharge a lot less than that. Usually, the only time we're pushing our limits in terms of licences is when we've had heavy rain events, and that's from surface water runoff.

PROF MENZIES: Okay.

5 **MR CORNFORD:** The mining method is not changing. The continued mining method isn't going to contribute to any marked change in the underground water make. And it's been pretty consistent over the last four years.

PROF MENZIES: I like the "in summary" answer, that was great.

10 **MR CORNFORD:** Okay.

PROF MENZIES: Fellow Commissioners, other questions?

MS GRANT: Not from me, thank you.

15 **PROF MENZIES:** Okay, Bronwyn?

DR EVANS: No, thank you, I've asked my most pressing ones. Thank you.

20 **PROF MENZIES:** Okay. Well, that pretty much allows us to finish on time, which is lovely but a bit remarkable. So, all that remains is for me to thank you for spending the time with us and for very open and clear answers to our questions, that was particularly useful to us. And we very much are looking forward to seeing you on site for a site visit. We find the site visits really very useful. It's fine reading material and looking at
25 Google Earth images etc., but it's when you get on site that everything starts to fall together.

Okay, so thank you everyone.

30 [Multiple people say thank you]

THE MEETING CONCLUDED