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TRANSCRIPT OF PROCEEDINGS

TRANSCRIPT IN CONFIDENCE

O/N H-1662051

INDEPENDENT PLANNING COMMISSION

PUBLIC MEETING

RE: NARRABRI UNDERGROUND MINE STAGE 3 EXTENSION PROJECT

PANEL:	**PROF MARY O'KANE AC** **PROF CHRIS FELL AO** **PROF SNOW BARLOW**
ASSISTING PANEL:	**RICHARD BEASLEY SC**
DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT:	**CLAY PRESHAW** **STEPHEN O'DONOGHUE**
APPLICANT:	**PAUL FLYNN** **DAVID ELLWOOD** **MITCH ROYALL**
LOCATION:	**VIA VIDEO CONFERENCE**
DATE:	**8.33 AM, MONDAY, 14 FEBRUARY 2022**

PROF M. O'KANE AC: ..... and emerging and to the elders from other communities who may be participating today. I'm Mary O'Kane and I'm the Chair of the Independent Planning Commission and of this panel. Joining me are my fellow Commissioners, Professor Chris Fell, here in the room with me, and Professor Snow Barlow, at a distance. We also have Richard Beasley SC as Senior Counsel assisting the Commission at this public hearing. The applicant, Narrabri Coal Operations, is the operator of the Narrabri Mine, an existing underground coal mine located approximately 25 kilometres south-east of Narrabri and approximately 60 kilometres north-west of Gunnedah.

The mine is located within the Narrabri Shire Council Local Government Area and in the north-west slopes and plains region of New South Wales. The applicant is seeking development consent to continue longwall mining in a major southern extension area until 2044. The project also involves the continued use of existing underground and surface infrastructure, including use of the existing coal handling and preparation plant and its approved 11 million tonnes per annum capacity. I note the Department of Planning and Environment, in its assessment report, has recommended that the application is approvable, subject to conditions. The department has only made a recommendation.

No final determination has yet been made by the Commission. The Minister for Planning has directed the Commission to hold a public hearing into the application. He has asked that the Commission make its determination within 12 weeks of receiving final whole-of-government assessment report from the department. In line with regulations introduced in response to the ongoing COVID-19 pandemic, we have moved this public hearing online, with registered speakers provided the opportunity to present to the panel via video conference and telephone. In the interests of openness and transparency, we are livestreaming proceedings on the Commission's website.

A full transcript of the two-day hearing will also be published on the Commission's website in the next few days. A little note about the Commission and role in the determination. The Commission was established by the New South Wales Government on the 1st of March 2018 as a standalone statutory body, operating separately to the department and independently of the Minister's direction and control. The Commission plays an important part in strengthening transparency and independence in the decision-making process for major development and land use planning in New South Wales. The Commission is the Minister's delegate, as consent authority for this State Significant Development application.

So, now, a note about where we are in the process. This public hearing forms one part of the Commission's process. We have also undertaken a virtual site inspection, met the department, the applicant, Narrabri Shire Council and Gunnedah Shire Council. Transcripts of these meetings have been published on our website. We also met with the Independent Advisory Panel for Underground Mining and the department last Friday. The transcript of this meeting will be published on our

website, hopefully, today, but certainly within the next few days. After the public hearing, we may convene with relevant stakeholders, if clarification or additional information is required on matters raised.

So, now, to next steps. Following the public hearing, we will endeavour to determine the development application as soon as possible, noting that there may be a delay if we find that additional information is needed. Written submissions on this matter will be accepted by the Commission up to 5 pm AEDT on Friday the 25th of February 2022 and you can make your submission using the Have Your Say portal on our website or by email or by post. And what's the purpose of this hearing? We invite interested individuals and groups to make any submission that they consider appropriate during this hearing. However, the Commission is particularly assisted and interested by submissions that are responsive to the department's assessment report and its recommended conditions of consent.

All submissions made to the department during exhibition of the environmental impact statement have been made available to the Commission. As such, today's speakers are encourage to avoid repeating or restating submissions they've previously made on this application. There are certain matters that, by law, the Commission is not permitted to take into account when making its determination. Submissions on such matters cannot be considered by this panel. These matters include the reputation of the applicant and any past planning law breaches by the applicant. So, now, about how today will run.

Before we get underway, I'd like to outlie the process we'll use. We will hear first from the department, on the findings of its whole-of-government assessment of the application currently before the Commission. We will then hear from the applicant. We will then proceed to hear from our other registered speakers. While we will endeavour to stick to our published schedule, this will be dependent upon registered speakers being ready to present at their allotted time. Senior Counsel assisting, Richard Beasley, will introduce each speaker when it's their turn to present to the panel.

Everyone has been advised in advance how long they have to speak. A bell will sound when a speaker has one minute remaining. A second bell will sound when a speaker's time has expired. To ensure everyone receives their fair share of time, we will enforce timekeeping rules. I reserve the right to allow additional time, as required, to hear new information. If you have a copy of your speaking notes or any additional material to support your presentation, it would be appreciated if you would provide a copy to the Commission.

My fellow commissioners and I may ask you questions ..... hearing is primarily a listening exercise for the panel, so we can hear what you have to say. If we ask you a question and you're not in a position to answer it today, you are welcome to respond in writing by 5 pm AEDT on Friday the 25th of February 2022. Please note, any information given to us will be made public. The Commission's privacy statement

governs our approach to managing your information. Our privacy statement is available on our website. Thank you and it's now time to call the first speaker.

MR R. BEASLEY SC: The first speakers are Steve ..... Environment. You there, gentlemen?

MR S. O'DONOGHUE: Clay will be starting first.

MR C. PRESHAW: Thanks, Stephen, and thank you, Chair. So, good morning. My name is Clay Preshaw. I'm the executive director of Resources, Energy and Industry Assessments at Department of Planning and Environment. I'd like to say, "Thank you," to start with, to the Commission, for giving us the opportunity to present the project, openly, in this type of setting. I'll begin with a few brief remarks about the assessment report, itself, mainly just to explain how it comes together, just explaining what it really is and what it is not. I will then briefly identify what we believe are the key issues associated with the proposal.

I'm here today with my colleague, Steve, who's the director of resource assessments and Steve will provide further details on the key assessment issues and our evaluation of the project and, in particular, the key reasons for the department's recommendation to the Commission to approve the project. I'll also just say now, from the outset, that we don't intend to outline the project components in any detail, as this is all well documented in, as you know, substantial documentation, which is available on our website. Also, for the purposes of this presentation, when Steve or I make reference to "the project" it refers to the Narrabri Underground Stage 3 Extension Project.

So, firstly, some comments on our assessment report. I would like to start by saying that preparing an assessment report like this, for these types of projects, is a very difficult task. The report, really, is only the final piece of a very long, comprehensive assessment process. It's by no means meant to be a full compilation of all the information that has been presented to us throughout that assessment process. All of the key relevant information informing this assessment is publicly available on the department's major projects and planning portal and can be accessed if necessary.

Our assessment report, however, is really a distillation of all of this material and its designed to give the decision maker, which, in this case, is the Commission, sufficient information to make a determination. I will say that we are confident that our report does provide a good summary of our views about the project, but we also believe that this hearing process can be really important in fleshing out key issues relating to the project from the community perspective. So, now, just a few comments about our approach to this report. This is an approach we plan to continue to adopt into the future. We've really tried with this report to be very open and transparent about the issues that have concerned us the most.

I do believe that the environmental impact assessment process – one like this – can be very hard to understand from the outside looking in. It, obviously, involves, you know, thousands of pages of documents, most of which are filled with very technical language and a lot of jargon. And I can tell you that, even within the department I often get irritated by the over use of ..... within my own area and sometimes I insist that they change that to just plain English words. In any case, I think that this all can actually lead to a situation where the real issues of concern might be buried deep in the report and, in fact, the findings and recommendations about those issues might be hard to find or to understand.

So what does that mean for this project? Well, basically, if there was something in our assessment that made us spend extra time or extra effort to investigate, then, hopefully, that should be made clear to the reader and that issue should be emphasised and addressed in sufficient detail in the report. So, now, moving on to some high level comments about how that applied to ..... particular project. The first thing we have tried to make clear is the distinction between an entirely new mine project or a greenfield project and an extension of an existing coal mining project or a brownfield project. As this project is a brownfield or extension project, that has generally made the assessment process easier and generally means the overall impacts of the project are minimised.

The project does not involve any changes to the proposed rate of coal extraction or processing and uses all of the existing operational and transport infrastructure and facilities. In addition, looking at the strategic context more broadly, and particularly when comparing this mine site to other mines in New South Wales, there are relatively few community members in close proximity to the project area and the land within the project area is generally flat. It's characterised by a semi-arid climate and there is no irrigated cropping land, for example, within the project area boundary. Now, having said all of that, the project still would have impacts that require careful consideration and there are a couple of obvious aspects of this extension project which I really want to acknowledge, publicly, and ensure that the community knows we have taken into account.

They are, firstly, while most of the existing infrastructure on site remains the same, there are some additional infrastructure facilities at the surface proposed, which would, inevitably, lead to additional impacts. And, secondly, obviously the project would substantially extend the mine life, which means many of the impacts would continue for much longer, even if the nature and scale of those impacts remain similar to before. Now, there are two other important aspects of this project that must be kept in mind. Firstly, the proposed longwall panels would actually be some of the longest, at 10 kilometres, and widest, at 400 metres, in Australia.

While this is not inherently a problem or totally unprecedented outside of New South Wales or Australia, it does mean there is substantial subsidence above the mine workings. Where there is subsidence like that, it's always important to understand the potential impacts on water resources, for example. Secondly, the mine is considered to be a relatively gassy mine and I use the word "relatively" carefully, as

there are other mines with high levels of gas. But, ultimately, the gassiness of this mine is important in relation to fugitive emissions. And, importantly, when these two aspects are combined, plus factoring in the level of vegetation at the surface, this all leads to a need for extensive ventilation infrastructure and the subsequent clearing of vegetation, which would have, obviously, biodiversity impacts.

So, as a result, we have found that there are four key issues from the assessment. One, ground water, two, surface water, three, biodiversity and, four, greenhouse gas emissions. At this point in the meeting, I will step away, for the most part, and let Steve work through a brief summary of the key assessment process and key findings. But, before I do that, I wanted to make a few final comments about the policy context, particularly around greenhouse gas emissions, as this is one aspect of the proposal that I have been involved in quite closely. The main point I want to make is that we have looked at this issue especially closely over the past few months.

We have heard the community's concerns about this issue and we take that seriously and, of course, we recognise that the policy space is rapidly changing and is likely to evolve further over the proposed life of this project. I can say that, as a direct result of this proposal, we have been working even more closely with the relevant government agencies in this space and we will continue to discuss and collaborate on these issues into the future. And, as you would have seen in our assessment report, we have recommended that the existing New South Wales Independent Advisory Panel on Underground Mining should be expanded to cover issues relating to greenhouse gas emissions.

And, so, while we absolutely acknowledge that all the recent policy changes and updates appear to emphasise and reiterate the need for action on greenhouse gas emissions at a broad scale, we've actually found no clear policy reasons to make any major changes to the approach that has been adopted in recent coal mine assessments, particularly the approach taken through the Commission. For that reason, the department has focused on building upon those recent assessments and the work of the Commission with a targeted focus on the specific characteristics of this project and its greenhouse gas emissions.

Overall, we believe it is important that direct greenhouse gas emissions are minimised over the life of the proposed project and, for that reason, we have proposed to establish a mechanism to review the emissions and review the practices around that regularly throughout the proposed mine life. We believe that would allow, potentially, a ratcheting ..... over time, which we believe is in line with current policy settings. Now, that's all I'll say about greenhouse gas emissions for now, but I felt it was important to give some of the background on the efforts we've made in that space, in particular. And now I'll pass it over to Steve.

UNIDENTIFIED MALE: Well, just before you go, Mr Preshaw, if I could just ask you a question, given it's a public hearing. Could you just clarify one thing. It may be semantics, but right at the beginning you said you were – the department was recommending approval. In the assessment report, it says, "The application is

approvable." It also says, "It's in the public interest." Is that just the same way of saying the same thing?

MR PRESHAW: Yes. You're correct. I should have said we're recommending that the project is approvable.

UNIDENTIFIED MALE: Right. Okay. Can I ask you something else – and tell me if you're not able to answer it, but I'm only asking you because you said you had a particular focus on greenhouse gas emissions for the assessment; does that mean you were the departmental officer that looked closely at the applicant's economic assessment and, in particular, the way greenhouse gas emissions should be costed?

MR PRESHAW: I would say that I was not the only person. In no way was I the only ..... that looked at that issue.

UNIDENTIFIED MALE: One of the people.

MR PRESHAW: But I was one of the people who looked at that.

UNIDENTIFIED MALE: All right. Can I ask you this, then, in starting at about paragraph 411 of the assessment report – and please go to it, if you need to – just to help the commissioners, there's a discussion there about a difference in approach, it would seem, between the applicant's economic assessment and how their experts have costed greenhouse gas emissions – scope 1 and scope 2 – and an approach this Commission took in Mangoola. You've expressly referred to that in 413. I'm just wondering, firstly, does the department have a view about how this should be approached?

MR PRESHAW: There is an issue that's still outstanding, in some respects, about the apportionment of emissions - - -

UNIDENTIFIED MALE: Yes.

MR PRESHAW: - - - to either the State or further beyond that. We are currently investigating and consulting with other agencies within government and I'd prefer to take that one on notice - - -

UNIDENTIFIED MALE: All right. Does that mean, at the moment - - -

MR PRESHAW: .....

UNIDENTIFIED MALE: Does that mean, at the moment, the department doesn't have a final view?

MR PRESHAW: Correct.

UNIDENTIFIED MALE: All right. Can I ask you this, though, still in the same section of the assessment report, at 424, you've said:

> *While full accounting of scope 1 and scope 2 GHG emission cost to New South Wales and Australia would significantly increase the project's estimated net benefits –*

I think that's another way of saying, "If the Mangoola approach was the correct one," you still go on to say –

> *a significant net economic benefit would still accrue to New South Wales Government, primary from coal royalty payments. A significant benefit would also arise –*

etcetera. I'm just wondering, "significant" is not a particularly precise term. Is there a dollar figure that can be attributed to "significant" or is there – what's your definition, to assist the commissioners, as to what's meant by the term "significant"?

MR PRESHAW: I might take that question in two parts.

UNIDENTIFIED MALE: .....

MR PRESHAW: In relation to what the definition of "significant" is, I don't think there's a clear answer I could give you - - -

UNIDENTIFIED MALE: Does it mean "large" or - - -

MR PRESHAW: Yes. So I think it would generally mean it's some sort of substantial benefit. In terms of the specifics around how much that is for this project, I might leave that one to Steve.

UNIDENTIFIED MALE: Right.

MR PRESHAW: I think he will cover a bit more – that in a bit more detail in his comments.

UNIDENTIFIED MALE: All right. Thank you for that.

PROF O'KANE: Just before we go on, when we spoke last week, Mr Preshaw, I asked you about the Lock the Gate letter that had come in and we'd referred to the department and you said you were meeting with Lock the Gate last week and, you know, in due course would get back to us; is there any update on that?

MR PRESHAW: The only update I could give you, in relation to those comments, is that we did meet with Lock the Gate, but we gave, essentially, the same answer to them that I've just given now, which is that we would prefer to take it on notice and we are seeking some advice around that question and, in particular, some

interpretation of government policy and we're happy to prove a further response to that in writing, to, I guess, both the Commission, if necessary, and Lock the Gate.

PROF O'KANE: Thank you.

MR BEASLEY: All right. I think we're now going over to Mr O'Donoghue, are we?

MR PRESHAW: Yes, please.

MR BEASLEY: Thanks.

MR O'DONOGHUE: Thanks, Clay. Good morning Chair Commissioners. My name is Steve O'Donoghue, director for Resource Assessments at the Department of Planning and Environment. First I would like to provide a short summary of the assessment process to date and set out the strategic context of the project, followed by an outline of the key assessment issues, findings and recommendations that the department made in its assessment report for the Commission. First, a brief outline of the assessment process to date. In addition to the current public hearing process, the project's been through an extensive assessment process already.

This included public exhibition, in November through to December 2020, with a total of 67 public submissions, 61 from members of the public and six from special interest groups in the project, including 63 of the submissions, around 94 per cent, in support of the project, largely noting the positive socioeconomic benefits and ongoing employment. There were three submissions from special interests rejecting the project, including Lock the Gate, Leard Forest Research Node and the Boggabri ..... Landowners Group. Key concerns raised in the objecting submissions were about the impacts on biodiversity, greenhouse gas emissions and ground water and surface water impacts, including the potential for ..... and ..... impacts.

Narrabri Coal provided its submissions report and a formal amendment to the project in May 2021, which included removing 31 hectares of ..... development footprint, relocating some infrastructure to reduce impacts on the threatened flora species Coolabah Bertya of 2.3 hectares and also incorporating clearing or pre-mining drained gas to reduce greenhouse gas emissions by about one per cent. The department also received advice from New South Wales Government agencies and authorities, including Narrabri and Gunnedah ..... throughout the assessment, which also included the department's water group and biodiversity conservation science group, along with advice from the resources regulator, Mining, Exploration and Geoscience ..... New South Wales, Transport for New South Wales and the Forestry Corporation of New South Wales as well, given part of the project overlies the state forest.

The department also sought the advice of the Independent Advisory Panel for Underground Mining. Its advice and other government agency advice, including advice from the Commonwealth Independent Expert Scientific Committee, has been

carefully considered in and they're outlined in the department's final assessment report. A request for a public hearing ..... public spaces was made in November 2021, followed by the recent referral of the project to the Commission on the 19th of January. I'd just like to outline some of the strategic contexts, as already displayed by Clay, particularly in relation to distal land use around the site and local land use within the ..... site.

The broader region is dominated by agricultural land uses and elevated country that is typically reserved as state forest and national park, including that Pilliga East State Forest portions overlies the project area. The region also has extensive ground resources which support this valuable agricultural industry, including extensive irrigation in the ..... floodplains of the Namoi River. The project is also located on the east edge of the Great Artesian Basin. The protection of these valuable water resources is integral to the assessment of the project and was a key concern raised in submissions, particularly from land holders around ..... including ..... however, this region is also rich in a variety of mineral resources, such as coal, coal ..... and other minerals.

Apart from the Narrabri Mine, the Gunnedah Coalfield is close to a number of other major coal mine developments, located 20 to 40 kilometres in the project area, to the east and south-east, also ..... Narrabri Gas Project immediately west of the project area. The Narrabri Mine is also located to the immediate west of the Kamilaroi Highway and the Werris Creek ..... Railway. The Kamilaroi Highway lies right next to the Narrabri Mine and it was an existing, operating brownfield mine with minimal proposed changes to the existing mine infrastructure. The existing infrastructure is well placed for the mine expansion. However, in saying that, the proposed intersection upgrade will be required at the intersection of Kamilaroi Highway, to access the mine and the department has recommended conditions to ensure that these upgrades will be undertaken.

As Clay flagged, there are a few community members in close proximity to the project area, with about 20 residences within five kilometres. The project is located 25 kilometres away from the nearest town, Narrabri, and 10 kilometres from the nearest village, Bundabah. The New South Wales Government's 2020 Strategic Statement on Coal Exploration and Mining in New South Wales recognises the value of continued coal production in the state, including the potential of coal production to deliver significant economic benefits to regional communities. To support the intentions of the state, the New South Wales Government has identified a ..... where mining is not supported and/or is prohibited in areas considered ..... coal exploration.

The project would not be located in these no go areas. It would be located in an area where coal exploration and mining titles already exist and ..... is an extension of the existing mining operations. I will now provide a summary of the key assessment issues flagged by Clay, namely, ground water impacts, service water impacts, biodiversity impacts and greenhouse gas emissions, noting, also, that the department has undertaken a comprehensive assessment ..... by all matters, including ..... noise,

area impacts, transport, social impacts and benefits, which are documented in the department's assessment .....

Firstly, in relation to ground water. There are three key aspects in the department's assessment of ground water ..... impacts on ..... ground water resources, drawdown impacts on landholder ..... and water quality impacts, including ..... to underground waterfalls. Firstly, the project is not predicted to have any impact on the two key regional ..... identified as highly productive water sources in the region. That is the Namoi ..... around six kilometres to the east of the project, and the Pilliga Sandstone, which forms part of the Great Artesian Basin, with its eastern edge overlying the project site. That is the predicted drawdown does not extend to New South Wales Government's Aquifer Interference Policy, with a minimum impact threshold of greater than two metre drawdown.

This conclusion was informed by groundwater lowering that included peer review commissioned by Narrabri Coal, by Brian Barnett, Principal Groundwater Modeller Jacobs, reviewed by the Commonwealth's Independent Expert Scientific Committee, the department's water group and the New South Wales Independent Advisory Panel for Underground Mining, which I'll refer to as the "mining panel" throughout this presentation, which is chaired by Professor Jim Galvin, with expertise in ..... and also includes Professor Rae Mackay, with expertise in groundwater, and Professor Neil McIntyre, with expertise in surface water.

The mining panel concluded that, overall, the groundwater model was appropriate for assessing regional flow and impacts on regional aqua systems. However, they were concerned about predictions above the mining area related to uncertainties about potential for surface cracking caused by subsidence which feed into the groundwater drawdown predictions and that assume recharge rates and recovery as a result of this cracking ..... longwall panels ..... surface cracking zone.

However, overall the mining panel concluded that it did not consider there were significant issues identified by the groundwater model results and their interpretation for the area in the vicinity of the mine and the predicted inflows are unlikely to be substantially ..... However, the mining panel recommended ..... groundwater monitoring above the existing mining area and extension area to reduce uncertainties and require model updates which the department has included in its recommended conditions.

However, nine privately-owned stock and domestic bores across eight landholders are predicted to be impacted by the project-related drawdown in less productive water sources below the Pilliga sandstone that do exceed the aquifer interference policy's threshold ..... drawdown. Most are predicted to be impacted well after mining processes cease. Narrabri Coal has committed to make good measures for these bores, and the department has recommended relevant conditions to require that Narrabri Coal uses best endeavours to reach agreements with regard to these bores within two years of commencement of the development. The department understands that since referring the project to the Commission, Narrabri Coal has

provided a copy of the proposed make-good arrangements – agreements with these landowners, and in some cases has met with these landowners to progress these arrangements.

I just wanted to touch on – from a groundwater perspective, springs and groundwater dependent ecosystems. There were three springs identified as potentially significant and in proximity to the mine, although very minor drawdowns predicted ranging from less than 0.5 metres to 0.1 metres at the springs. However, one spring, Mayfield, is located in the project area but it's not directly undermined by the longwall panels. So there is some uncertainty about predicted impacts, noting the mining panel's concerns discussed above about groundwater drawdown predictions above the mining area in particular.

Hardys Spring and Eather Spring are located further away, 3.5 kilometres and 5.5 kilometres, respectively, south of the mining area and identified as high priority groundwater dependent ecosystems in the ..... The mining panel noted that these two – these groundwater dependent ecosystems located a distance from the mine are not likely affected significantly by mining. However, the mining panel recommended monitoring should be undertaken of all the springs and nearby high priority groundwater dependent ecosystems, and the department has included ..... to this effect.

I would just like to touch on brine disposal which is another issue raised in submissions, and looked at by the mining panel, and this is really brine disposal to the underground work that is post-mining. Overall the mining panel accepted the finding that the disposal of residual brine from the underground mining area is unlikely to reach significant water quality problems. The mining panel also concluded that brine re-injected into the goaf at those mining depths will effectively be trapped with any prospect of contaminating any of the surrounding shallow aquifer systems. And there is more discussions in the department's assessment report and there is also ..... discussed at the meeting with the mining panel last Friday .....

Just to touch on groundwater licensing, the project's groundwater licensing requirements have been conservatively and appropriately modelled peaking at around 2400 megalitres later in the mine life when mining at the deeper seams across all groundwater sources. However, neither the IESC, the department's water group or the mining panel raised any significant issues about predictions on groundwater inflows from the mine. And the department considers that Narrabri Coal should be able to obtain all necessary entitlements across all the water sources predicted to take water, including indirect take from surface water sources.

As the result from the advice from the agency and independent experts and consideration by the department, the department required Narrabri Coal ..... made in the EIS. Narrabri Coal has provided the required groundwater monitoring regime to include continuation of existing monitoring, establishing additional sets of shallow and deep monitoring bores, establishing additional subsidence calibration bore holes

to assist in the subsidence predictions, and implementing continuous monitoring of groundwater – quality of groundwater inflows.

These recommended conditions require an overall water management plan for the site, as well as a water management plan for the extraction plans which will be developed as mining progresses. ..... touch on surface water and the consideration of impacts on surface water resources. The key potential impacts on surface water include surface water losses due to fracturing connection to underground workings and also from ponding on the surface from the subsidence effects. But also potential water quality impacts due to changes in stream geomorphology and subsidence effects as well, for example, increased erosion and scouring.

First, it's quite important to note that all creeks likely to be affected by the project are ephemeral with the normal baseflow. This is unlike the situation, for example, in the southern goldfields where they're deep inside valleys and there's permanent flowing streams ..... groundwater baseflow. So it's quite a different situation to that area, and also to the western goldfields and around Mudgee – the Mudgee area. Water diverted from stream flows by surface cracking is estimated to be around four megalitres a year from the water courses. This compares with average annual runoff of ..... five and half thousand megalitres a year, which is less than 0.01 per cent. So the surface water take is largely – it's ..... compared to the flows from ..... as a result of rainfall runoff.

Also, while it's predicted to be indirect take of water from the lower Namoi regulated river system – water source in the order of 93 megalitres per year during operations and 193 megalitres per year post-mining, Narrabri Coal has sufficient entitlement to ..... this water take. The mining panel accepted that due to the ephemeral nature of the creeks and low expected frequency of surface-seam fracturing, along with low recharge rates, it is unlikely that measurable impacts on surface water take would occur. The department also considers that the risk of soil erosion, ponding and sedimentation are well understood and can be satisfactorily managed for the project.

So overall the department has recommended ..... conditions to manage surface water impacts which include setting strict performance measures, preparing and implementing extraction plans as the mining progresses. The extraction plan is also to have subcomponents of water management plan, land management plans and trigger action response protocols designed ..... performance measures. In addition, the department is recommending, based on advice from DPI Water and the panel, that formal records of creek flow conditions should be initiated at selected sites. There should be alternatives to measuring of creek flows ..... And of course further updates to the mine's water balance modelling to include improved modelling of the likelihood of uncontrolled discharges from the mining ..... area.

..... in relation to biodiversity, the key potential impacts on biodiversity, the direct bearing from installation of surface infrastructure in the longwall mining area, but also indirect impacts from subsidence effects such as ponding and cracking. As discussed earlier, following amendments to reduce surface disturbance the total area

of direct clearing of native vegetation would be around 547 hectares. It's an additional 70 hectares included for indirect impacts, including from ponding about 3 hectares and surface cracking about 54 hectares, and also transmission line management for electricity infrastructure that's required to maintain ..... Where possible surface infrastructure has been placed to avoid and reduce impacts on biodiversity, and Narrabri Coal has committed to ongoing review of the disturbance footprint throughout the mine life, and as extraction plans roll out to further reduce impacts. The proposed impacts on biodiversity are also required to be fully offset.

Now, on this matter, the offsets would be staged in six phases to align with the progression of the mine until the end of mining operations in 2044. Overall, the department considers that the impacts on biodiversity values from direct clearing – indirect impacts could be suitably avoided, mitigated and/or offset. While there is extensive clearing in total, both clearing and rehabilitation would be undertaken progressively over the life of the project, with impacts required to be offset prior to commencing each development phase. The department has recommended conditions to manage and regulate these impacts.

This includes setting performance measures for subsidence impacts on biodiversity values, staged biodiversity offset requirement, providing an opportunity to further refine the development footprint through detailed mine planning during the extraction plan process, implementation of a biodiversity management plan to manage and minimise impacts to biodiversity values, a monitoring program groundwater dependent ecosystems and providing additional offsets if impacts were to exceed predictions, and progressive rehabilitation to self-sustaining native woodland vegetation in the areas of the woodland .....

..... just like to touch on the fourth area flagged by Clay which is greenhouse gas emissions. Firstly, the department acknowledges that fugitive emissions from coalmining are a significant component of emissions – State emissions and account for approximately 9 to 10 per cent of overall greenhouse gas emissions. The project would have a large emissions footprint due to both its overall size in terms of ROM coal extracted and the relatively gassy nature of the seams, as Clay touched on earlier.

Total Scope 1 emissions ..... the majority of the Scope 1 and 2 protocol ..... expected to total around 31 million tonnes carbon dioxide equivalent, but averaging that 1.36 million tonnes per year of life of the project. Just touching on that, the project's fugitive emissions would be roughly three times higher than historical levels and this is largely due to higher percentages of methane which has a far greater global warming potential compared to carbon dioxide and currently around 28 times. While existing conditions in the current mining operations have not been amendable to flaring because it has been CO2, carbon dioxide rich rather than methane, higher methane seams are identified in later stages of the mining life, or about the middle to late stages in the southern and western areas of the project as the seams ..... and options for flaring are certainly a consideration in the future as identified by the company.

As Clay mentioned earlier, the department – in the current policy settings, the department has sought ways to ratchet down the project's predicted greenhouse gas emissions throughout the assessment process. In response to the department's request, Narrabri Coal gave further consideration to opportunities for reducing fugitive emissions by flaring. I guess their assessment identified that only a pre-mining gas drainage ..... could be flared safely and it is technical feasible – really only ..... about one per cent reduction in their predictions on future emissions.

At the department's request it also undertook further investigations into abatement technologies including reducing methane in ventilation air movement and post-mining goaf gas ..... the area above longwall mines flowing from the mining, including consideration of technologies such as membrane separation where methane could potentially be further concentrated to make it amenable for flaring power generation. The department has given careful consideration of the full range of options that might exist, either now or in the future, to address fugitive emissions.

In summary, the department acknowledges that gas separation enrichment technologies are not currently used in coalmines in Australia and are expensive. However, the department also considers that these technologies or other related options are likely to improve and reduce in costs over the relatively long life of the project, particularly noting that emissions ..... increases in the latter half of the mining life as methane concentrations increase in the south west. Given there are clear policy drivers to ratchet down greenhouse gas emissions and reduce fugitive emissions over the coming decades, the department considers that these emerging technologies and abatement options should therefore be considered for application in current and future long life underground coalmining operations.

As Clay flagged earlier the department has jointly adopted the Commission's approach to greenhouse gas emissions in the recent Tahmoor South Project, but has also proposed or recommended to take it one step further by establishing a mechanism to independently review emissions and potentially ratchet down over time. To support this process the role of New South Wales' existing independent mining panel would be specifically expanded to include the provision of advice on greenhouse gas emissions.

I will just give a summary of the clear recommendations that the department has recommended to the Commission. Firstly, there has been a recommendation for a fugitive emissions minimisation plan which would be required to be reviewed and updated every three years, including reviewed by the mining panel, the department's Climate and ..... Science branch and the EPA, all who have a key role in emissions policy and regulation in New South Wales. Recommended performance measures for Scope 1 fugitive emissions intensity based on a peak five year rolling average and project life targets, with offsetting requirements where targets are not met, and the potential to ratchet down the targets over time following the submission of the fugitive emissions minimisation plan and review of it by the mining panel and agencies.

We have also included performance in Scope 2 fugitive emissions from electricity generation and noting that the company has committed to carbon neutral options ..... emissions. We have also recommended gas extraction plans as part of the rollout of the extraction plan, so that there is detailed information for ..... as each phase ..... occurs, including options for gas capturing and ..... gas capture throughout the life of the project. And also recommended regular reporting of greenhouse gas performance, including in the annual review with specific requirements, independent audits, an extraction plan reporting requirements through the life of the project.

Just touching briefly on other issues, the department also ..... of the project on other relevant issues, including heritage, ... traffic and amenity ..... noise, dust, visual lighting impacts and broad social impacts. Following the implementation of reasonable and feasible mitigation measures and recommended conditions ..... ensure that the impacts meet contemporary New South Wales Government policy and requirements. The department considers the residual impacts of the project can be suitably managed and/or offset.

Just touching on final evaluation points, the department acknowledges that the project would have a number of ..... impacts, the key issues I have just outlined there. In summary, in relation to groundwater the department considers the proposed groundwater monitoring regime is appropriate and sufficiently comprehensive. It would support the regular review and updating of the project's groundwater model and improve its accuracy and therefore support refined predictions of water take from the fractured rock aquifers overlying and surrounding the project area.

In relation to surface water, the department considers that its proposed requirements regarding monitoring, management and remediation of subsidence impacts resulting from the project are robust, reasonable, comprehensive and appropriate. Any surface water quantity or quality impacts are likely to be minor, and the department considers that Narrabri Coal would be able to obtain all necessary entitlements for the predicted surface water take.

In relation to biodiversity the department considers that the impacts on the biodiversity values in direct clearing and in indirect impacts would be suitably avoided, mitigated and/or offset. And while there is extensive clearing in total, both clearing and rehabilitation would be undertaken progressively, with impacts required to be offset prior to commencing each development phase.

In relation to greenhouse gas emissions, the department considers that it's important for the project's direct fugitive emissions to be minimised as far as possible over the life of the project. While the opportunities to minimise fugitive emissions are limited at this stage, the department's proposal to ..... independent review of emissions and ratchet down emissions over time. The department has carefully weighed environmental impacts of the project against the significance of the project's identified coal resources and associated economic benefits associated with the continued operations of the mine. There remains strong support for the project in the

local and broad community, with 94 per cent of submissions expressing support, particularly targeting the positive socio-economic ongoing requirement.

In summary, the departments considers that the project has been designed in a manner that achieves an appropriate balance between maximising the recovery of the recognised coal resources of State significance and minimising its potential environmental and social impacts. It considers that the project is approvable subject to the recommended conditions. Details in more depth are available in our assessment report ..... online. Thank you for the opportunity.

PROF O'KANE: Thank you. Can I just check with my fellow commissioners if they have any questions. Chris, do you have anything?

PROF C. FELL AO: Yes. Mr O'Donoghue, I'm just wondering for the ratcheting down mechanism, do you see that proceeding through the NGER Commonwealth system or through the State system, through perhaps the ..... reports?

MR O'DONOGHUE: I guess we have looked at that in the conditions we have recommended, in that if the Commonwealth ratcheting – if there Commonwealth ratcheting down through the safeguard mechanism under the energy ER scheme, we certainly wouldn't be looking, like, double-dipping in that sense. So if there is other policy initiatives from the Commonwealth Government or the EPA, for example, which does that, then we consider – in the conditions we consider how that works and how that would apply to the conditions we have recommended and the – including the input from the mining panel.

PROF FELL: Thank you.

PROF O'KANE: Snow, do you have anything?

PROF S. BARLOW: Yes, I do, Mary. Mr O'Donoghue, Snow Barlow here. I wanted to ask you about the biodiversity and whether your department gave any consideration to perhaps the reduction. We note in the EIS that the roadway or the clearing width of the roadway to access the bore holes and gas extraction hole is actually 30 metres. And in terms of maintaining connectiveness of the remaining vegetation at that point it becomes perhaps a barrier for wildlife crossing in that exposed area. Did you give any consideration to reducing the width of those roadways to make them less of a threat to biodiversity as it tends to go to connect between the other forest .....?

MR O'DONOGHUE: Thanks, Professor Barlow. We have certainly looked very carefully at – and our colleagues in Biodiversity, Conservation and Science ..... avoidance and ..... impacts is the first priority. We have – the company has outlined ..... potential reductions in ..... through the ..... report with some reductions based on changing the surface infrastructure footprint. I think the – I think the key that will be – there's opportunity through the mine planning to further reduce this. The issue of the roadways is really – I guess the largest part of clearing is the – is really the goaf

gas draining and the – and reducing the gas envelope and wider safety issues where the short space is really designed to take ..... goaf gas there. Certainly – it's certainly – the condition put in is looking at opportunity to further reduce that over time as the mine progresses.

PROF O'KANE: Thank you. That's right. Mr O'Donoghue and Mr Preshaw, you might have seen late on – late last week – on Friday that the Environmental Defenders Office, acting for Lock the Gate, has provided some questions to the panel. And they – well, they're not the panel's questions and the panel does not necessarily accept the premises and assumptions in them. We would be interested in your response to a set of them, so I will go through the numbers. There's quite a few. So questions 1, 2, 3, 6, 7, 8, 10, 13, 14 and 15. You're welcome to respond to those questions in any general comment now, but I realise it's short notice and we're running out of time. But you're also welcome when you return on Friday to speak to them, and of course to respond in writing, although we would like any written comments by 5 pm on 25 February.

In answering those questions please feel free to rely on any expert reports or other material already before the Commission because we note that certainly the assessment report and other things more than touch on it. And also feel free to comment on any of the other questions in the list. So I don't know if you want to say anything now or you would rather take it on notice?

MR PRESHAW: I'm not actually aware of the ..... of those questions, so I would prefer to take it on notice.

PROF O'KANE: Sure.

MR PRESHAW: Steve, I'm not sure if ..... the questions if you wanted to make a general comment ..... do so.

MR O'DONOGHUE: No, Clay. Look, I think it's best to take it on notice and we can have a detailed look at the questions and provide a response either on Friday or – as well as a written response.

PROF O'KANE: Great. Thank you.

MR BEASLEY: Just two final matters for both of you. I should have asked Mr Preshaw, but feel free to answer, Mr O'Donoghue as well. I should have asked Mr Preshaw when I was having that discussion with him about how to – what the department's view is as to how to properly cost the greenhouse gas emissions associated with this proposed project. And, Mr Preshaw, and I'm paraphrasing, said, "We're having discussions with other agencies." I assume government agencies. I'm just wondering, the commissioners of course won't be bound by any view the department has but no doubt they would be interested in it. I'm just wondering is a final position from the department imminent?

MR PRESHAW: Look, I think the answer to that is yes. We have put forward some information ..... in the assessment report which I consider was our position at the time that we finalised the report. We – the question that you're asking about is obviously about ..... and ultimately is about the valuation ..... in relation to a cost-benefit analysis, which is a technical matter. Now, as you know, a cost-benefit analysis is one of the tools used to assess the economic implications of a project. We also look at local effects analysis and ultimately those tools are part of a broader assessment, you know, in relation to ..... where environmental, economic and social impacts are weighed up. So it's a long way of saying this is but one small but, I guess, important part of one tool that we're using and there is - - -

MR BEASLEY: Well, it's not really a small part, is it? I mean, if the – depending on how you do your calculations and depending on how you assess risks associated with the future market for coal and the potential price for coal, but importantly here, the matter we're discussing, what price you put on greenhouse gas emissions, it might potentially have a very big difference, depending on your approach, as to whether the mine is viable, whether it's of limited benefit to the State, or whether it's of a large benefit to the State, won't it?

MR PRESHAW: Yes, that's precisely what I was going to say.

MR BEASLEY: Right.

MR PRESHAW: It's one small but important part of a process which can have significant implications for that tool.

MR BEASLEY: I see. Yes.

MR PRESHAW: So that's why we - - -

MR BEASLEY: Understood.

MR PRESHAW: We agree that it's a rather technical matter but can have consequences that are important for the overall assessment process.

MR BEASLEY: All right. And just very quickly, because it's a public hearing everyone would be well aware that of people that oppose this project there would be some people that aren't even looking at the specifics of Narrabri underground but would oppose any approvals of any coalmines because of climate change concerns. I noticed in your assessment report, and I won't say you've put this as a criticism, but you have noted in the report at 330 that there's uncertainties about the application of various policies. And you have mentioned there is no clear methodology to assess relative scale impacts, there is no performance criteria for standards, there is no clear guidance for mitigation measures and no guidance about offsets.

And as a result of that you have informed people through the assessment report that the department has established this interagency working group to discuss climate

change issues, which includes staff from climate change policy, climate science, the EPA. And we know the EPA now has its own obligations to develop climate change policies because of a recent court decision. But I'm just wondering, in that group where you have these interagency discussions in relation to climate change, does the group discuss things like, for example, the recent report – the recent report of the intergovernmental panel on climate change. Would that be something that would be discussed in a group like that?

MR PRESHAW: Yes. So if I can take that question again in two parts, just to go back to the question on ..... because I just wanted to add that even – given that it's a question about valuing externality that is an issue that fundamentally includes some element, an important element of sensitivity, and that's, I guess, the question around sensitivity and the way that you calculate that is the issue that we're seeking further ..... So I just wanted to add that. It's important for us to ..... for the guidance to the Commission.

And in relation to your questions around the, I guess, policy uncertainty that we reference I think in 330 or paragraph 15, I think that uncertainty we believe that the department has drafted conditions that allow a processing mechanism to be in place that provides the ability for emissions to be addressed adequately over the life of the project. So we have absolutely taken into account that uncertainty. And in relation to your question around what matters we're considering in the discussions and the meetings we have with the other agencies involved with this issue, yes. The answer to your specific question around different documents and policy changes and updates that have occurred, we have considered everything from the international level that occurred actually during the assessment of the process down through the national changes, and in fact some State updates as well.

MR BEASLEY: Sure.

MR PRESHAW: So we have discussed all of those matters, and that's – the comments we have ..... all the latest updates, at least to the point at which the assessment report was finalised.

MR BEASLEY: All right. Thank you for that. Thank you both for that and we will go to the next speakers. And we now have representatives from Whitehaven Coal. We have got Mr Paul Flynn and Mr David Ellwood.

MR FLYNN: Good morning, all.

MR BEASLEY: Good morning.

MR FLYNN: Thank you very much. Well, if I might clear my screen, if I could, I do have some slides.

MR BEASLEY: Please go ahead. We can hear you.

MR FLYNN: Thank you. If I can confirm that you can see that?

PROF O'KANE: Yes.

MR BEASLEY: Yes. Thanks.

MR FLYNN: Good morning everybody. Thank you. Thank you, Chair. ..... My name is Paul Flynn. I am the CEO and managing director of Whitehaven Coal, parent company of Narrabri Coal. I might just take this opportunity to ..... be here today at this hearing and I would also like to add my acknowledgment to the owners of the land we're on ..... Gadigal people the Eora nation, but also recognise the ..... on whose land the Narrabri mine is located within and pay my respects to their elders past, present and emerging.

As mentioned, I will give a brief presentation, followed by David Ellwood. My slide also does say here Mitch Royall will be ..... today but he has had a family medical emergency which he is attending to, so we won't be dealing with that section of it today. David's role ..... page 3 working on Narrabri - - -

MR BEASLEY: Yes, I think we've been told he is coming on Friday now.

MR FLYNN: Thank you very much. Yes. Thank you for making the opportunity for him to be here once he has managed ..... A brief overview of Whitehaven, if I could. We are one of the ..... leading independent producers of premium quality coal, all exporting our assets are exported completely to the offshore markets ..... markets of Asia. We have all our operating assets in the Gunnedah Basin, being three open cuts and of course the Narrabri the underground mine which is the subject of discussion today. In addition to that we have our Vickery Extension Project which the IPC will be ..... And we also have a new project, Winchester South, which ..... up in the Queensland Bowen Basin which is a coking coal project.

Over time our smaller assets are running out and we are in rehabilitation phase with a couple of those, but we are transitioning to larger projects such as the Narrabri Stage Three Project, Vickery Extension Project and Winchester South which will support Whitehaven's transition to a portfolio of more largescale long-life mines that typify ..... and in productivity gains with scale. ..... coal is very strong and that's principally because of its unique property, notably its ability, amongst other things, to provide the lowest carbon emissions per tonne of coal consumed. It is used in high-efficiency, low-emissions power stations, ... power stations, and also we sell coal for metallurgical coal processes, so steel-making and smelting .....

Our thermal coal is the best coal you can buy seaborne trade and, as I say, enables ..... emissions intensity per tonne of coal consumed. All our customers are signatories to the Paris agreement or have equivalent domestic policies, such as in the case of Taiwan. Over more than 20 years we have grown significantly in the Narrabri and Gunnedah region. This growth in production has been accompanied by growth in our workforce which now is around the 2500 mark, two thousand five

hundred, of which 75 per cent live in the local region around our mines. And we are proud of the social and economic contribution that we have been able to make and we are the largest private sector employer in the region. A couple of notable matters there our female ..... 12.4 per cent of the workforce, and in terms of our Indigenous employment which is an outstanding number, nine per cent of our total workforce identify themselves as being Indigenous by heritage.

We believe the benefits of our presence goes beyond that of our workforce and every single mine. Ultimately our compact is leave an economic and social legacy that outlives our actual mining operations, and lives on in the area through education, health, skills and infrastructure. Our focus on our procurement in particular locally delivers enormous local benefits through an active business stimulus coming from this spend. The intergenerational nature of the investments that we make allows us to build not just jobs and skills but also the infrastructure that serves the community through the good times and more challenging times as well.

We offer sustainable long-term rewarding career opportunities in regional Australia. We invest in skills development with a strong focus on creating pathways for young people to remain in the region. Our long life assets and human resources-intensive nature of our business puts us in a strong position to continue to provide meaningful opportunities in the region. We are committed to local employment and, as I say, 75 per cent of our people live and work in the community where our mines are based.

This slide shows a few of the key metrics which are important in terms of our contributions to the community, and this is just FY '21. As you can see, significant numbers, $344 million in local procurement and ..... of each ..... local business. There is about 300 businesses between Narrabri and Tamworth that have shared that bounty. And we have paid about $210 million in wages in this past year and contributed $190 million in this past year to federal, state, local taxes, and also royalties of course.

It's worth noting that maintaining our operations through COVID-19 and supporting our local communities has been challenging but we have been able to manage our way through that successfully. Since September we have been encouraging our people to get vaccinated using a COVID-19 incentive program which has been providing $250 vouchers which are redeemable in local businesses and ..... the benefit of those vouches issues as being $355,000 for gift cards, as I say, to be spent in local businesses between Gunnedah and Narrabri. Our view of this is that if we keep our local – our people safe, by implication we're keeping the community safe as well as we are the largest private sector employer in the region.

Similarly, the employment and community benefits are associated with Whitehaven's operations were maintained during this difficult time but also during the preceding drought period in 2017, '18 and '19. I think this record demonstrates the resilience of our business and the ability to maintain a positive contribution, even during challenging times.

On to the project itself and the support, we believe there is strong support for Narrabri Stage 3 project as evidenced by the nature of submissions to the EIS. About 94 per cent of the submissions to the EIS were in support of the project, with only three objections from special interest groups. No individuals, including local landholders in the vicinity of the project, launched objections to the project. Whitehaven considers that this represents a strong understanding of the benefits of the projects, that they significantly outweigh any residual costs and consistent with DPIs evaluation that he project is in the public interest and is approvable. We note the IPCs submissions are ongoing and thank everyone for taking the time to express their opinions and acknowledge that 272 people have indicated their support for the project thus far.

Whitehaven is an integral member of the local community and we continue to have strong support. Stage 3 project is a logical extension of an existing mining operation, leveraging the site's existing infrastructure and providing ongoing employment opportunities and community support. We have a strong understanding of the potential impacts associated with mining operations, given its history of operational ..... and have developed monitoring and management programs which will continue to implement and improve over the life of the mine.

We have completed a comprehensive assessment of the project itself with a team of expert consultants and peer reviewers. The assessment involved in an integrative design process to minimise environmental impacts while balancing recovery and ..... coal resource in a safe and efficient manner. ..... of the EIS and supplementary information the Department of Planning Industry and Environment has developed a comprehensive set of conditions in consultation with relevant government agencies. Whitehaven has accepted the draft conditions and agrees ..... they will allow the project to go ahead and comply with acceptable criteria and standards. I would now like to hand over to David Ellwood, the stage 3 project director, to provide a summary of the Narrabri mine and the Stage 3 project itself.

MR ELLWOOD: Good morning, Commissioners. Thanks for that, Paul. I'm just going to share my screen as well.

MR BEASLEY: Yes, that has come up. Thank you.

MR ELLWOOD: Right. Thank you, Paul. Thank you, Commissioners. As Paul said, my name is David Ellwood. I am the Stage 3 project director, and I will just be running through a very brief project overview for you today. The Narrabri mine is the existing underground coalmine operating approximately 25 kilometres south-east of the existing – of Narrabri and is serviced by an existing regional rail, road and power infrastructure and is located in the vicinity of Whitehaven's existing Maules Creek, Tarrawonga and Bickery Extension Project coalmines.

The Stage 3 project, the mining operations commenced in 2012 and have progressed through longwalls 101 to longwalls 110 which are these longwalls up here, and these form the northern part of the mine. The ..... operation in longwalls 201 and 202 in

this area here are scheduled to commence later this quarter and will occur in parallel with our longwall operations. Longwalls – mining of longwall 111, which is this panel up here, will be deferred until later in the mine's life. ..... is approved to be produced at a rate of up to 11 million tonnes per annum. It is transported from the underground to the pit top area shown here, which is located to the east of our longwall panels via an underground conveyor system. ROM coal is processed at the coal handling and preparation plant before being stockpiled and transport to the Port of Newcastle via rail.

The Stage 3 project involves extending the 200 series longwall panels, which are these on the screen here, approximately six kilometres to the south into the mining lease application areas shown down here. The project proposes to use an existing – the existing facilities at the pit top area, such as the CHPP, the stockpiles, the train loading structure and the water and reject storage facilities. There is no change to the maximum ROM production rate proposed by this project. Surface infrastructure required to facilitate underground mining, such as ventilation infrastructure and associated access tracks, is required to be developed along each longwall panel. The ecology surveys conducted as part of the EIS we used to design the infrastructure layout to minimise impacts on ecological values as well as Aboriginal cultural heritage sites.

The micro-siting process will continue to be used through the detailed design of our infrastructure, aiming to further reduce impacts where practicable over the life of the mine. We are planning our construction activities to minimise impacts to the land as far as practicable to improve rehabilitation outcomes. For example, we minimise topsoil disturbance at our drilling pads, such that vegetation can regenerate from the existing seed bank. This avoids disturbing the soil properties and allows for existing species to re-establish themselves. As with our current operation in accordance with the recent New South Wales rehabilitation reforms and the proposed draft conditions from DPIE, we will progressively rehabilitate areas of surface disturbance as they become available. Our rehabilitation methodology is to return the land to its pre-existing land use.

The project will access approximately 82 million tonnes of additional coal resource and extend the approved mine life from 2031 to 2044. This will provide therefore continued employment of up to approximately 520 full time equivalent personnel, and the ongoing contribution to the local and regional area, supporting local businesses and the communities. The project will provide up to a net benefit of $599 million in net present value to the State of New South Wales. Being an extension of an existing operating mine, many of the key issues associated with the Stage 3 project have been subject to previous assessments. The Stage 3 extension area can be characterised as a mirror of the Stage 2 area, with similar topography, hydrology and mix of land used, with grazing areas to the east and forest to the west.

The site is well suited to the project, given the underground mining areas do not contain any high productive agricultural land and are located approximately five kilometres west of the high productive groundwater resource located along the

Namoi River. And we have ..... community members living in close proximity to the mine. As Paul mentioned earlier, the existing suite of environmental ..... management methods will continue to be used and approved on where required. Lastly, we have consulted extensively with – regarding the project with the people in the local area and more broadly in the region. We respect there is a range of opinions, however we do note and we are thankful for the support that we have in the community. Thank you.

PROF O'KANE: Thank you. Chris, do you have anything?

PROF FELL: Yes. I had a question about greenhouse gas emissions, and it particularly had do with the fact of flaring. Flaring is very successfully used in ..... mines and I note in the amendment report you have indicated you will flare under certain conditions. And I was really having a look at those conditions. I was seeking more information. The first of these was if the methane content was greater than 30 per cent, ... biogas it is successfully flared with methane content substantially lower. So I would be interested in getting more information on that. And the second issue

MR ELLWOOD: Yes - - -

PROF FELL: Sorry. I will give you the three - - -

MR ELLWOOD: No, no. Sorry.

PROF FELL: - - - because they may flow one to the other. The second one has to do with the oxygen concentration, and less than six per cent. I just wonder how far that is away from the lower explosive limit of a carbon dioxide methane mixture. And thirdly, I guess, you propose to flare only for those areas where it's 3.5 metres cube per tonne of coal as ..... level. And I note as the mine moves south, in fact the methane content goes up substantially, and I wonder if a more aggressive pre-mining activity, perhaps even using more underground extraction might not be sensible. Thanks.

MR ELLWOOD: Yes. No worries. I will – I know two – those first two questions have been assessed as part of our EIS and amendment report so I will have to refer back to that and get back to you later. But just on your third point with regard to pre-drainage at below 3.5 cubic metres per tonne of gas in the coal seam, we generally find in the mine that we can't drain any gas once we get lower than three and a half cubic metres per tonne. There is just simply not enough seam pressure within the coal seam to get that gas ..... into the area, therefore it's very unlikely that we will be able to extract any of that gas, even if it is methane present when it is below three and a half cubic metres per tonne.

PROF FELL: Thanks for that. But what puzzled me was you're moving into deeper seam territory where understandably there would be higher seam pressure. I realise your experiences fall in the Extension 2 project, but in the Extension 3 project

perhaps you could be more active in extracting because there is a lot of methane content.

MR ELLWOOD: Yes. As part of the management of the mine we will continue our pre-drainage network. That's for the safety of our men underground as well, therefore we will be exploring that as the mine does extend down to the south. And if we can extract that gas, then it will be extracted by .....

PROF FELL: If you could give us some information about that, that would be very helpful. Thank you.

MR ELLWOOD: Yes. No worries.

PROF O'KANE: Do you think there is a chance you could do more through draining? I mean, you sounded a shade doubtful then. I was just wondering if there is a technical reason why - - -

MR ELLWOOD: In terms of pre-drainage, it all just comes down to seam pressure and how much you can actually get out of a seam. So once you're above a certain seam pressure you can extract it. It will take a long time, but you can extract the gas out of the seam, which we are proposing to do. But once you get below that three and a half cubes it is very difficult to get any gas out of a coal seam.

PROF O'KANE: And at the moment you don't know exactly what the pressure is in that – in the Stage 3 area. Is that right?

MR ELLWOOD: No. We have done extensive exploration down the south. That's what the three and a half cubic metres is based on. ..... the Stage 3 area runs effectively ..... The depth of cover in Stage 2 area varies very similarly to the depth of cover in the Stage 3 area, therefore there is parallels between the two areas that you can withdraw.

PROF O'KANE: Okay. Thank you. That's helpful. Snow?

PROF BARLOW: Yes. David, one question with regard to rehabilitation after you finish mining particular longwalls. Those would clearly be in the northern area of the mine. But you have a plan to also re-inject the brine back into the goaf. Will you not need access to those holes that are in the front area to re-inject brine?

MR ELLWOOD: We're just actually developing a response on that now, Commissioner. We know it was a question I think you asked in the last meeting so you should have a written response over next week.

PROF BARLOW: Okay. Thank you.

PROF O'KANE: So I have one more question. Again you will have noted those questions late last week that I referred to when speaking to the department, the ones

from Environmental Defenders Office acting for the Lock the Gate. And we would appreciate your comments particularly one question 16. And again you're welcome to comment now or when you return on Friday. You're welcome of course to send a comment in writing by 5 pm on 25 February. We note the questions are not our questions and we don't necessarily accept the premises or assumptions, and we also note that you might like to rely on existing reports or material and the EIS and so on, and that's perfectly okay to refer to that in answering it. But feel free if you would like to make a comment now, you or Mr Flynn, that would be fine.

MR ELLWOOD: I will jump in there. I am aware of those questions ..... but we haven't reviewed them in detail so - - -

PROF O'KANE: And of course you're welcome to comment on any of them, but 16 is the one we particularly want a comment on.

MR ELLWOOD: Yes. No worries. We will review them in-depth this week and we will either come back with a written response or a response on Friday.

PROF O'KANE: Thank you.

MR BEASLEY: All right. Thank you both. The next person making a submission is Johanna Evans from North West Protection Advocacy. Are you there, Ms Evans?

MS EVANS: Yes. Yes. Can you hear me?

MR BEASLEY: Yes, we can.

PROF O'KANE: Yes. Thank you.

MR BEASLEY: Go ahead, please.

MS EVANS: Thank you for the opportunity to come before the IPC to contribute to the case against approving the Narrabri Stage 3 Expansion. Can you hear me properly?

PROF O'KANE: Yes, very clearly. Thank you.

MR BEASLEY: Yes, we can. Yes. We will let you know if we can't.

PROF O'KANE: And we can see you clearly, too.

MS EVANS: Thank you. I'm Johanna Evans. I represent North West Protection Advocacy, a grassroots environmental advocacy group which is committed to preserving the cultural and ecological values of the Pilliga Forest. I pay my respects to the elders of the Gomeroi Gamilaroi past, present and emerging. It's inconceivable to us that this project has made it this far based on its greenhouse gas emissions alone. I'm just going to share my screen. Can you see that?

PROF O'KANE: Yes. Thank you.

MR BEASLEY: Yes.

MS EVANS: Madam Chair and Commissioners, Stage 3 has been described to you as a brownfields project. But with the expansion being mostly in native forest it's a misleading description to justify the fragmentation and cutting to shreds of the largest inland temperate forest in Australia. The image here shows the Stage 3 project area looking to the north over the top of Bulga Hill. It's hardly brownfield. The entire Pilliga is sacred to the Gomeroi.

This part of the Pilliga is significant all levels. Locally, Pilliga is home to hundreds of species, including black cockatoo, koala, Pilliga mouse, spotted quoll, hundreds more. It is a living biodiversity bank. A wombat burrow photographed at Bulga Hill. Proponent fails to mention wombat in their documents that I can see. Correct me if I'm wrong. The Eastern Cave Bat, listed as threatened on the BC Act, breeds at Bulga Hill. The noise from the nearby proposed ventilation shaft could impact this bat. The subsidence could impact the wombat. Inferior brown coal or biodiversity?

Regionally, Pilliga is the recharge zone of the Great Artesian Basin. It is a State significant resource and should be formally recognised and protected from projects exactly like this one. At a national level, the Pilliga's importance is in mitigating climate change impacts by staying intact. To avoid catastrophic climate impacts we must leave forests like the Pilliga undisturbed. Through its association with the GAB, it's essential to economy and agriculture for a large area.

This presentation raises issues around cumulative impacts and the importance of holistic, comprehensive monitoring of groundwater impacts, including the IESC request tracers be used to track contamination. We need to consider all activity across the GAB. Cumulative impact is when the combination of projects in a region will have a greater impact than when singular. In this situation it – we have – you know, it's a tipping point for the Pilliga.

Narrabri Stage 3 Groundwater assessment states:

> *Groundwater modelling undertaken as part of this study provided a preliminary assessment of the impacts of the proposed project but did not assess the cumulative impacts of development of the adjacent Narrabri gas project.*

This is an oversight and needs correction. Two heavy industries, the gas and the coal, come together atop the crucial recharge zone of the Great Artesian Basin. Neither one accounts for the other in any meaningful way in the proponent's documentation. Quite simply, the true cumulative impact is being ignored. We cannot have both these projects. We should not even have one. DPIE Water did note in their supplementary advice:

There are apparent inconsistencies between groundwater models for different developments in the area.

To the west, right next to the proposed Stage 3, the Santos CSG Project is about to begin, approved in August 2020 by the IPC. While on the surface they may be a few kilometres apart, the underground connectivity of aquifers has long been suspected and discussed by experts. Connectivity could have impacts such as underground spread of contamination from injected brine, aquifer drawdown, cracked aquifers, salinity, chemicals of potential concern and other pollution from the Whitehaven inaccurately characterised and analysed drilling waste procedures.

Why, Commissioners, has this tool not been developed further? It's called assessing the cumulative impact of mining scenarios on bioregional assets in the Namoi catchment. Cumulatively, we must also consider projects to come, the inland rail further to the west, more habitat fragmentation and Gorman North a new fossil fuels exploration area south of Narrabri and to the north of Stage 3. The Gorman North Precinct would bring coal and, potentially, oil shale exploration almost to the doorstep of the town of Narrabri and its immediately adjacent to the Namoi River.

IPC Commissioners, who will take responsibility should our fears be realised and we see the collapse of this incredible biome which is home to so much biodiversity, and which so many rely on for life liquid by the water. Will you take responsibility? Will you make sure the proponent is required to monitor thoroughly, as the experts recommend, if you approve this? At both the Santos and now Narrabri Underground Stage 3 assessments, experts, like the water expert panel, and independent environmental and scientific committee, have recommended monitoring that the proponent arrogantly belittles and then flatly denies.

In many instances, Whitehaven can be seen in their responses to the IESC to just ignore what is recommended. The IESC concluded that any cumulative impacts would be adequately avoided if the conditions were applied. This confidence is not warranted. There are too many red flags, too much data missing across the GAB. The IPC signed off on the gas stating multiple conditions assuring risk be adequately managed. Santos applied to the New South Wales EPA to cease to monitor 37 bores in the project area; no data, no problem.

One of these bores is called – one of the bores is called Tullamullen. It is located on the eastern edge of the Santos gas field, not far from Bulga Hill. It's in the Stage 3 area. We applied by GIPA for information about the drastic groundwater monitoring changes we were witnessing on the Santos Water Portal. What we learned from the disclosed documents has relevance to the Stage 3 application. Tullamullen was showing big impacts. It was taken out of action by Santos and the EPA admits it was found to be susceptible to underground mining. The bore dropped 6 points in pH in just 3 months between November 2015 and February 2016. You can see that here. The EC was fluctuating wildly, analytes of concern were noted.

The bore was measuring the Digby formation at 218 metres. The Digby is part of the Gunnedah Oxley Basin and the next formation up from the target coal seam, it is slightly deeper, though, than the seam being mined for coal. When the IESC comments on Stage 3 and makes specific monitoring recommendations, termed comments, we stand behind the recommendations/comments of the experts, not the proponent Whitehaven Coal and not the DPIE assessment report. Why employ experts to provide scientific advice and then ignore it?

The public don't have access to crucial data. The GISERA Faulting Study. Years overdue. It's meant to assess the possibility of faults as potential connectivity pathways in the GAB floor in the area of Bohena Creek. If there are already existing faults in the basin floor coupled with the induced faulting as stated by Hydro Stimulations in the groundwater reports parts A and B for Stage 3, then there is a bigger than minimal chance of the GAB leaking into the coal seams and eventually into the Gunnedah/Oxley Basin due to the difference in the geographical height and water pressure in the larger Great Artesian Basin. There's a comment there from the Gateway report.

The New South Wales Coal Basin Water Monitoring is still not operational. Years overdue. Millions of tax payer dollars spent. The bores on Plumb Road in the gas field have never worked properly and are now not even showing standing water level. How can cumulative impact on groundwater be assessed when monitoring is so weak? Let's go and have a look at some specific IESC comments, which are really good advice.

I paraphrase a bit here. This is comment 1. Overall, the IESC considers that there is still a material risk of impacts on water resources given the current intensive use of groundwater in the region. The predicted extent of subsidence and groundwater drawdown by the project, and the proposed development's proximity to significant water resources such as the Namoi River. Many of these potential impacts were discussed in the IESCs previous advice in 2019 and are still not adequately addressed.

Whitehaven's response is to effectively give the expert committee the flick, citing its own high degree of confidence in its water resources and associated data. When taking up – when weighing up the carefully considered, sage advice of the IESC with Whitehaven's self-praise, I take this opportunity to remind you that Narrabri Coal Mine is at the highest risk level under the EPAs risk-based licensing system.

Comment 2. The potential for long term drawdown of the water table in this water-stressed groundwater management area is of concern and warrants further investigation, modelling and monitoring. Whitehaven, "Yeah, no. Let's stick to our waste management plan. No further ground truthing was necessary", says the same company that near Turrawan at Maules Creek failed to monitor the conditions of the impact of Back Creek vegetation. Then, at its prosecution by NRAR for water theft, claimed lack of evidence of harm.

Comment 3(a). IESC notes a number of issues with the proponent's assessment of groundwater impacts; however, IESC does not consider that all relevant parameters and boundary combinations have been considered in the proponent's assessment of potential impacts. Whitehaven, advised by AGE, responds that:

> *A model with this level of detail in the vertical direction would likely not be capable of accurately predicting long term regional drawdown patterns.*

Despite this admission of limitations of the model to accurately predict drawdown – which they currently admit to be 2 metres and possibly up to 10 – the proponent continues to ignore the IESC, providing long-winded excuses why IPC should ignore the IESC. 3(d). Maybe the most breathtaking example of Whitehaven's arrogance is its response to Comment 3(c).

IESC called for a biannual update as works progress. Calling for twice yearly recalibration of the Stage 3 groundwater model in the face of uncertainties and noted the need for increased groundwater monitoring. The proponent's response is one of disdain, assisted by AGE consultants, the well-known advisors to the water-thieving CSG industry. The stingingly sarcastic response is:

> *It is assumed that biannually in this case means every two years – biennial – rather than every six months. Six monthly updates would require a near-continuous rolling program of data collection, processing, model recalibration and predictions.*

IESC recommends rolling twice yearly calibrations precisely because of the rapid depressurisation predicted. To suggest every two years is an adequate adaptive management measure is nonsense. The New South Wales EPA knows all of this, and yet to our knowledge these matters have not been brought to the attention of the IPC in its agency advice. I stand to be corrected if I'm wrong.

IESCs Comments 3(e) and 4 allude to the noticeable lack of water quality monitoring, which we see already happening to the west in the gas fields, namely, reduced frequency or no monitoring at all. The comments continue and the responses continue to underwhelm. I'm run out of time here, but I will include more in our submission.

The IESC is independent. It has no vested interest to unnecessarily obstruct industry and commerce. On the other hand, the proponent has a vested interest to avoid the consequences of catastrophic water loss and contamination, deferring reporting and monitoring until it is too late.

If Whitehaven get what they want management plans will be massaged behind closed doors, DPIE will fail to enforce the guidelines of CCC so that community members can't get honest and timely answers. Farmers will lose and the forest will lose. We need to avoid the devolution of all obligations into management plans. Right now there is an opportunity to draw a line in the ..... sand. We call on you to reject this

new approval and, if not, then you must implement the IESCs advice in full in the conditions.

DPIEs recommended conditions will undermine adaptive management, not enable it, allowing problems to worsen without scrutiny for lengthy periods while damage is happening. The cumulative impacts of Stage 3 will be fatal to groundwater in the Pilliga. The farms, the precious water and life contained will be lost. Who will be held responsible? I do hope that what you hear and learn today will have bearing on your final decision. Thank you for your time today.

PROF O'KANE: Thank you.

MR BEASLEY: Thank you. The next speaker is Robert Monteath from Cheaper Electricity Party Incorporated. We can see you, Mr Monteath. Not sure if we can hear you yet.

MR MONTEATH: .....

MR BEASLEY: Okay. We can hear you, as well.

MR MONTEATH: ..... can you hear me?

MR BEASLEY: Yes, we can. Thanks. Go ahead.

MR MONTEATH: Thank you for the opportunity to speak to you today. Yes. I'm going to take a – more of a global view on issues relating to this mine expansion. So I'm looking at some of the arguments for not approving this extension of the Narrabri Mine. First of all is the goal of reaching net zero emissions by 2050 and the issue of carbon dioxide emissions from coal plants to people claiming extinction of flora and fauna, human deaths and rising temperatures.

To respond to these claims, I'm referring to the expertise and the knowledge of the people below – or the organisations below, where I take a pragmatic view when I review projects similar to this. So, first of all, the goal to reach net zero emissions by 2050. What is the current global contribution of wind and solar to all energy use, be it electricity, transport, heating, manufacturing, et cetera, over the last 30 years. Is the world tracking towards net zero emissions by 2050?

And information provided by the International Energy Agency over various regions. This is for Europe, which the – wind and solar is the yellow band. It was zero in 1990. 30 years later it's 30 per cent. Looking at China, the dark green band is their wind and solar contribution which has gone from .5 to three per cent in 30 years. Asia, excluding China, is the yellow band and it's moved from.5 to two per cent over that 30-year period. Australia has gone from .5 to three per cent, and that's the green band in this chart, and then looking at things globally, again in yellow, wind and solar has gone from zero to two per cent in that 30-year period.

So it's a very slow transition, even though there's been tremendous efforts to produce wind and solar farms, and it's noted that the percentage of coal that's being consumed in the world for energy has hardly changed in that 30-year period, which means that, to me, that coal is still needed for – in the foreseeable future and Australian coal, being the cleanest in the world, should be used for powering the world. And that's not me saying it's the cleanest coal in the world. The CSIRO have reported on that and says that Australia's coal is five times cleaner than the rest of the world, and we have – our coal has a very ratio of energy to – energy ratio.

So, unfortunately, net zero emissions by 2050 appears to be an unachievable goal, and here's some further evidence to that effect. Last year, the IEA prepared a report about what it would take to get to net zero emissions, and in that report they say that the world will be – the world's electricity generation will double in the next 30 years to 2050 and solar and wind energy would have to be providing 50 per cent of that demand, which means, looking at this IEA graph at the moment, wind and solar being the blue and purple down the bottom there, produce seven per cent of our electricity, but by 2050 they need to be produced 27 million gigawatts, which is the current amount.

So if we assume that this 30-year graph timetable goes from 2020 to 2050, it means that the rise in wind and solar percentage would have to be at that rate, which is five times what it currently is, and it appears that this is an unachievable goal. So if people of the world, including us good old Australians want the luxury of using electricity 24/7, then we need to keep mining coal for the next several decades at least and, further, many people say the carbon dioxide emissions from coal power plants is going to destroy the planet by causing mass extinction of flora and fauna, significant loss of life, human life, and an increase to global temperatures.

So considering mass extinction from carbon dioxide, that's what activists say, but biologists tell us that carbon dioxide is crucial for life on Earth, and we think we all are well aware of that. So we're not – since 1990 carbon dioxide in the atmosphere has increased from 360 to 410 parts per million and, according to the CSIRO and the Australian National University combined that over the – that 30-year period from 82 to 2010 there's been an 11 per cent increase in the foliage in the world's arid reasons due to the rise of CO2 in the atmosphere.

And NASAs satellite data has shown that over a similar period, 82 to 2015, the amount of tree leaf cover around the globe has increased by 20 million square kilometres. So believe it or not, there are some good things with extra CO2 – good things happening with the extra CO2 in the atmosphere. There's also a claim that human deaths caused – there are more human deaths cause by rising in temperatures, and Yuming Guo from Monash University last year published a paper showing that more deaths are cause from cold weather than hot weather. So there's a 10 to one ratio. 4.6 million people die from cold weather each year, where 480,000 die from hot weather each year.

And is carbon dioxide the only cause of rising temperatures. What about the sun? Here's a graph of the activity on the sun. Solar flares, sunspots tracked over the last 1000 years and, as you can see, at present where the sun's activity is at its highest in over 1000 years, and it has been increasing since about 1900. I also would like to note – you to note that what's called the maunder minimum happened around 1700, and just looking at this – going back to this increase in solar activity since 1900, it shows – the CSIRO have shown that since that time our – Australia's temperature has been increasing, which make sense.

Now, and back in the 1910s, 20s, 30s, I don't think there was a huge amount of human activity involved in climate change, and in the 1700s, going back to the maunder minimum, the Thames River would freeze over each winter, similar with other European rivers and the Baltic Sea, and here's a painting of a fair happening on the Thames River during such a winter, and this was known as a little ice age. So there's a reasonable amount of proof that the sun does have a significant effect on Earth's climate.

But then looking at ..... report published last year, they're claiming that since 1750 the drivers for climate change have been dominated by increasing greenhouse gases resulting from human activities and claiming that, in the comparison, that there has been a negligible long-term influence from solar activity or even volcanoes, which seems a bit surprising, but I believe the sun has been affecting our climate. Ice ages, warm times, for since the beginning of time, and doctor – and I didn't learn – just make that up by myself.

Dr Patrick Moore, who's a co-founder of Greenpeace, also claims that during the existence of Earth there's been no direct correlation between CO2 increase and increase in atmospheric temperatures, and even on this graph that temperatures dropping at this stage while carbon dioxide is increasing, and a bit further on, the opposite happens. Temperature rises, CO2 decreases and in the last million-odd years there hasn't been a huge change in CO2, but the temperature has jumped up and down quite significantly.

So getting back to more local matters. Where does Narrabri coal go? Most of it goes to Asia, and Asia needs Narrabri's coal. In an IEA report, the coal report at the end of last year, it's saying that coal is a cornerstone of electricity supplies in India, China and South East Asia, and it's estimating that there'll be increased last – over the next few years 4.1 increase in China, 11 per cent in India and 12 per cent in Asia. So like it or not, there's a huge demand for coal, and considering Asia, there at 600 coal-fired plants under construction or planned, which are all of the pink or purple circles, and there's a total generation capacity for these proposed plants of 500,000 megawatts, which, in comparison to Australia's coal-fired capacity is 25,000 megawatts.

And here's another graph showing that in the last 10 years there's been a threefold increase in thermal imports into South and South East Asia. Returning back to a bit more locally. In the foreseeable future can Australia survive without coal to generate

electricity, and the answer is ..... and the reason for that is that reviewing the Australian Energy Update report produced by the Department of Industry, Science, Energy and Resources, it shows that over the last 50 years – this is, again, total energy consumption – renewables were six per cent in 74, which is mostly hydro power, and in 2021, they're still six per cent.

Gas is the one that's made the big change from eight per cent to now 28 per cent, but renewables, the transition is very slow, and more to the point, regarding electricity generation, wind and solar now produce 16 per cent of our electricity, and where it started off at – as a zero in 94. Again, slow transition. So we've been building windfarms and solar farms for 25-odd years and, unfortunately, it is a slow transition, and there's another problem which is the night-time in Australia when we are wanting 24/7 power. This is a graph from NEM, you know, National Electricity Market. The six States showing colour-coded black ..... brown, coal, red, gas, blue, hydrogen – sorry, not hydrogen. Hydro. Green, wind, yellow, sun.

And six – 5 o'clock on a July night, we're in a wind drought. One per cent of electricity is coming from wind and solar – in New South Wales, that is – four per cent Australia-wide, where they're the percentages for coal. So then 13 hours later it's 6 o'clock on the following morning. Wind and solar is two per cent in New South Wales, eight per cent Australia-wide, and we – Australia had consumed 300,000 megawatts of electricity during that period and, unfortunately, wind and solar were contributing next to nothing, and last year, according to NEM, there were 106 nights that were a similar situation where wind and solar were producing less than five per cent of our electricity.

And, unfortunately, solar and wind don't come with batteries, according to this cartoon, but that is what we would be needing if we were wanting to remove all fossil fuel generators and rely significantly on wind and solar, and in attempt, we would need somewhere near 300,000 megawatts of electricity stored up in batteries, and I know Snowy Hydro 2.0 is coming along, but it only produces 2000 megawatt hours and, at the moment, our largest battery is 450-megawatt hours.

So we're facing a big problem and, according to Clean Energy Council, there's only proposal for 2800 megawatts of battery storage projects on the table at the moment, and we would be needing to build ..... thousands of gigawatts for the next 20 years, if we were wanting to rely on wind and solar. So there's no such thing as clean reliable energy and, like it or not, Australia needs to keep its coal industry going for the foreseeable future. Narrabri Coal Mine Extension needs to be approved. Thank you for your time.

PROF O'KANE: Thank you.

MR BEASLEY: Just to assist the commissioners, Mr Monteath, what's your – given there was a lot of expert evidence in that submission, what's your personal area of expertise?

MR MONTEATH: My personal area of expertise has nothing to do with electricity or generation at all.

MR BEASLEY: No, I just asked you what it was.

MR MONTEATH: No, that's fine. No. I'm a land surveyor and a town planner.

MR BEASLEY: Right. Thank you. Mr Barlow, I think that's all we have for the time being.

PROF BARLOW: Okay.

MR BEASLEY: And we're having a break now.

PROF BARLOW: .....

MR BEASLEY: Sorry, Snow, you had a question, did you?

PROF BARLOW: Yes. Sorry. We lost him. Don't worry. Have we lost--

MR MONTEATH: No, I'm sorry. I'm still here.

MR BEASLEY: He's still here.

PROF BARLOW: I would just like to ask Mr Monteath, you know, what is the warming in Australia over that period of 1990 to 2020, which he quoted the CO2 increase, and, secondly, you know, does he agree that plant growth – you know, CO2 is important to plant growth. Also temperature and availability of water is perhaps the overriding factor.

MR MONTEATH: Well, going back to my – well, my high school science, yes. Well, CO2, light and water were all – are all very important for plant growth. Now, I'm not an expert on any of those, but I'm just providing in my presentation the information from experts that I found, either from NASA or CSIRO claiming that there's been a significant increase in plant growth during those 30 years.

PROF BARLOW: Thank you.

MR BEASLEY: All right. Thank you for that. I think we're now having a break for 15 minutes. Thank you.

PROF BARLOW: Thank you.

RECORDING SUSPENDED **[10.31 am]**

RECORDING RESUMED **[10.51 am]**

PROF O'KANE: Richard, do you want to - - -

MR BEASLEY: Yes. We now have Nic Clyde from Lock the Gate Alliance as the next speaker. Mr Clyde, are you there?

MR N. CLYDE: Good morning, Commissioners. Yes. Can you - - -

MR BEASLEY: We can hear you. Go ahead.

MR CLYDE: Fantastic. Thank you. Commissioners, Lock the Gate objects to this project. It is not in the public interest. It does not represent ecologically sustainable development. It is contrary to the principles of intergenerational equity. It's at odds with the climate policy settings of New South Wales. And, quite frankly, and clearly, it is not compatible with net zero by 2050. Neither the department's nor Whitehaven Coal's economic assessments are fit for purpose. Both overstate the benefits and dramatically underestimate the costs of this project.

And, just briefly on that, I just want to respond to the department's characterisation this morning of the cost of carbon attributable to Scope 1 emissions in particular. There was a suggestion that this is a small technical issue to do with the performance of a cost-benefit tool, as it was put. That is not the case. This is a fundamentally important issue that is at the heart of this assessment, of whether or not the costs of this project outweigh the benefits. And I'd just draw the Commission's attention to Justice Preston's examination of this precise issue in the Rocky Hill case, where it was material to the refusal of that project.

We also oppose this mine because the location for the mine expansion is unsuitable for the longest and widest longwall mining in Australia, for a number of reasons, including impacts on groundwater, on ecosystems, on Indigenous cultural heritage, and the viability of local initiatives – that I think you're going to hear more about this afternoon – to enhance landscape soil carbon sequestration.

We believe the location is also unsuitable because the area of the coal seam that Whitehaven wants to expand into is much gassier than the area that is currently being mined, and this has serious implications, as I'm about to explain. Further, longwall mining in this location will also impact at least nine water bores crucial for watering stock, which would be affected by groundwater drawdown that exceeds the impact criteria of New South Wales's Aquifer Interference Policy.

Despite the serious and long-lasting impacts predicted, as far as I understand, minimal subsidence mining methods, such as bord-and-pillar mining, do not appear to have been assessed as an alternative development option, which, I believe, is required under the EP and A Act, and I thank the Commission for putting that

question to the department, and I look forward to reading their response. For these reasons and more, this project should be refused consent.

Let me begin by explaining why on Scope 1 greenhouse gas grounds alone this project should be refused. I'm just going to attempt to share my screen now, if you can bear with me just for a moment. Sorry. I've got multiple screens open. Okay. Commissioners, are you able to see that?

PROF O'KANE: Yes, we can. Thank you.

MR CLYDE: Okay. I've had to switch back to my notes. Can you still see the slides?

PROF O'KANE: We can, but it's a bit hard to read the main slide.

MR BEASLEY: Yes. You might have to either expand it - - -

MR CLYDE: Okay. All right. I'll tell you what. I'm going to go old school. I will share the visuals in our written submission, and I might tweet a few after this presentation. Okay. Sorry for that distraction. Our analysis, Commissioners, is that – sorry. And this is of Scope 1 greenhouse gas data reported to the Clean Energy Regulator. That analysis has revealed that this project would, if it were operating today, emit more Scope 1 greenhouse gas pollution than any other thermal coal mine in Australia.

Please take a moment just to consider that fact. Narrabri Underground Stage 3 Coal Mine would produce 1.36 million tonnes of carbon dioxide equivalent per annum of Scope 1 emissions. And that's just getting the coal out of the ground, and that does not include the Scope 2 emissions, by the way. No thermal coal mine operating anywhere in the country produced more than that, according to the Clean Energy Regulator, in 2019/20.

To understand just how reckless the Department of Planning's recommendation to approve this project is, I just want to briefly highlight four key developments in the last 11 months. Commissioners, in March of last year, the Australian Academy of Science called for an acceleration of Australia's transition to net-zero greenhouse gas emissions over the next 10 to 20 years – an acceleration of that effort. Two months later, in May of last year, the International Energy Agency declared that no new oil, coal or gas projects could be developed anywhere in the world, if we are to meet the Paris Agreement's 1.5-degree temperature goal.

Three months after that, in August of last year, the IPCC released its sixth assessment report, finding that there's a finite amount of carbon left in our 1.5-degree carbon budget, and that at current levels of CO2 emissions, this carbon budget would be used up within about the next 12 years. And then, Commissioners, most recently, just 10 weeks ago, in December, the New South Wales Minister for Planning published new planning principles which declared that:

The New South Wales Government recognises the need for urgent and deep reductions in greenhouse gas emissions.

The proposals also propose action and guidance that should result from this concern with what I think is a commonsense directive, that:

The planning system must promote strong action towards reducing carbon emissions.

Commissioners, I will share with you a graph in our written submission of what action Narrabri Underground are proposing. In essence, as Steve O'Donoghue said this morning, the proposal is for Scope 1 emissions to triple, or almost quadruple in some years. So that is clearly not a reduction in emissions. If you look at the Scope 1 emissions that the company has reported to the Clean Energy Regulator over the last four years, you will also see a trend of increasing Scope 1 emissions there. So the actual plan that Whitehaven Coal has submitted to you is to increase those emissions threefold or fourfold, and to maintain that level of increased emissions for the next 20 years.

And DPE and Whitehaven Coal agree that the project will not achieve anything more than a token level of abatement: less than one per cent, a level of abatement so small that it's actually hard to see it when you graph it. So I graphed it. I've dubbed this the Where's Wally Abatement Plan, because this sliver of emissions, not appearing for the first time until year 7, is so small that it's actually quite hard to see it on a graph, and if I were to show it to you now, you would struggle to see it with your – on screen.

Commissioners, I also want to draw your attention that just in the first six years of mining, before the proposed flaring even begins, about six million tonnes of emissions will already have entered the atmosphere. Six million tonnes. Lifetime Scope 1 and 2 emissions for the Hume project were estimated to be about 1.8 million tonnes, so less than a third of what Narrabri Underground would emit just in the first six years, 100 per cent unabated. Hume Coal Project, you'll recall, was refused consent by the Commission, partly on greenhouse grounds, with the Commission finding that:

The project would be a new net emitter of greenhouse gas emissions.

And that:

When weighed against the relatively minor economic benefits of the project, the emissions are not justified.

Commissioners, lifetime Scope 1 and 2 emissions for the Bylong Coal Project were estimated to be 3.4 million tonnes, lifetime emissions Scope 1 and 2. Bylong, of course, as you know, was also refused consent, also partly on greenhouse grounds, with the Commission finding that:

It is rational to refuse fossil fuel developments with greater environmental, social and economic impacts than fossil fuel developments with lesser environmental, social and economic impacts.

The Commission was also of the view that the applicant had not minimised Scope 1, 2 and 3 emissions to the greatest extent practicable, as required by the mining SEPP. The Commission also noted that there were no offset measured proposed by the applicant, an attribute of this project also.

In stark contrast, the Department of Planning has recommended approval of a new, high-emitting thermal coal mine, which would continue emitting Scope 1 emissions out to 2064. Post-mining Scope 1 emissions for Narrabri Underground, Commissioners, would total 1.6 million tonnes, so that's between 2045 and 2064. In what, Commissioners, Bob Dylan might describe as a simple twist of fate, if you're a Dylan fan, Rocky Hill's lifetime Scope 1 emissions were exactly the same, their lifetime emissions 1.6 million tonnes, the same as just the post-mining emissions for Narrabri Underground. And, of course, as we all know, Rocky Hill was also refused consent, again, and famously, partly on climate grounds.

Commissioners, it's worth noting also, of course, that those emissions will be adjusted upwards as the global warming potential is increased from 25 to 28, which the department needs to do, and should supply that information to you, before this project is determined. Commissioners, New South Wales Government policy is to reach net zero by 2050. As I mentioned before, there will be more than half a million tonnes of emissions after 2050, so how is that compatible with net zero? And there are no offsets proposed as part of this package to make that project compatible with a net-zero objective.

And while we think at Lock the Gate there's nothing in particular that's special about the coal that Narrabri Underground wants to produce – it's essentially the same thermal coal that's being mined in other mines across the state – there is one important difference: you can mine the same product elsewhere in the state for a fraction of the Scope 1 emissions.

In our written submission, I will tender some analysis of a mine near Mudgee that produces about the same amount of thermal coal as Narrabri wants to produce. Its emissions intensity is almost 10 times lower than Narrabri Underground's. There is a much larger thermal coal project in the Hunter which is also seeking to expand. Its current emissions intensity is about a fifth – actually, it's less than a fifth – of the emissions intensity proposed at Narrabri Underground. At this point, again, Commissioners, I want to emphasise the Commission's findings in the Bylong Coal determination:

It is rational to refuse fossil fuel developments with greater … impacts than fossil fuel developments with lesser … impacts.

Whitehaven Coal want to move into a very gassy part of the coal seam in their lease area ..... massive methane emissions. That makes this site simply not a suitable location for a new coal mine expansion.

Last year, Commissioners – sorry – just one week ago, there was a story in Nature magazine highlighting some research from NOAA in the US that are sounding an alarm about a tripling of the pre-industrial methane levels. I highlight that because the scientists raised the concern within the context of President Biden and his global methane pledge that almost 100 countries signed onto at Glasgow last year, and urgent efforts to reduce methane by 30 per cent by 2030. This project would increase methane emissions.

We also know that crossing your fingers, recommending approval, and hoping that so-called reasonable and feasible measures will mitigate the greenhouse impacts of this project just doesn't hold water. These measures are demonstrably failing to improve performance across Whitehaven's mines right now. In fact, their only sustainability report last year confirmed that the emissions intensity per tonne of ROM coal mine had increased year on year for the last five years in a row.

So that is Whitehaven's own analysis of the emissions performance of their mines. They found no link at all between the implementation of reasonable and feasible measures and emissions reduction – absolutely none. Where total Scope 1 and 2 emissions decreased, that decrease was not attributed to mitigation measures, but, by the company itself, to:

> *...lower production across our mines, resulting in lower fugitive emissions.*

So just bear in mind I'm comparing emissions intensity and absolute emissions there. That's the reason for the discrepancy there. And then, of course, there's the significant Scope 3 emissions. I'm running out of time to touch on that, but they would be significant, and, of course, they would continue for decades to come.

Commissioners, let me finish by saying these are just some of the reasons why this project is not in the public interest, is not ecologically sustainable development, is contrary to the principles of intergenerational equity, and is, frankly, at odds with the climate policy settings of New South Wales, and should be refused. You'll also hear this afternoon about the appalling track record of the company, which has no social licence to operate. It is not supported by local people, who overwhelmingly are opposed to this project and do not think it should go ahead.

And, finally, I will just say that the reference this morning to 63 submissions supporting the project at the EIS phase is not a credible representation of the views of the New South Wales community. Commissioners, more than 500 people are employed at this mine, so only 63 people in total put in submissions supporting the mine. And we know from social research that the overwhelming majority of the Australian community oppose the expansion of new coal mining in Australia. So let

me finish there. Thank you for hearing me out. We will submit a very detailed written submission to you.

MR BEASLEY: Just while you're there, Mr Clyde, just one thing, one question from something you said right at the beginning of what you were saying. You were referring to the Chief Judge of the Land and Environment Court's decision in the Rocky Hill case, and you were making that submission in the context, I think, of costs and economics. Were you referring to that part of his Honour's judgment where he seemed to reject the applicant for that mine's submission that in terms of the greenhouse gas emission costs for the project, you shouldn't take the New South Wales costs and apportion them against the global population? He seemed to reject that approach. Was that the part of the judgment you were referring to?

MR CLYDE: Mr Beasley, thank you for raising that question. Yes, that is precisely the part of the judgment.

MR BEASLEY: Okay.

MR CLYDE: And if you read that part of the judgment, Justice Preston outright rejects the suggestion that Scope 1 and 2 costs should be apportioned based either on New South Wales share of global GDP or - - -

MR BEASLEY: Sure. All right. Just one other thing. You also mentioned the IPCCs most recent report, and you were talking about the importance of getting to net zero by 2050 in order to keep global temperature daily average rises to, hopefully, 1.5 degrees C, and certainly no worse than two degrees C. I'm right, aren't I, that that report also says it's not just getting to net zero by 2050; it's how quickly we get there? In other words, it's the cuts on the way. If we are slow about reaching net zero by 2050, then the likelihood is that global daily average temperatures will exceed 1.5 degrees C and maybe even two degrees C.

MR CLYDE: No, that's exactly right. And I think you'll hear more about that on Friday - - -

MR BEASLEY: .....

MR CLYDE: - - - from Professor Penny Sackett in her expert evidence. But that's right. So the IPCC are saying that the current carbon budget will be exhausted within 12 years – within 12 years – bearing in mind this project already has approval to mine almost for that long, until 2031, and that is the same reason why the Australian Academy of Science are calling for an acceleration of effort to get to net zero. So I think there's a consensus that that needs to happen as soon as possible - - -

MR BEASLEY: Yes.

MR CLYDE: - - - and that this project takes us in the opposite direction in a fairly spectacular way.

MR BEASLEY: All right. Thank you very much.

PROF O'KANE: Nothing from me, beyond to say thank you for the questions you submitted last week.

MR BEASLEY: Yes. I'm just wondering if Mr Barlow – Commissioner Barlow, do you have anything?

PROF BARLOW: No. Thank you, Richard.

PROF O'KANE: All right. Thanks. All right. Thank you for that. And the next speaker is Bronwyn Vost, who, I think, is also from Lock the Gate. Are you there, Ms Vost?

MS B. VOST: Hi, good morning, Commissioners. Yes, I'm here.

PROF O'KANE: Good morning.

MR BEASLEY: Perhaps I was wrong in saying you're from the Lock the Gate. I might have read in some markings that weren't there, but you go ahead and tell us what your submission is. We can hear you and see you.

MS VOST: Well, I'm here as myself. I am a grandmother of seven. Primarily, I'm a member of the Sydney Knitting Nannas & Friends. And I wish to speak against the approval of Stage 3 of the Narrabri Underground Mine expansion for the future of coming generations.

While the Knitting Nannas are known for our opposition to fossil fuel mining, an important aspect of our mission is to advocate for water security. It appears to me that Narrabri Underground Mine is an extensive water-draining exercise, which extracts groundwater from aquifers and contaminates them in its industrial processes. It plans to release up to 144 megalitres of some sort of filtered water into the Namoi River. The Namoi forms part of the headwaters of the Murray-Darling Basin.

What Whitehaven calls "filtered" or "treated" is a very loose definition, when I read the advice of the Independent Environmental Scientific Committee. I decided to read the IESC advice, and Whitehaven Coal's responses. The latter is quite staggering in its rebuttal of the independent scientists' recommendations. Given what – sorry. I've just lost my - - -

MR BEASLEY: That's all right.

MS VOST: Given what is at stake, and the generally low confidence indicated by both IESC and DPIE Water, to accept the view of Whitehaven over that of the IESC would be very foolish and irresponsible of the Commission, not to mention the fact that Whitehaven has recently been prosecuted for surface water theft in the Land and Environment Court. Respectfully, we urge you to accept all of the IESCs

recommendations, which are focused on precaution and acknowledge the major gaps in knowledge about underground aquifer connectivity. Regarding the release of mine water into the Namoi River, the IESC made perfectly reasonable recommendations in paragraph 20, stating:

> *It is unclear how the mine-affected water will be treated (filtered?) prior to release.*

Additional monitoring data on other parameters, for example:

> *…soluble metals identified in the geochemical assessment (antimony, arsenic, cobalt, molybdenum, selenium) should be obtained, especially as there may be uncontrolled releases from sediment dams into Kurrajong Creek.*

Given that we've learnt the New South Wales EPA has limited reporting requirements of Narrabri Underground, which do not include heavy metals, I think insufficient is known about what Whitehaven considers "treated" or "filtered". Given that the EPA itself has not provided appropriate monitoring requirements for mine water discharged into the Namoi River, it is essential to ensure that all possible contaminants associated with coal mining are tested for. Was that my five-minute bell?

MR BEASLEY: One minute to go, I think, Ms Vost.

MS VOST: Thanks. Whitehaven says that it would consider – would consider – measuring soluble metals in its discharges. For goodness' sake, who's running the asylum here? How can a repeat-offending company, which has been prosecuted for a range of environmental and workplace safety offences, make up its own rules? Leaving this to the management plan, which will be massaged behind closed doors, can no longer be accepted.

It was heard at the prosecution of Whitehaven Coal by the Natural Resources Access Regulator last year, where the company was found to have stolen surface water for years, to the astonishment of the presiding judge Nicola Pain, that Whitehaven had been in breach of its Maules Creek Mine water management for the entire duration that mine has been operating. Strict conditions won't suffice. We need to see more objective standards applied, and they need to be transparent, so that environmental groups and stakeholders have easy access.

MR BEASLEY: All right. Thank you very much, Ms Vost, for that submission. I'll just check with Commissioner Barlow whether he's got a question.

MS VOST: Okay. Thank you.

PROF BARLOW: Thank you, Richard. No, I don't have any questions for Ms Vost.

MR BEASLEY: All right. I don't think – all right. Thank you very much for your presentation, Ms Vost.

MS VOST: I'd just like to note that I'm - - -

MR BEASLEY: If there's any written material, you can pass it in.

MS VOST: Yes.

MR BEASLEY: If you've got extra text there, just send it in to the Commission.

MS VOST: Okay.

MR BEASLEY: Thank you.

PROF O'KANE: Thank you.

MS VOST: Thank you, Commissioners.

MR BEASLEY: The next speaker is Phil Bradley from Better Planning Network. Are you there, Mr Bradley?

MR P. BRADLEY: Yes, I am. Thank you. Yes.

MR BEASLEY: We can see you and we can hear you. Go ahead.

MR BRADLEY: Great. I acknowledge the Aboriginal traditional owners and custodians of the lands on which we ..... and thank the Commission for the opportunity to speak. The Better Planning Network, or BPN, is a statewide, volunteer-based, not-for-profit, incorporated organisation established in 2012 to challenge inappropriate planning changes and unsustainable development. BPNs objectives including advocating for the principles of ecologically sustainable development, community wellbeing and quality of life.

BPNs strong feedback from its members is that excessive coal and gas mining is detrimental not only to the needs of the people for a healthy environment, but is also detrimental to community wellbeing. BPN believes that in this Narrabri Coal Project, the public good is being sacrificed to the interests of big business. BPN knows that if we are not planning seriously for strong, urgent climate action, we are planning for climate catastrophe like lemmings running off the cliff. Accordingly, BPN objects to the Narrabri Underground Mine Stage 3 Extension Project.

The United Nations Intergovernmental Panel on Climate Change reported that to provide a 93 mid-value probability of not exceeding a dangerous post-industrial increase of two degrees Celsius, the concentration of atmospheric greenhouse gases would need to be stabilised at or below 350 parts per million carbon dioxide

equivalent. That is well below current levels of 500 parts per million carbon dioxide equivalent, which means no carbon budget left for the two-degree C rise.

So why are we even consideration another coal mine extension? The Protection of the Environment Administration Act 1991 is worth revisiting with respect to the Narrabri Coal Mine. The Act specifies in part 3 the objectives of the Environment Protection Authority, including the following, which for the Narrabri Mine would be impossible to achieve:

> *…(a) to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development; and*
>
> *(b) to reduce the risks to human health and prevent the degradation of the environment, by means such as … promoting pollution prevention … reducing to harmless levels the discharge into the air, water or land of substances likely to cause harm to the environment … minimising … waste –*

and to apply the precautionary principle, which should be guided, among other points, by intergenerational equity, by the present generation ensuring:

> *…that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*

The Narrabri project fails on all of these environmental protection aims. Our planet and Australia have been on fire in recent years, including in Indonesia, Russia, the USA, and, of course, the devastating fires in Australia. Underground peat fires resurfaced in the Arctic in 2020, and in Western Sydney's extreme heatwave, Penrith was the hottest place on the plan, when it reached 49 degrees C.

Combatting climate change is also a great opportunity, though. The solutions are clear. Green economics, cleaner air, better health and prosperity are possible for all if we respond to this crisis with global and national solidarity. When your house is on fire, we do not pour petrol on it. Instead, we take quick, immediate action to put out the flames. Climate change is happening now, and we must play our part, as the 10th biggest national emitter in the world. In August, the United Nations IPCC released its latest climate report. It's been described as code red for humanity by the UN Secretary-General António Guterres. The report says:

> *Evidence of observed changes in extremes, such as heatwaves, heavy precipitation, droughts and tropical cyclones, and, in particular, their attribution to human influence, has strengthened.*

It is clear that the scale and pace with which humans are altering the climate system has almost no historical precedent, and the changes are being driven by burning fossil fuels. This scary UN climate report makes it clear that we have a responsibility to move more quickly, by 2030, as urged by Australia's Climate

Council, which, after using the carbon budget in the United Nations climate report, calculated that to play our fair part in the rapid sustained emissions reductions required globally, Australia should aim to reduce its emissions by 75 per cent below 2005 levels by 2030 and to net zero by 2035.

The Narrabri coalmine proposal, on the other hand, is guaranteeing an increase in greenhouse gas emissions, as is shown by the graphic included with my written report. The first graphic is for Narrabri stage 2. Rather than the requirement to minimise the release of greenhouse gas emissions from the project, as required, it indicates an increase in greenhouse gas emissions over nearly 30 years of operation, almost quadrupling carbon dioxide equivalent emissions by 2037, which is seven years after the climate council says that we should have 75 per cent emissions cut. The problem would be worse in stage 3, as shown in the second graphic, as the quality of coal is shown to be poorer with a much higher emissions intensity per tonne. This is yet another reason to reject stage 3, especially given both the New South Wales and Australian Governments are already committed to net zero emissions by 2050 and the Climate Council says net zero by 2035.

New South Wales clearly needs to do more on climate action for a start. New South Wales should, among other things, follow the Climate Council's strong recommendations. This stage 3 coalmine, if approved, will make this target very difficult to achieve, given its high emissions. Many of Australia's strategic allies and major trading partners, including USA, European Union, UK, Canada, China and Japan, have strengthened their climate commitments for this decade. The faster New South Wales cuts emissions, the better the outcomes.

The New South Wales Government has announced a 50 per cent emissions reduction by 2030, with Treasurer and Energy Minister Matt Kean declaring this emissions reduction target and a quicker move towards 100 per cent renewable energy will, I quote:

> *…drive down household and business energy costs, create jobs and grow our economy.*

End quote. The Business Council of Australia also supports a 46 to 50 per cent reduction by 2050 – 2030, sorry. B10 acknowledges Matt Kean's leadership in renewable energy, but the New South Wales Government's coal and gas industry expansion more than negates his good work. Instead, New South Wales should be setting a good example for the Prime Minister by quickly phasing out coal and gas mining to achieve the Climate Council's recommendation. On the contrary, the Narrabri coalmine extension has the largest greenhouse gas footprint of any coalmine assessed to date since the IPC was formed, as shown in the third graphic in my written report.

At a 1.4 degrees average land mass temperature rise, Australian lives and livelihoods are already being harmed. Climate change is a clear and present danger and we are already experiencing associated major losses. Heat stress alone kills more people

than all natural disasters combined, but we do have the solution. Rather than dirty coal, it's never been cheaper or easier for Australia to invest in clean energy, clean industries and clean jobs, which will make Australia more prosperous and resilient and protect ecosystems. If the Commission rejects this polluting coalmine, it will have strong public support, as in the latest Climate of the Nation report, 75 per cent of Australians expressed concern about climate change. Macquarie University Climate Councillor Professor Lesley Hughes said:

> *The science is clear and Australia's international allies and neighbours are calling for Australia to lift its 2030 emissions reduction target. This isn't just about saving face internationally. This is about protecting Australia's economic future and ensuring our children and grandchildren can not only survive but thrive.*

The Better Planning Network proposes this Narrabri coalmine expansion in the interests of the public and the environment and especially due to the project being contrary to doing New South Wales' fair share in trying to avoid global climate catastrophe. Accordingly, the Better Planning Network urges the Commission to reject this unacceptably high greenhouse gas polluting, dirty fossil fuel project. I thank you.

PROF O'KANE: Thank you.

MR BEASLEY: Do any of the commissioners have a question? Commissioner Barlow?

PROF BARLOW: No.

MR BEASLEY: No. Thank you very much, sir.

MR BRADLEY: Thank you. That's all right.

MR BEASLEY: The next speaker is Anna Christie from Leard Forest Research Node. Are you there, Ms Christie?

MS A. CHRISTIE: Hello. Yes, I am here. I don't know if you can hear me.

PROF O'KANE: Yes, we can see you.

MR BEASLEY: We can hear you and we can see you, so go ahead.

MS CHRISTIE: Well, unfortunately, I don't seem able to share my screen, which is pretty unfortunate, because much of what I wanted to contribute was actually visual, for the benefit of the - - -

MR BEASLEY: Well, don't forget you can send that in later and just talk to it now.

MS CHRISTIE: Okay. Well, thank you very much anyway for the opportunity to address the Independent Planning Commission. Our citizen science group doesn't agree that this project should be approved. We believe that its known high-intensity greenhouse gas emissions alone would have justified refusal of this expansion. I'm speaking to you today from Narrabri, the ancestral land of the Gomeroi People. To the elders, past and present, I offer my respects and would like to note that our group walks with the traditional custodians in their commitment to protect the Pilliga forest from being poisoned by the impacts of coalmining, the groundwater being drained, the Namoi River being used as an industrial sewer for mine-affected wastewater and the destruction of habitat and ultimately local extinction of wildlife.

The Leard Forest Research Node is a group based in Narrabri, formed in 2015 and conducts community participatory action research concerning the impacts of coalmining and gas extraction in the Namoi Valley. And for seven years, we've been following these coalmines and their activities and studying them and reporting on them, and we come to you today with our observations about Narrabri Underground, which we commenced monitoring in 2017, after we became aware of drilling in the eastern region of the Pilliga forest, just off Scratch Road.

Community members were shocked to witness what we now know is the severe surface impact of the Narrabri Mine, apparently unique among underground coalmines in Australia. This was the process of gas drainage to prepare the longwalls for mining. In its EA for stage 2 of the Narrabri Underground, the company was very open about the extremely high CO_2 levels which made flaring of the drained gas impossible. And here I was hoping to show you a video of this process because to see is to believe how primitive this practice is, and this practice, this primitive practice you are being asked to approve of on a large scale of industrial proportions in Pilliga forest.

We also observed the combined impacts of pre-degassing and goaf degassing, which you can see in our slides, which included unbunged holding ponds, unlined sumps to contain drilling waste, and then to leave this drilling waste onsite to evaporate or drain into the ground. We saw drilling waste spilt around the drilling pads and an obviously unsafe workplace.

What you will see in the images that we are going to share is what the DPIE calls the only feasible means of methane and carbon dioxide gas drainage for this mine. DPIE is asking you to accept that the conventional horizontal technique of gas drainage for underground mines called "underground to inseam degassing" is not an option for this mine because it is, as we repeatedly hear, a very gassy mine, and that you should accept the devastating surface impacts that result from its chosen method of surface to seam degassing, along with the associated impacts like biodiversity fragmentation and loss, raw venting of greenhouse gases into the atmosphere and the problem of drill cuttings and their potential contamination of land surface water and groundwater, which have not been adequately addressed in the environmental impact assessment.

Given the aboveground footprint of the surface to inseam degassing process, it will probably be the most damaging to biodiversity of all the operations proposed in stage 3; therefore, the process of underground to inseam degassing should not be dismissed so flippantly as simply stating that it is not feasible. In view of how serious the impacts would be, we therefore call for an independent review, independent of both the proponent and DPIE, to determine whether the underground inseam degassing is in fact feasible or not feasible, or is it just not commercially desirable by Whitehaven.

Instead of adopting the conventional inseam method of degassing, which would also enable accurate measurement of greenhouse gas emissions, Whitehaven is urging you to believe that a speculative new flaring technology, which can flare small amounts of methane, is an acceptable mitigation for the fugitive emissions from the gas drainage. They would have you approve Narrabri stage 3 on condition that a management plan might be developed to incorporate such technology in the gas drainage process, even though they say that only .2 megaton of the 31.41 megaton of coal seam gas could be abated by this flaring. And we have a slide there, paragraph 358 of the assessment report referring to that.

As the Commission may know from our written submissions, the process of raw venting of gases is a key problem. And Narrabri Mine is already the largest methane emitter in the region, and this source is GISERA and Associate Professor Bryce Kelly and his team, but nevertheless methane comprises a relatively small proportion of greenhouse gases from this mine.

Regarding biodiversity, as illustrated in our written submission, the intensity of vegetation so far, in the northern half of stage 2, has been substantially more than what was ever predicted, and the layout has changed immensely. It seems that at every step of the way, Whitehaven has underestimated the aboveground footprint. Under the approval of stage 2, Whitehaven Coal has the flexibility to clear additional tracks and well pads at its discretion, based on operational demands, and clearly they did.

So, you know, the wording is:

> *The exact location of future surface to inseam pre-drainage borehole areas may change.*

And that's it, and thereby reserving the right to clear horizontally and more pads, whatever they want.

Please compare figure 2.2 and 2.6 of part 2, I believe of the EA, and you'll see a little bit of misrepresentation going on there because without the figures to demonstrate to you, it's very clear that the proposed positioning and number of degassing wells in figure 2.6 severely underestimates what will really happen. And so we question whether the true disturbance area has ever been recalculated from stage 2 and whether the amount of biodiversity offsets needed has been revised. We hope the

IPC will seek further advice on how the additional vegetation clearing from stage 2 was addressed in the biodiversity offset scheme of Narrabri Mine. And we request the IPC to call on DPIE to explain how offset requirements will be adjusted to account for this unplanned loss of biodiversity.

Knowing that Whitehaven falsified its biodiversity offsets for the Maules Creek Mine to gain approval to open-cut mine the Leard State Forest, we submit to the Commission that you should require the proponent to secure offsets equivalent to the predicted disturbance plus an amount equivalent to the proportion of additional vegetation clearing using stage 2 as a guide, and the offsets should be secured in perpetuity as a condition before any mining would be allowed to commence.

And I now turn to the gas drainage system which has been permitted to continue for years with no previous disclosure of the chemical composition of the drilling waste, certainly not by the EPA, which astonishingly has imposed no conditions at all on the mine's environmental licence to report on the chemical composition of the drilling waste which is produced in the form of a slurry and left onsite in unlined sumps, which I have many pictures to show you.

Confidence of the regulator in the impermeability of these earth tanks is contradicted by the Land Contamination Assessment, appendix M, page 3, which describes the soil profile as 86 per cent sandstone, on average, but only five per cent of finer grain sediments, including mudstone, claystone and siltstone. Earth tanks for the containment of hazardous and liquid waste and sludge are typically lined in clay – in thick clay. I apologise for this interruption, which is due to the fact that here in Narrabri we are scrambling for places to actually do our presentation.

So basically, back to the earth tanks, which are not clay-lined. They are sitting in 86 per cent sandstone, sitting above the Pilliga sandstone, which is described in the groundwater assessment as highly porous and permeable and producing high yields of good quality groundwater. So we had serious concerns about this. The IESC expressed doubts about the confidence in regional scale geological mapping and hydrological parameterisation near the Namoi River and recommended ground truthing to provide confidence. Nothing could be further than the truth. And not only applied to the water – pretty much everything needs ground truthing because right now it's being left to community groups like ours to actually do the ground truthing.

And so I'd like you to also bear in mind supporting the IESC requirements, which we recommend that you will support in full. We now learn of contamination coming from leakage from the underground mine into Santos' groundwater monitoring board called Tullamullen, where we now see that apparently, according to the EPA itself, mine contamination has entered the Digby seam. Now, how it has entered the Digby seam, we don't know, but at the very least the EPA should have included this important information which it has in its control in its agency advice. And it's a serious dereliction that the EPA did not inform you of this and it had to be provided by community.

Now, I'm sorry, but I'm finding it very difficult with the situation here, but I'll continue on now, skipping a bit of information that is relevant to pictures that I had. Regarding the chemical composition of the drilling waste slurry, the activities that we've observed in the eastern Pilliga forest are crude. Unlined earth tanks were a key concern, but the chemical composition of the drilling waste is another matter that we draw to the Commission's attention, and this is relevant even if Whitehaven proposes to transfer the drilling waste to the coal rejects emplacement area. As to our knowledge, no indication has been given as to whether this waste will be transferred from the sumps as a solid, having been allowed to drain into the sand, or to evaporate, or as a liquid. And we think that these things you need to know upfront. These are not things to just leave in the lap of the gods or some behind-closed-doors discussions between Whitehaven and the DPIE.

The safety of unlined earth tanks is questionable and we also have concern about the proposal to somehow transfer the drilling waste to the coal rejects pile. We obtained one sample of the drilling waste slurry, which was analysed by ALS Laboratories. The slurry – we were hoping to compare the slurry with the geochemistry assessment and, well, unfortunately, when we did try to compare the sample of the actual coal drilling waste slurry with what Whitehaven has disclosed, we were unable to do so because what Whitehaven has provided in the geochemistry assessment is actually not the substance that they're planning to transfer to the reject coal pile. It is, in fact, solid waste from 270 metres depth, which does not represent the substance that they are supposedly analysing and reporting on and going to transfer to the coal rejects pile.

Look, this oversight is just appalling, and the fact that it just would not be picked up by the EPA makes it even more upsetting. So basically we feel it's a con that this supposed exploration drillhole waste material referred to in paragraph 9.5 of the Environmental Chemistry Assessment is using two selective – we don't know selected out of how many – solid waste samples from deep in the earth. Our sample was measured in milligram per litre. Theirs is measured in milligram per kilogram. How representative is it, and really what is going on there?

Furthermore, the EPA advice to stage 3 clearly recognises that drilling waste contains drilling fluid, stating that:

> *Drilling waste accepted from other sources may carry contaminants that are not present in the drilling products used by the site drilling contractors or in the geology that site drilling activities intersect.*

This is a very confusing statement. What is this, quote, "drilling waste accepted from other sources", unquote? Is this a reference to discussions the EPA has had concerning disposal of Santos coal seam drilling waste at Narrabri Mine? The EPA should be requested to clarify why it is talking about "drilling waste from other sources".

The EPA goes on to recommend that drilling waste that is received from offsite complies with the specifications within the treated drilling mud order 2014, a reference to the resource recovery order under clause 93 of the Protection of the Environment Waste Regulation, and this order recognises that drilling mud typically has attributes which have not been tested for in stage 3 geochemical assessment, including polycyclic aromatic hydrocarbons, benzopyrene, hydrocarbons, and in its 8th of December 2020 agency advice, the EPA advises that the so-called drilling mud should be characterised periodically as the work progresses. Well, we don't agree. The EPA should have discharged its responsibility by providing advice and, at the very least, examining the geochemical assessment and providing some guidance on what should be tested for and when. So - - -

MR BEASLEY: Ms Christie, Commissioner Fell has a question for you. So I'll let him ask – I'll get him to ask you that now.

MS CHRISTIE: Yes.

PROF FELL: Sorry. Ms Christie, you earlier mentioned underground seam drainage as an effective way of getting methane release down. I'm just aware – asking you, are you aware of any New South Wales mines that are doing that extensively?

MS CHRISTIE: I don't know the specifics. What I do know is that no one has ever witnessed surface to seam to this extent. Now, admittedly, this is one of the most gassy mines in the state, if not the country. So that might be a factor, but I first became aware of the fact that other mines practise the inseam method when I visited Middlemount, a very established mine in Queensland, and read about the processes there, and that's what really got me thinking as to, "Well, if this is what they're using in other coalmines, why don't they use this technique here?"

And the environmental assessment of stage 2 actually does tell us why. It tells us. It's quicker and obviously, thereby, it's cheaper. If you look back at the wording, which I can provide in our written assessment, even the proponent's consultant at the time, who – I'm sorry – I can't remember the name of the consultants – made that very clear, that there was a choice. And it leads – if I may say, Professor Fell, that does lead to one of our conclusions, which was that we believed that serious attention should be given to whether the inseam degassing method is actually not feasible or is it just not preferred by Whitehaven because it's more time-consuming and more expensive.

PROF FELL: Thank you. You did make that point. Thank you.

MR BEASLEY: Yes. Any of the other commissioners?

PROF O'KANE: No. That was very good. Thank you.

PROF BARLOW: Yes.

MR BEASLEY: Yes, go ahead.

PROF BARLOW: I have a question. Ms Christie, you said earlier in your presentation that there is evidence that one of Santos' – I don't know whether that was a gas well or a groundwater monitoring well has been possibly contaminated by - - -

MS CHRISTIE: Yes.

PROF BARLOW: - - - drilling. And will a reference to that – first, is that public information, (2) will that be included in - - -

MS CHRISTIE: It certainly will. I have a slide which pinpoints the location of the decommissioned Santos monitoring – water monitoring bore, which, by the way, is one of the few that measures quality as opposed to water level, which we believe is a real shortcoming. The water monitoring scheme in the Pilliga needs to focus also on quality. And if you study the number of bores that exist, cumulatively, between all the regulators, NRAR, EPA, DPIE, which, by the way, it's not a very good system. You'll find that's the case.

So what has happened is that this bore has become contaminated. Santos has gone to the EPA and said, "Look, this has been – this is showing influence from the mine and it's not something that we should be responsible for. It's not part of our baseline." And the EPA has agreed to decommission the reporting on that bore. And that bore is located somewhere between stage 2 and stage 3.

Yes, I will provide that to you, but, look, we believe this is very serious because, as I say, to reiterate, this is knowledge within the EPA, and the EPA provides an agency advice to you and the EPA should have, at the very least, informed you that this problem exists, that there is already leakage going on, whether this is leaking downwards to – from Hoskissons down into Digby, even though Digby is the more close – it's the above – in terms of which layer, Digby is above. We can't tell, at that exact point, whether it's draining upwards or downwards, but once again, the IEC has the solution. I feel that I – I can't hear the bells. I can't hear very well, and I don't know whether I've used up all my time.

MR BEASLEY: Yes, you actually have, Ms Christie, but you of course can send into the Commission any of the written material we haven't gotten through.

MS CHRISTIE: Well, thank you.

MR BEASLEY: Thank you for your presentation. The next speaker is Denise Murray. Are you there, Ms Murray?

MS D. MURRAY: Yes, I am. Good morning.

MR BEASLEY: Good morning. We can hear you, so go ahead – and see you now.

MS MURRAY: Good. Thank you. This is my objection to the proposed Whitehaven Underground Mine Stage 3 Extension. I'm Denise Murray, a retired teacher and now cattle farmer with my husband. I'm a mother with grandchildren, who will inherit a world less liveable than what I have known. The sessions on whether fossil fuel projects are approved should be driven by the best science and evidence that now overwhelmingly supports their rejection. In Australia, this is not happening, as Prime Minister Scott Morrison has declared:

> *We will keep mining the resources that we're able to sell on the world market.*

The government even suggested they would bring in legislation that would make it illegal for banks to refuse to finance fossil fuel projects. Michael McCormack, the National leader at the time, declared he's not worried about what might happen in 30 years time.

As the Independent Planning Commission Panel are all professors and should be familiar with the science, you should already have made your decision to reject the proposed Whitehaven stage 3 extension. For this reason, I have decided not to talk about the science but have chosen to quote a few lines from a book recently published by David Attenborough called A Life on Our Planet. On page 5, he starts to tell us about the most costly environment catastrophe in history. I quote:

> *Something else has been unfolding, everywhere, across the globe, barely noticeable from day to day for much of the last century. This too is happening as the result of bad planning and human error. Not one hapless accident, but a damaging lack of care and understanding that affects everything we do … It started silently, before anyone realised it, as a result of causes that are multifarious, global and complex. Its fallout cannot be detected by a single instrument. It has taken hundreds of studies across the world to confirm that it is even happening. Its effects will be far more profound … it could ultimately lead to the destabilisation and collapse of everything we rely upon.*
>
> *This is the true tragedy of our time: the spiralling decline of our planet's biodiversity. For life to truly thrive on this planet, there must be immense biodiversity. Only when billions of different individual organisms make the most of every resource and opportunity they encounter, and millions of species lead lives that interlock so that they sustain each other, can the planet run efficiently. The greater the biodiversity, the more secure will be all life on earth, including ourselves, yet the way we humans are now living on earth we're sending biodiversity into decline. We are all culpable but it has to be said, through no fault of our own, it is only in the last few decades that we have come to understand that every one of us has been born into a human world that was always inherently unsustainable.*
>
> *But now that we know this, we have a choice to make. We could carry on living our happy lives, raising families, busying ourselves with the honest pursuits of the modern society that we have built whilst choosing to disregard the disaster*

waiting on our doorstep, or we could change. Our careless use of fossil fuels has set us the greatest and most urgent challenge we have ever faced. If we do make the transition to renewables at the lightning speed required, humankind will forever look back on this generation with gratitude, for we are indeed the first to truly understand the problem and the last with a chance to do anything about it.

If you believe the science and understand what David has said, then you will reject this proposal outright. If this is still a problem for you, then I would ask that you consider the decision last year by the Federal Court that found the Commonwealth Environment Minister had a duty of care to protect children from the climate crisis when exercising approval powers, that this be seen as a precedent for you when making your decision. Thank you.

MR BEASLEY: Thank you very much, Ms Murray, and the next speaker is Anatoli Smirnov on behalf of Ember and Lock the Gate. Mr Smirnov, are you there?

MR SMIRNOV: Yes. Hello. Hi.

MR BEASLEY: All right. We can hear you. Go ahead, sir. We can see your screen as well.

MR SMIRNOV: Okay. Thank you. That's good. Yes. Good morning, good afternoon. We wanted to do a quick presentation for you, using our – from Europe – like, Europe seem to be experienced about methane emissions in the global context and in the context of underground mining, so we – we put a little – I put a – we put a little presentation where a European thinktank focused on the energy transition and coalmine methane, in particular. These slides are just to support our presentation. We will send a proper report with our partners, Lock the Gate, and others, in the – in a few days after this hearing. The summary of – the summary, we think we oppose the – this coalmine and generally thermal coalmines, underground coalmines, is that we have a real global emergency in terms of methane concentrations.

And many studies are showing that these global methane concentrations are really affecting climate change very close to the effects that carbon dioxide has, and at the same time energy sector is a big culprit and is one of the easiest sectors to where you could mitigate these emissions. Australia's coalmine methane dominates Australia's methane emissions and causes more ..... like, its global warming effect is more than all of New Zealand's CO2 emissions for comparison, so it's a real big problem and this mine would – this proposed extension would contribute to it, and there are many studies showing that this is likely to be an underestimate.

If you measure a 20 year horizon – and I'm sorry, this is not very clear – is that right now we've – I will go to the slides, it's easier to help with my report. So the challenge with methane is it's a very powerful greenhouse gas, but we usually have been – until now, we've been using multiple – its effects over 100 years compared to CO2, which is about 25, 30 times more powerful than CO2 and this global warming

effect. Within that there's a big climate emergency that 100 year equivalence is not applicable, and the 20 year equivalent should be used. And over the course of 20 years methane is 86 times more powerful than CO2, and once you start using this equivalence all these projects become really, really problematic in terms of their greenhouse effects.

Why is this a problem? You can see that atmospheric methane concentrations are rising steadily and if it's so much more powerful than CO2 you could see how much of today's climate change comes from methane. But at the same time when you see this, how fast this is rising, you could also see the potential of how easy it is to make it go because it's a short-lived gas, and if we reduce our emissions we will have a very quick positive effect on global climate change. The IEA states that in order for us to achieve a net zero by 2050 – the goal of net zero by 2050, we need – one of the things we need to tackle is global emissions from the energy sector – sorry – methane emissions from the energy sector.

They think that we should target reductions of 75 per cent of emissions by 2030, so in about eight years, if we have any chance – if we were to have any chance to reach global net zero from – by 2050 and we haven't really even started going in this direction, so this chart is completely unrealistic. And also just it's, like – it's that at the moment the way we – the whole globe put together is going is we're nowhere near the goals needed. The current NDCs do not show any potential for us to go to reduce our climate, the – to achieve our climate goals, and this is because we are approving fossil fuel for the projects such as this extension.

Now focussing really clear – really on coalmine methane, if you say there's six multiple, coalmine methane is a real, real big global problem. It emits more – it has more global warming effect on all of the 27 states put together, more than India, more than Russia if you compare it to CO2 emissions from those countries. It's a real big contributor to global climate change and also – and this is only a few thousand mines scattered around the world, it's a very manageable problem, but if we keep adding to new coalmines it will become worse and worse and worse. In Australia's energy sector, more than two-thirds of methane emissions come from coalmining.

You have very modest oil and gas – emissions from oil and gas production, given that it's quite important in Australia and fuel combustion is from industrial processes, so coalmine methane is your biggest source of global methane emissions and they are big contributors to climate change. If you see just Australia's coalmine methane emissions at the moment, it – the effect on global emissions is twice of all of Australia – New Zealand's CO2 emissions, so, again, it's a really, really massive problem for an industry that is not that – not that important economically, and this again – sorry, this is really important – but not as – not two times the economy of New Zealand. And there is study after study, there is much, much evidence that the reported estimates are underestimates.

Satellites state that's been flying over Australia showing that their emissions were – and sometimes orders of magnitudes higher than you would expect from this coalmine. This is ..... many of the emissions, and this is not the case in this Narrabri – within this. They're included, but post-mining emissions are often not included in the reporting, and, again, not applicable to Narrabri, but Australia's coalmines – many surface mines than we have, being that they have problematic emission factors. And also, finally, when you – when the coalmine is closed it's never really formally abandoned and just put in care and maintenance, which just means that it continues to leak methane without any mitigation and this is a problem.

Just to quickly focus on the Narrabri impact, if you go over the course of its lifetime it is more than, say, Australia's CO2 emissions per year, but this is over 20 years so it's a slightly misleading ..... but over a – so overall Australia's emissions would be less than Narrabri's lifetime emissions, and this line on the top is using an 86 multiple. The line on the bottom is using a 28 multiple which is currently being used. But just to go into another direction, New Zealand's GDP per annum is orders of magnitude higher than Narrabri's total lifetime NPV, so we're putting a huge amount of global warming gases for something that's economically not that enormous.

And whilst I understand mining is important there, people have jobs around it, but we still need to understand this context that Australia's a developed economy and could afford to do better. When you compare to the European Union, European Union has outright – has – just in December has put a proposal to ban any flaring, not just of coalmine methane or any venting of coalmine methane from thermal coalmines, and that effectively to us will put pressure on them to go – to stop producing. So we're not talking about even a question, would you flare or not? It's a question you're not allowed to flare.

It has to all go through electricity generation and you're not allowed to vent. You have to destroy the ventilation area as well as very strong emission measurement obligations, and then you will work on this – we will work on strengthening this regulation further. Just a quick overview, that technology supports exist. These include the directional drilling with the surface underground, the drilling, flaring that actually could manage very low concentration gases. We don't see .....

MR BEASLEY: Thank you, sir. You can mail in the rest of your presentation as a written submission.

MR SMIRNOV: Yes.

MR BEASLEY: Thank you for that, and I think Commissioner Fell has a question for you, though.

PROF FELL: Yes, Mr Smirnov. Thank you.

MR SMIRNOV: Yes.

PROF FELL: One way of expressing the emissions is to put the tonnes of carbon dioxide equivalent per tonne of coal.

MR SMITH: Yes.

PROF FELL: Do you have any feeling for what would be a reasonable figure for Australian thermal coal?

MR SMIRNOV: It really depends on the tonne. What do you mean reasonable? Is it, like – I mean, Narrabri estimate is – I mean, in Australia you have actual – if it's underground thermal coalmine it has actual emission estimates that are reported and measured and that they're very mine-specific. I don't know what you mean by reasonable. There's a huge variation.

PROF FELL: Thank you.

MR SMIRNOV: Yes.

MR BEASLEY: All right. Thank you, sir. Next speaker is Jann Dark from Lane Cove Coal and Gas Watch. Are you there, Ms Dark?

MS DARK: Yes, I am. Can you hear me?

MR BEASLEY: We can. Go ahead.

PROF O'KANE: Yes, thank you.

MS DARK: Thank you. Yes. I'm from the Lane Cove Coal and Gas Watch, which is a grassroots group in Lane Cove. On behalf of the Lane Cove Coal and Gas Watch, I would like to thank you for the opportunity to present to the Commission. I would like to acknowledge and pay my respect to the Gamilaroi people, the traditional owners of the country on which this project is proposed, whose connection to the land continues to this day. Lane Cove Coal and Gas Watch is a subcommittee of the Lane Cove Bushland and Conservation Society. Since 2014 our group has campaigned in Lane Cove to raise awareness about the destruction caused by coal and gas mining in New South Wales.

We strongly object to any extension of the Whitehaven underground mine. In our local Lane Cove government area we doorknocked six entire suburbs, affluent conservative suburbs. We found in our first survey in 2014 that 84 per cent of residents did not want coalmining on prime New South Wales agricultural land. In 2017, 97 per cent said they supported an end to the mining and exploration of coal in New South Wales. We have a continuous presence in Lane Cove. The community continues to be horrified when we inform them that despite the climate emergency, the government supports new coal and gas projects.

We are particularly concerned now with a surge in new applications for coalmining and extensions to existing coalmines at a time when we know that the burning of coal and other fossil fuels globally is causing dangerous warming to our planet. Our aim this year is to alert New South Wales residents to the fact that Scope 1 and Scope 2 carbon emissions from coalmining in New South Wales are rising, and that if the government continues to approve new coalmines and allows further coal seam gas developments, New South Wales will not be able to reduce emissions in line with the Australian Government's Paris 2015 Agreements.

We feel that the Planning Department's approval for Whitehaven to mine coal until 2044 contradicts the New South Wales Government's stated claims that they are actively reducing carbon emissions, especially as the predicted methane emissions for this mine are so high. If this mine extension is allowed, Scope 1 and Scope 2 emissions in New South Wales will rise. The Planning Department assessment contradicts the Whitehaven mine's own survey into the social impacts of the mine so far. On page 14, the Planning Department's assessment states:

> *No agency expressed concerns relating to negative social impacts arising from the project.*

In stark contrast, the Whitehaven EIS social impact survey stated that:

> *95 per cent of people in the mine-affected area disagreed that Whitehaven is a good neighbour. 90 per cent felt that Whitehaven did not listen to community concerns.*

The Planning Department in its summary states that:

> *The mine has not had major issues or complaints made against it.*

However there is a long list of fines, licence suspensions and a court case available to see on the Lock the Gate website. A recent fine was for the illegal use of one billion litres of surface water in 2019 during the drought. Given the number of infringements committed by the company and the assessment by local community that the mine is not a good neighbour, we do not feel confident that the mine will conform to the Planning Department's "strict conditions" and "honour the public interest" in keeping its greenhouse gas emissions under control. We feel particularly unsure of the Planning Department's ability to monitor Scope 1 and Scope 2 emissions due to its own admission on page 73 that there is a lack of clarity about regulating emissions.

If the New South Wales Government has agreed to the principles of the Paris Climate Change Agreement, then Scope 1 and Scope 2 emissions should be clearly regulated. Why are these contradictions occurring in the material made public by the department? We are very concerned that the Narrabri mine extension's effect on the environment has not been clearly and properly assessed. We feel that the department's approval of the mine shows a lack of real commitment to act on climate

change and to protect the environment. After the catastrophic bushfires of 2019/2020, the long droughts across the country, destructive flooding events, we are greatly disturbed at the prospect of any new coalmines or coalmine extension.

We live in a state of perpetual horror at the loss of human and animal life, and the losses we will suffer in the future if we continue to mine and burn coal. The Commission has a moral responsibility to consider the effects of this mine on present and future generations. The mine will have a cumulative effect on raising carbon levels in the atmosphere. The mine will use water that should be used for farming. The mine will probably disturb, if not destroy, significant Aboriginal cultural sites. The mine will force some farmers to sell their farms, disrupt lives, destroying long-term valuable farming businesses. The mine will degrade and poison the land above and around it.

The combined impact of this Whitehaven extension, along with the Narrabri gas project in the adjacent Pilliga forest, will reduce biodiversity, destroy the habitats of koala, Pygmy possum and many other birds and animals. We, in the city, greatly care about this issue of coal companies destroying the environment. Land, water culture and biodiversity must be protected. Thermal coal must be phased out. We do not need it. Why destroy land for something we will not need? Methodologies - - -

MR BEASLEY: Thank you, Ms Dark. We're going to have to ask you to wrap up, because otherwise people at the end of the day can't stay connected.

PROF O'KANE: And could I ask you a request? You spoke about two surveys in 2014 and 2017.

MS DARK: Yes.

PROF O'KANE: We'd appreciate it if you could send in some details that reference those. Thank you.

MS DARK: Yes. Well, I was just about to say that before I was interrupted. Yes.

PROF O'KANE: Thank you.

MS DARK: We will be submitting this.

MR BEASLEY: All right. Thanks very much.

MS DARK: Thank you.

MR BEASLEY: The next speaker we have is Kathleen Briggs from the Wahgunyah (Housing) Aboriginal Corporation and I think you're on the telephone, Ms Briggs, hopefully. Can you hear me, Ms Briggs? Obviously not. So we might try and come back to Ms Briggs. Ms Briggs, can you hear me? All right. Do we have Justin Smith from Narrabri Industrial Network?

MR SMITH: Yes, I'm here. Can you all hear me?

PROF O'KANE: Yes, thanks.

MR BEASLEY: We can and we can see you as well, so go ahead, sir.

MR SMITH: Yes. Hi, my name is Justin Smith and I'm speaking on behalf of the Narrabri Industrial Network, and I'm also managing director of JA Smith Solutions in Narrabri. Narrabri Industrial Network are in favour of the extension of the Narrabri Coal project, and we look forward to assisting with this if it's approved. Narrabri Coal is already an existing site and it's a part of our community and everyday life for Narrabri locals. The extension will only increase the opportunity and value for the area. Narrabri Coal is a very impressive site. I personally visit this site on the odd occasion. When I do it is always clean, well-presented and safe.

Each and every time I visit the site I also see many other local contractors and employees. These people range from civil, septic, waste, concrete, electrical and so on. All these companies are large employees of Narrabri or employers of Narrabri, and the extension will only see these businesses grow and give the region a more diverse sustainability. Whitehaven Coal have proven that using locals and employing locals is a way forward. This has a massive ripple effect on the town and the shire. My business does some work for Narrabri Coal, but not a lot. I see the effects when previously mentioned contractors and local employees shop with me.

I'm sure everyone in retail, hospitality through to the beauticians and hairdressers, also see this money flow back into the community. Myself, as a passionate person for Narrabri, I'm constantly blown away by what Whitehaven Coal give back to the community. Their contributions to local organisations are what keeps the town ticking. Local sport and charities are thriving in Narrabri and this has a massive effect on the town. One of our major goals at Narrabri Industrial Network is to make our region sustainable. Unfortunately, some of our traditional large industries have changed due to the drought, large investments and technology.

We are now in a position to diversify. Narrabri has many opportunities and the coal industry is one that has proven to work in this area. Our region needs projects like the Narrabri coal extension to grow. We need infrastructure to increase our population. Once we have that we will see more day cares, schools, universities, hospitals and further investments. We want to see this area thrive for generations to come. In our opinion, we need to be diverse and take the opportunities like the extension seriously. Regional Australia has so much potential through industry, employment, affordable living and lifestyle. Increasing the opportunities will only open more doors to what we can offer. Growing our community is a good example of what can be done in other areas to give Australia the best chance. Thank you for your time and all the best with your decision.

PROF O'KANE: Thank you.

MR BEASLEY: Thank you, sir. I'm not sure – right. We're going to have a break now for - - -

PROF O'KANE: We're not going to have Ms Moodie?

MR BEASLEY: All right. We can't get the next speaker on the phone, so we're going to have a break for how many minutes? We're going to have a lunch break and when would we come back?

PROF O'KANE: 1 o'clock we'll have, because we've got to catch some time this afternoon. 1 o'clock be okay? Thanks. So we'll be back at – we'll be starting again at 1 o'clock, and thank you all.

RECORDING SUSPENDED **[12.17 pm]**

RECORDING RESUMED **[1.00 pm]**

MR BEASLEY: All right, thank you. Just continuing then with the public hearing for Narrabri Underground Mine Stage 3. I believe we have Kathleen Briggs from Wahgunyah (Housing) Aboriginal Corporation on the phone. Are you there, Ms Briggs?

MS BRIGGS: Yes.

MR BEASLEY: All right. We can hear you, so please go ahead.

MS BRIGGS: I would just like to start by paying my respects to the traditional owners of my country, the Gamilaroi People and their continuing connection to land, water, song and community. I pay respect to my elders both past, present and emerging. I just wanted to share a couple of sentences about Wahgunyah working in collaboration with the Whitehaven mine over the – over the past four years. Wahgunyah have provided an indigenous site monitor to monitor any clearing or digging that takes place on the Whitehaven site. Our site monitors all identify as Gamilaroi, and have some training to compliment the cultural heritage. That sums my spiel up today.

PROF O'KANE: Right. Thank you.

MR BEASLEY: Is that – is that all you wish to say, Ms Briggs?

MS BRIGGS: Yes.

MR BEASLEY: All right. Thank you very much for that.

PROF O'KANE: Thank you.

MS BRIGGS: Not a worry.

PROF O'KANE: And how – could you – could I just ask a question, thank you.

MS BRIGGS: Sure.

PROF O'KANE: How long has that person been in place for that? Through the life of the mine?

MS BRIGGS: For the past four years.

PROF O'KANE: Great.

MS BRIGGS: We've worked with – with Whitehaven.

PROF O'KANE: Yes.

MS BRIGGS: And it's not just one person; it's a couple of people - - -

PROF O'KANE: Right.

MS BRIGGS: - - - working over a roster.

PROF O'KANE: Right. And what sort of – you said there's some training supplements the cultural knowledge the person has – or the people have.

MS BRIGGS: Yes.

PROF O'KANE: What sort of training? Who does that?

MS BRIGGS: They worked with archaeologists actually on the mine site.

PROF O'KANE: Yes.

MS BRIGGS: Yes, just – they've done a couple of training sessions with the archaeologists.

PROF O'KANE: Right. Great, thank you. Thanks – and thanks very much for taking the time to come back after the break.

MS BRIGGS: Not a worry. Thank you very much. The technical issues - - -

PROF O'KANE: Yes, indeed. Okay. Thanks a lot.

MS BRIGGS: Okay. Not a problem. Thank you.

PROF O'KANE: Bye.

MR BEASLEY: All right, thanks. The next speaker we have is Mr Rod Campbell from The Australia Institute. Mr Campbell, can you hear me?

MR R. CAMPBELL: I can, Mr Beasley. Can you hear me?

MR BEASLEY: I can hear you and I can see you; go ahead.

MR R. CAMPBELL: Fantastic. I'm the research director at The Australia Institute, an independent think tank based in Canberra. I'm, also, an economist by background, and both myself and The Australia Institute more broadly have been heavily involved in coal and planning issues, particularly the economics around that, for many years, including looking at reforms to the way economic assessment is done in New South Wales, so got quite a background in some of what we're going to be talking about today. I will try and share my screen because I've got some slides that I'd like to go through. This screen here.

MR BEASLEY: Yes, that's working.

PROF O'KANE: Thank you.

MR BEASLEY: Although - - -

PROF O'KANE: Yes, better.

MR BEASLEY: Yes, now that's better. Yes, we were on Twitter for a minute, but I think we're right now.

MR R. CAMPBELL: Yes, I was just Tweeting my appearance. So I think a really interesting development with this project has been the Department of Planning and Environment really taking a bit of a look at Scope 1 and 2 emissions and realising the seriousness of that for the overall value of the project, and we'll just go to the quote of what they said in the assessment report. The department wrote:

> *The key result of the cost benefit analysis was that the project would provide a net benefit to New South Wales estimated at $599 million in net present value terms.*

I'm slightly abridging this, but:

> *The department generally accepts the cost benefit analysis assessment and conclusions, the exception of which is the treatment of greenhouse gas emissions where taking a different approach significantly reduces the net benefits.*

So having realised that taking a different approach in assessing greenhouse gas emissions to what's in the EIS and the economic assessment written by Analytecon, having realised that a different approach will significantly change the net benefits, as an economist two – two questions immediately jump to my mind: how much is this significant reduction; and secondly, if we found one potentially major flaw in this assessment, I wonder if there are some others.

So what I'd like to go through today briefly, and in more detail in my written submission, is – not to try and – not to try and actually value the cost of these carbon emissions to put a precise figure on it, but more to come at it another way of, what value would you need to put on greenhouse gas emissions per tonne to negate the net present value estimated in the – in the assessment? How much would climate impacts need to be worth to outweigh these projected financial benefits? And then a little bit later on, are these projected financial benefits reliable? So we can see from project documentation, particularly the amended reports by Jacobs on Scope 1 and 2 emissions, here are the incremental – incremental increases in Scope 1 and 2 emissions from the project. I've taken them out and put them into this basic model.

And if you apply a carbon price of $73 per tonne operating across the life of the project, that would be bring net present value to zero. So I think that's worth just stopping and thinking about for a second. I mean, valuing carbon is difficult and subjective and there's a wide range of approaches taken. Now, I've seen values of the social cost of carbon well into the hundreds of dollars. Currently, Australian carbon offsets are trading at around $55 a tonne, and there's – there's, certainly, some lower estimates there as well, but – so with nothing up my sleeve, if you apply a carbon price of $73 a tonne through the life of this project, the net present value of it is reduced to zero. I think that's a question that the department should have absolutely been considering, or at least commissioning some analysis to work out
- - -

MR BEASLEY: Well, just on that, Mr Campbell, I don't know whether you heard when the people from the department, Mr Preshaw and Mr O'Donoghue, gave evidence, but this – this whole issue of the cost of greenhouse gas emissions came up and the – the department is still finalising its position. But it all comes down to, doesn't it – leaving aside what is the – the cost of carbon per tonne of CO2, the EIS here, the economics report and the EIS takes the view that you calculate it with reference to the New South Wales gross straight – state product as a percentage of world gross domestic product. In another case, Rocky Hill, the applicants' economist want to divide the New South Wales population as a percentage of the world population.

MR R. CAMPBELL: Yes.

MR BEASLEY: Do you agree with either of those approaches?

MR R. CAMPBELL: Look, I think – I think you can mount a case for taking either of those approaches, or for taking the approach that the department is recommending.

But I think what's much more important than whatever technical approach you take, is the – the overriding responsibility that an analyst performing cost benefit analysis has to inform their readers and decision-makers about the implications of the decisions and assumptions they've made. And I think that's not clear from the – from the EIS. I – I think, sure, you can mount an argument that if you're taking a strictly New South Wales based scope to your cost benefit analysis, then you can mount a case that that's what you should do.

But I think it – it's absolutely incumbent upon the analyst to make it very clear that, "What I'm putting in my spreadsheet limits itself to New South Wales. There's this enormous, big problem over here that I'm, effectively, hiding from you." And so, yes, I – I think you can make a case either way, but what – what needs to be done is to bring the attention of decision-makers and the audience to – to this great big issue. So does – does that answer your question?

MR BEASLEY: Well, it does. I mean, I – the alternative approach is to just look at what – what is the cost to New South Wales without dividing it by the New South Wales gross state product as against world gross domestic product, or – or dividing it between population of New South Wales and - - -

MR R. CAMPBELL: Yes.

MR BEASLEY: - - - the world population and just putting a price on carbon as a tonne.

PROF O'KANE: Yes. Professor Fell - - -

MR BEASLEY: And I think – I think Commissioner Fell wants to follow that up.

PROF FELL: Yes, thank you. Mr Campbell, what discount factor did you use in calculating your NPVs in your diagram?

MR R. CAMPBELL: Everything in my diagrams and so far in my report is based on the seven per cent discount rate that's, generally, the central case in ..... assessments.

PROF FELL: Thank you.

MR R. CAMPBELL: Just responding to Mr Beasley quickly, I do have a bit more to say.

MR BEASLEY: Sure.

MR R. CAMPBELL: I think two issues crop up if you're going to limit yourself very strictly to what impacts are felt by the people of New South Wales. First are relatively – relatively new, certainly, since cost benefit analysis guidelines were updated, policies by the New South Wales and Australian Government on our

limiting carbon emissions and moving towards net zero emissions. That – what that's saying is, "Internally, we are going to deal with our own carbon emissions," you know, a laudable policy, and that brings the – the price of dealing with it back into the New South Wales or Australian scope of the assessment. I think the other problem if you're going to go down a strictly New South Wales focused assessment is, then you need to include Scope 3 emissions because Scope 3 or some – some part thereof, because New South Wales will, also, feel the impacts of Scope 3 emissions regardless of where – where they appear.

So that takes us down a whole bunch of other rabbit holes that I don't want to talk about now, but I think what's – what's important is the approach that's being recommended here by the department and has been taken by other Commissions and the Land and Environment Court of dealing with New South Wales emissions in a New South Wales focused cost benefit analysis, I think is defensible from an economic point of view and is the right thing to do in terms of the responsibilities of the analyst.

MR BEASLEY: Yes, sure.

PROF O'KANE: Thank you.

PROF BARLOW: Mr Beasley, could I – it's Professor Barlow here. Could I ask Mr Campbell a question, please?

MR BEASLEY: Of course.

PROF BARLOW: You were just arguing that Scope 3 emissions aren't, and they should be, included in this analysis. In arguing that, are you just including Scope 3 emissions that are actually burnt in New South Wales, or are you arguing that it's all Scope 3 emissions from the coal wherever it goes – outgo - - -

MR R. CAMPBELL: No. So if one was to go down that path, and I'm not necessarily saying that analysists should, then if you're really interested in only looking at the damages or the costs borne by the New South Wales community from a particular project, then you do need to look at what a project impact is on how much coal is burnt in the world, and I would argue that it's non-zero, and you would have to include – working out that sum or that proportion is a difficult task and nobody has done it satisfactorily, in my view. But you would have to work that out and apportion some of that back to the damages that people in New South Wales will feel. I think that the approach that the department is recommending avoids that potential pitfall, but I will talk about it a little more in my written submission.

PROF O'KANE: Thank you, and Chris, just before - - -

PROF FELL: Just a very quick one, Mr Campbell. The Commonwealth has a mechanism through its baseline and NGER. If you exceed the NGER, then, in fact, you – you have to look for credits. These credits are a lot lower, for instance in your

72 – or 73, I'm sorry. Can you give us any guidance on what the Commonwealth's mechanism would do for your science?

MR R. CAMPBELL: Well, I mean, in terms of – I – I think if – if we're going start talking about offsets and the value of offsets, then a couple of questions arise. One, I think, is the integrity of offsets, and there's some pretty big questions around the integrity of a lot of carbon offsets including ACCUs. And I think you'd, also, need to start looking at what the – what the obligation to purchase offsets does to the financial strength of the project and, I guess, I will come to that a little bit more in my presentation and, certainly, in written submission. I mean, but, spoiler alert, you know, it would make the economics of the project much, much more difficult.

PROF O'KANE: Thank you.

MR BEASLEY: All right. Thank you very much, Mr Campbell.

MR R. CAMPBELL: Can I continue with my slides, or - - -

PROF O'KANE: No. No, we're out of time.

MR BEASLEY: I think we've – I'm sorry. You might have to just include it in your written submission because otherwise, we'll get to the point where the speakers at the end of the day won't have enough time.

MR R. CAMPBELL: Yes. If I can just summarise in 30 seconds, $73 - - -

MR BEASLEY: All right, but it's strictly 30 seconds.

MR R. CAMPBELL: Yes. $73 a tonne here brings the NPV of the project to zero based purely on what's in the EIS, but what needs to be recognised is that the EIS has radically overstated tax payments and the likely profit from the project. The tax payment – Analytecon estimate that the project will pay in undiscounted terms $1.6 billion in company tax over the life of the project. By contrast, Whitehaven Coal has actually paid $15 million in corporate tax over the last seven years.

MR BEASLEY: All right.

MR R. CAMPBELL: And it blows my mind that nobody at the department ever looks at company tax estimates and doesn't think to look up the actual data on how much tax companies have paid historically. Similarly - - -

MR BEASLEY: All right.

PROF O'KANE: Yes.

MR BEASLEY: Thanks very much, Mr Campbell. We look forward to getting that material in your written submission. The next speaker is Simmone Moodie from Wambali, who I think is in the – on the phone. Are you there, Ms Moodie?

MS MOODIE: Yes, I am.

MR BEASLEY: Please go ahead; we can hear you.

MS MOODIE: I'd just like to say that our organisation does contracting fence work out at the Narrabri Coal mine.

MR BEASLEY: Sure.

MS MOODIE: We've been engaged for about a year and a half now, employing up to five people. Yes, we have a great relationship working with the mine. My team meet with the environment team every week to make sure that they're doing things by the standards and that everyone is on the same page on what's going on.

PROF O'KANE: Thank you. Ms Moodie, how many people do you have working out at the mine under that contract?

MS MOODIE: Five.

PROF O'KANE: Five. Sorry, I think you did say it, and I thought I'd forget it. Thanks a lot.

MS MOODIE: No worries. Thank you.

MR BEASLEY: Okay. Next – thank you for that. Next speaker is Jack Campbell. Mr Campbell.

MR J. CAMPBELL: Hey, can you hear me, guys?

PROF O'KANE: Yes, we can, thanks.

MR BEASLEY: Yes, we can. Go ahead, sir.

MR J. CAMPBELL: So that's good. Yes, so good afternoon, everyone. I would like to preface that I'm no expert on – on environmental science regarding mining or – or I'm not an economist either, but – but I can speak on – on what I know which is the tangible benefits we've seen in the Narrabri community resulting from Narrabri Coal's operation. My name is Jack Campbell, and my family has been local to the Narrabri Shire for – for generations. I run my family's business, Namoi WasteCorp, which my father started in Narrabri 21 years ago, and due to mostly the mining industry in the area we've been able to thrive, and we've found opportunities that would be unthinkable for businesses in – in most small communities.

Namoi WasteCorp has provided waste collection and recycling services to – to all industries in the Narrabri Shire since its inception, but as the mining industry grew in the area, we – we've grown with it. We now provide services across Narrabri, Gunnedah and Liverpool Plains shires. So Namoi WasteCorp has serviced Narrabri Coal since its construction phase, and I can think of so many other local businesses who have been in the same position and who have all grown exponentially after opportunities they've had with Narrabri Coal in particular. We currently have 14 employees, we've got 11 trucks, and – and we, also, supply a substantial amount of work to – to subcontractors local to the region.

So – so mining and agriculture have worked side by side in the – in the region for as long as living memory. Out the back of Gunnedah there – I think this alone is the reason why – why Narrabri and Gunnedah remain to be thriving communities. Over the years, farming has provided less and less direct employment. As a result, the community benefits from farming now reside in local suppliers that facilitate goods and services required by agriculture. More often than not, these suppliers can diversify to offer goods and services to the mining industry as well. The regular droughts and floods that we see in the region put the agriculture industry on hold and – and farmers are not the only ones that feel the pinch.

A lot of these suppliers I've spoken about would not be able to keep their doors open if they were to solely rely on farming production to provide them with work. Major agricultural distribution research facilities downsized and shut down during the last drought resulting in significant unemployment locally. The proposed Narrabri coal extension utilises existing infrastructure to increase the lifespan at the mine. This seems to me like the ideal scenario for further coal production minimising invasiveness to the community and the environment. As you are well aware, New South Wales has an extremely high bar set for environmental regulations on the resource industry.

If Narrabri Coal can continue to adhere to these regulations, then it's going to be a much better outcome for the environment as a whole than the alternative. The alternative being the same amount of coal would be mined from a less regulated jurisdiction in order to supply the market. The only way to phase out coal mining, in my opinion, is through renewable technology advancements that make coal redundant. Until this is achieved, we need to do the best we can with what we've got in order to maintain society as we know it, and that's why we're here today. Not to figure out why this project should be rejected; to figure out how we can make this project happen as safely as possible, that issues raised are addressed by the mine and – and practices are improved as a result.

As farming becomes more streamlined, again, young people are met with less and less opportunity regionally and we need the professional job prospects that the mining industry can provide. I know I wouldn't have moved back to Narrabri four years ago if it weren't for the mines. When I was finishing high school here in Narrabri, everyone my age couldn't wait to leave. As soon as we were old enough, everyone had moved to the city. That's very different now though. Not only are a

lot of young people staying in Narrabri, a lot of young skilled peopled are moving to Narrabri from the cities and starting a family while working at the mines. If not for this extension, this will all be reversed by 2031.

From the perspective of a local business person, the Narrabri Stage 3 Extension is an opportunity that we cannot knock back. In an era where small communities are dying off, towns like Narrabri need to encourage growth. Business does not just come to town without a catalyst. Growth does not just happen without opportunities, and small towns do not just survive by saying "no" when opportunities like this come knocking. Thank you.

PROF O'KANE: Thank you. Could I ask you a question as well?

MR J. CAMPBELL: Yes.

PROF O'KANE: Thank you for the presentation. So I'm going to just take the fact that you're a waste expert - - -

MR J. CAMPBELL: Yes.

PROF O'KANE: - - - and you, presumably, work with a few mines. Just – because something came up last week. Do most of them have a waste plan? A sort of a plan under which the waste is managed or - - -

MR J. CAMPBELL: Yes, yes, correct. I believe most mines have – have a waste plan as a part of their – their environmental licence.

PROF O'KANE: Great. Thank you. It just was a little issue that was hanging. Thanks a lot.

MR J. CAMPBELL: Yes. No worries.

MR BEASLEY: Nothing from you, Commissioner Barlow?

PROF BARLOW: No, thank you.

MR BEASLEY: All right. Thank you very much, sir.

MR J. CAMPBELL: Thanks, guys.

MR BEASLEY: Next speaker is Sally Hunter. Are you there, Ms Hunter?

MS HUNTER: Hi, how are you going?

MR BEASLEY: Hi, we can hear you. Go ahead.

MS HUNTER: Thanks for the opportunity to address the IPC today. I'm calling in from Gomeroi Country in Narrabri, wherever I can find a decent bit of wi-fi. In some - - -

PROF O'KANE: It's good at the moment. We're hearing you clearly.

MS HUNTER: Perfect. In some ways this feels a bit like a family reunion. For many of us it's the third time in 16 months that we've had to address the IPC. That's not because we enjoy this process. It's because the Namoi Valley is the target of rampant, ill-conceived fossil fuel expansion plans that are desperately trying to get an approval under their belt before the reality of coal and gas' worldwide unpopularity and unviability is fully revealed. Why does a project that begins in July 2031 need to seek approval in February of 2022? This is like me booking my child into university before he even starts grade 3; lots can change between now and then. Goodness knows what the state's priorities will be by 2031 and what the price of thermal coal will be, not to mention how the carbon emissions will be costed and how we are tracking on our net zero 2030 plan.

I would suggest that the current approved mine should run its course, and the new approval be assessed more closely to the time when the project is planned to start; maybe in 2028. The EIS has not properly considered this option, and it would far better suit the public interest to do so. So back to my family reunion. I addressed Professor Chris Fell at the Vickery hearing where 76 other people spoke and 2800 submissions were made, mostly objecting to the project. I addressed Professor Snow Barlow at the Narrabri Gas hearing where there were eight days of hearings like this one, hearing from over 400 people and then a record-breaking 23,000 submissions of which about 98 per cent opposed the project.

We have borne witness to detailed well-researched, expert, heartfelt and logical argument, speaker after speaker after speaker until the list runs into the thousands, and yet these projects were all approved mostly with cut and paste conditions of consent that the department has been doling out for years. We know with lived experience that it is irrelevant how many people object to a project. We know social acceptance is not a factor in the IPC decision. We know how futile it is to have thousands of objectors. In order for the Minister to refer the project to a public hearing, it must trigger one of three criteria: 50 or more objections; a Local Government objection; proponent declares a political donation. None of these criteria were met for this project.

50 objections were not made, Local Government did not object, and the proponent did not declare a political donation. There was no justification for sending this project to a public hearing. The non-participation in the EIS process by objectors was a deliberate, active decision. We did not want to trigger the criteria for sending the project to a public hearing. We were so desperate for a different, better outcome for our region than these previous processes delivered. We fought our very instinct and did this outlandish thing of not objecting to such an objectionable project. This is a demonstration of just how broken this system is rather than a demonstration of

how little objection there is to this project. So it was shocking to see the previous Minister call a public hearing without any need, immediately extinguishing our merits appeal rights.

We knew that should the project be assessed in a court of law on its merits, it would not be approved, and that is why the department did not see 50 or more written objections to the EIS. Of course, despite their claims, the department are highly aware of the high level of objection. A department staff member and a consultant attended an intense meeting at the Wine Bar pub with dozens of locals. There is no way they could have left that meeting thinking there is no opposition to this project. They are kidding themselves and, more importantly, they are kidding the IPC. This meeting ignited the Pilliga East Landholders Group of which I'm a member. This group made a submission to the EIS with a dozen families as signatories objecting to the project.

Narrabri Underground Expansion Stage 3 claims that 200 local families will get an extra 12 years of employment. Of course, that's as long as automation doesn't remove their roles first. It is my view that it would be a cruel decision by the IPC to approve the expansion. It would give false hope to these families. The thermal coal industry has a limited, finite future. We all know full well, including Whitehaven's own staff, that as the market ..... Whitehaven will not hesitate to drop these families like a stone with no plan for re-training. A more responsible course of action would be to immediately and urgently provide re-training for new careers to keep these families local and to keep them in industries that do not have a – that do have a future beyond 2030.

The EIS has not addressed the key consideration of the State Environmental Planning Policy, the compatibility of the proposal with other land uses. Current land uses are forestry, recreation, tourism, biodiversity habitat, an olive farm, a piggery, broad scale cropping, and extensive beef production as well as cattle studs. The IPC is required to evaluate and compare the respective public benefits of the development and the current and future land uses, but this has not been provided – they have not been provided with the information to do this. The public benefits of the non-mining land uses serve a far greater number of people in this shire than the public benefit of the mine. The public benefit of the diversity of other land uses, the diversity of economic viability is far greater. The amenity of this land will be compromised. Water for livestock, people and forest will be compromised. The expanding mining activity, in the words of the SEPP, is likely to have a significant impact on land uses and is not compatible with them. The public benefit of the mine is of very short duration and highly limited and is in serious question in any case, given the serious harm that climate change is already inflicting on the people of New South Wales and this project's contribution to worsening that harm.

The water impacts from this mine and combined with those from the gas field, other mines in the region as well as the future planned mine at Gorman North will cumulatively have massive impacts. Bores on mine-owned land as well as bores on surrounding neighbours' land will go dry and lose pressure or be contaminated.

There will be a reduced flow to the Namoi River due to surface cracking and dewatering of the Gunnedah-Oxley Basin will cause depressurisation of the above-lying aquifers. All this has been admitted. At the end of this mine life, agriculture, tourism and recreational land uses will be expected to pick up the reins and be productive once more but there will be swathes of land with no access to usable water. Livelihoods and living beings cannot exist without water. This land cannot function without water.

The alternative that has not been given due consideration is that there are current land uses, including farmers, some of whom you will hear from today, whose families have created a living from this land for up to four generations. This land use has provided quiet enjoyment, security of tenure, an ongoing revenue and expenditure stream, a tax stream, a resilient way of life. If water is available, this land can continue to sustain their families indefinitely forever. 12 years of mine life is not compatible with agricultural livelihoods that have no end date. We live about 10 ks downstream from Maules Creek Mine. We lease country less than 10 ks from the project. I spent more than a decade on the community consultative committee for this exact mine before my husband took on the role four years ago and continues now. We live in the community and are friends with Whitehaven neighbours across the valley.

What we have as locals and others like us is a 15-year horizon on the reality of how these approvals pan out over time. The IPC, on the other hand, hears a lot of the beginning of the process about the promises and the plans and the hope and the future and the IPC would do well to listen and heed our experience. But it's not just us. An appendix of the EIS, the environmental impact statement, the social impact assessment outlined in black and white how the community perceives Whitehaven. It states from its survey that Whitehaven paid people to write that 95 per cent disagree that Whitehaven is a good neighbour. 90 per cent disagree that Whitehaven listens to and responds to community concerns. 82 per cent disagree that Whitehaven contributes to our community or cares about our region. Please note, this is work that Whitehaven paid consultants to do for them.

With our experience across their operations, we can tell you of the patterns of behaviour, the way this company operates. We know how they work. We see these patterns over time and we can predict what will happen in this instance. And it's my view that the IPC doesn't have this depth of understanding because you don't live next door to these projects. You don't speak with people impacted. You don't see their lives change irrevocably after mines are approved. So that is our role today, to try to help you understand that and to try to get through to you that this is about real people, real lives, our children's lives, and that it can't be blithely approved the way the assessment report brushes over major important issues and puts forward a positive story when all the evidence points to quite a different story. In particular, water. At this planning approval stage, it's all about how organised it can be, how controlled it can be, how predictable and manageable and how it can be offset with a few purchased water licences.

We know that is complete baloney. We have seen it time and time again. The clearest example was during the worst drought in history a couple of year ago. What we saw in the drought was that these mines did everything they possibly could to grab more water to keep their thirsty mines going in a parched landscape. This is despite the fact that one of their conditions of consent deals exactly with that situation. This same condition was cut and pasted in the Maules Creek Mine's approval and also for Vickery. And now the same one is recommended once again by the department for this project. And I quote B24:

> *The applicant must ensure that it has sufficient water for all stages of the development and if necessary adjust the scale of the development to match its available water supply.*

A lay person – me – reads this to mean that if the mine doesn't have enough water, it should change its operations to suit. But don't just believe me. How about we listen to your comrade, Professor Willgoose, when he was doing the Vickery assessment. He said to Gunnedah Shire Council:

> *The draft conditions say that the mine has to match its production to the available water. So if there's scarcity of water, they will produce less coal and not use so much water.*

I couldn't have explained it better myself. However, the reality of how Whitehaven perceives this condition is very different. What we saw in the drought was Maules Creek Mine buy out two more irrigation properties just for the water licence. Another couple of thousand hectares on top of the 61,000 hectares that Whitehaven already owns in our valley; more land just so they could get their hands on the water licences. Then what they did is they built two illegal pipelines. One day, in 2019, I drove down our road and they were just tearing up the side of the road to bury these pipelines just to get that water out of the irrigation bores and into their mine in a hurry. And in response to our formal complaint, the department denied the company didn't have permission to build these pipelines on public land.

Three months later, in February 2020, the department silently gave them a $15,000 fine for these two illegal pipelines that were already buried; the irrigation water already used for washing coal and watering roads. That is the reality of what we see time and time again. And I can guarantee you that that is what will happen with the underground expansion stage 3: underestimations of water requirements with, ultimately, the community and the environment playing the price for that. In particular, I note that DPI Water and IESC reports have been almost completely dismissed by the assessment report; these important facts buried in the assessment stage documentation and never followed through to the IPC.

The other thing we've seen at Maules Creek when neighbours' bores go dry is, "No, it wasn't us," response leaving neighbours to try and prove the impact. When neighbours start to revise the documentation to identify the baseline and predictions for water impacts, the first thing they notice is that the network of bores used for a

baseline prior to mining has actually been completely wiped out by the first few years of mining; they mined the baseline bores, and that's just the start of the problems from that approval.

For this project, the landholders' group requested that the department not give its inevitable recommendation for approval until a thorough independent baseline was undertaken for all neighbours. The landholder group even provided a guideline document setting out a suitable baseline assessment, but this was not done. The department didn't even respond to this correspondence. Now, that we are at this stage of the approval process, it will never be done, leaving neighbours unable to prove water impacts due to mining. The make-good arrangements for those that the proponent has identified will have their bores impacted are an absolute joke and others will speak to that in more detail. And, for others, their bores are miraculously determined that they won't impacted despite local knowledge.

The company has a rap sheet longer than your arm. Right now, Whitehaven has more than 54 convictions, fines and breaches on that list. Have the Commissioners ever experienced another company seeking approvals with such a track record. One such conviction from this exact project area was the illegal clearing of forest last year. It was not mentioned in the assessment report and it is highly relevant to the assessment of this project. I would encourage the IPC to have a look at that. Whitehaven continues to have a modus operandi of breaking the law knowingly and willingly, copping the fine and keeping on operating. It's time that you make sure that that doesn't happen. It's time to draw a line and it's time to reject this application.

On a final point – and other people will talk about this in more detail, have put in written submissions much better than I can – but from a lay person's point of view, from a mother of three children's point of view, from someone who hopes to be a grandmother and a great-grandmother and a whole bunch of future generations, the carbon impact of this mine is completely and utterly unacceptable: 34 million tonnes of Scope 1 and 2; 450 million tonnes of Scope 3 over only 12 years, and all the time when we can afford zero emissions if this world is going to hope to be habitable for future generations. It is time to stop approving projects that blatantly pump extreme levels of methane into our atmosphere every day. It is time to stop approving climate-destroying projects, and this one is a prime example – way above the rest – this is the one that you need to reject. Thank you.

MR BEASLEY: Can I just ask you a question quickly, Ms Hunter. Just something you said right at the beginning of your submissions about – and I know you're probably against approval of this mine at any stage, but you suggested that if it was going to be looked at, it would be better looked at perhaps at 2028 was the year you said. Do I – do the Commissioners understand that that's because you think, at least by that stage, we might have more reliable information about what the market for coal is like at the time; what the price for coal is like at the time; how we're going with climate change reductions. All those things would be more reliably assessed later on closer to 2031. Is that the point you were trying to make?

MS HUNTER: Yes. And, I guess, what we've seen today is that the Department of Planning, you know, still has a lot of work to do to work out their policy on how to cost greenhouse gas emissions. We've heard quite a few speakers say, "I need to take that on notice and I will get back to you."

MR BEASLEY: Sure.

MS HUNTER: You know, people are still working through this stuff and it will be clearer in 2028. And most projects do seek approval kind of a couple of years before they're going to actually do the project, which is a logical approach.

MR BEASLEY: All right. So you're – in summary, you're against it, but also it's premature.

MS HUNTER: Yes. I think if there was one takeaway is I object to the project.

MR BEASLEY: Okay. Thank you.

PROF O'KANE: Thanks.

MR BEASLEY: All right. Thank you for that. Our next speaker is – I think we've got Greg Griffiths from Winanga-Li Aboriginal Child & Family Centre. Are you there, Mr Griffiths?

PROF O'KANE: Yes.

MR BEASLEY: Yes. I think you might be on mute, sir. Just check that, could you?

MR G. GRIFFITHS: How's that?

PROF O'KANE: Yes.

MR BEASLEY: Very good. We can hear you and we can see you. Go ahead.

MR GRIFFITHS: Thank you very much. And good afternoon, gentlemen and ladies. I'm here to support – to speak for the project. The extension of the Narrabri underground. I'm going to speak for Winanga-Li. Winanga-Li means listen and learn and it also has an extension of respect.

Winanga-Li's history: we were designated about 10, 12 years ago from the Federal Government to build a aboriginal child and family centre here in Gunnedah. We were successful in building the centre and our target are youth and children and families. We also provide a lot of services from Winanga-Li Services: breakfast clubs, language and dance, homework centres, youth programs, justice programs and, of course, elders. We have hubs running out of Narrabri, Pilliga, Gwabegar, Corindi and Wee Waa, so it's around the whole area. And during that time, Whitehaven

were very, very supportive of providing some resources for us to run those programs. And as a supporter of the programs, they also become on as a corporate partner and we also were successful in tendering for the Lightning Ridge and Brewarrina Child Care Centres and we were successfully getting those centres. So our reach for Winanga-Li is throughout the whole north west ..... and out western.

All of our services that are provided are run by – you know, run by Winanga-Li; they're for families. We targeted what we see the most disadvantages in our communities; that's who we are targeting, the disadvantaged. Education, health to give our children a start in life. You know, things – we're trying to change the history of our people here by giving them a fair education; a good start in life. And also, not only that, we worked with Whitehaven in regards to fathers and mothers and employment programs out there. We support the work for Aboriginal people on the mining, because that directly influences the children and youth in our communities as well from Gunnedah to Corindi to Narrabri to Wee Waa to Tamworth to Werris Creek, there are many Aboriginal families working from those communities in the mining industry.

The out-of-home care, which is one of our most important projects that we run from Winanga-Li and it is like kids that are taken into custody. It is the new stolen generation in Australia and we have a direct effect and contact and contribution to returning those kids to families and back into care with families. So not only do they have supported us with our services that we provide for our communities and the whole region, but also as a support mechanism for one of the most high emotional things that Aboriginal people have to deal with. In the services – or in the relationship that we've built with Whitehaven as a corporate partner, we've also talked about a media strategy: how we get out profile and build upon our services in the community, and that's, as I say it again, the most disadvantaged people in our community and the statistics say it all: death rates; mortality; diseases; incarcerations. How do we turn around those effects in our community? By starting on our children and our families and our youth at an early stage and having an intervention with the programs that we run out of Winanga-Li. And those things are already happening. We are making change.

So with our relationship with Whitehaven that we want to see grow with the future that we can always make these – make these benefits and these changes in our community for our people. You know, the fathers and mothers that work out there, the effect that they have on their families: three, 400 Aboriginal people working directly in Whitehaven. Those things weren't afforded to our people in history, but now these things are happening. Our kids are getting opportunities, self-esteem, you know, working, bread and butter on the table, basic life things that are afforded to the most disadvantaged people in our communities. And, you know, to work in a mining industry, you're in a high – you're in a high market wage earner. Those things put bread and butter on our families' tables.

So we're out there providing services for our youth, families and elders and Winanga-Li are supporting our ladies and men in jobs for the mob. And we have to

try and work hard. We're working hard on this. It's going to – it's going to take a couple of generations. The – yes, the history and the social responsibilities that we've got to build upon to go forward and make these changes are going to take some time and, yes, there will be a green new day one day, but it's not tomorrow. This is an extension that's going to benefit the most disadvantages people in these communities and it's not just within a stones-throw of the mine, it's throughout this northern region for Aboriginal people's benefits.

PROF O'KANE: Thank you very much.

MR BEASLEY: Thank you, sir.

PROF BARLOW: Mister – Richard, could I ask Mr Griffiths a question?

MR BEASLEY: Of course.

PROF O'KANE: Mr Griffiths, Snow Barlow here. Do you have a series of education training programs that train, you know, your Indigenous youth to enter and remain in employment?

MR GRIFFITHS: Well, it's always been – it's always been – it's always on our cross-hairs, Mr Barlow. You know, we have early learning. We have transition to school programs; that's to start on them at a very young age. You know, we're running – we're running in – through other programs, TAFE courses and programs that are trying to start our kids at 14 to 15 to 16 just when they're really looking to get out of high school. The Clontarf's, the girls academy, stuff that we know that's going on here in Gunnedah and Narrabri, the language and dance projects that they do out there, just self-esteem – build up our younger people, you know? Build their pride up about who they are, but also give them a pathway – a pathway into an industry that's just not to drive a truck or dig coal, it's a – it's pretty broad. But the benefits that come from the industry inside – economically is broad. Like, I was overwhelmed when I first seen the industry come here, about the impact that it has on a community and all the services that the infrastructure that comes with the industry. Yes, we know the green new day is coming, but it's not tomorrow. And what do we do about the most disadvantaged? We're just going to keep working hard. We're just got to keep try and changing lives for our people. So we're not missing out on the wealth of this country – this – the Australia we have to share together.

PROF BARLOW: Yes.

MR BEASLEY: Thank you.

PROF O'KANE: Thanks.

MR BEASLEY: Thank you. The next speaker is David Paull from Friends of the Pilliga. Are you there, Mr Paull?

MR D. PAULL: Yes, I am. Can you hear me?

MR BEASLEY: Yes, we can. Go ahead, sir.

MR PAULL: Thank you. Thank you for letting me speak here today. So I'm here today on behalf of Friends of the Pilliga which is a community, for 20 years has been providing advice, undertaking community events, citizen science in the Pilliga forests. We are strongly opposed to the expansion of this mine, considering how much damage has already occurred during stage 2. I am an ecologist with 30 years experience undertaking wildlife surveys, development assessments and reviews of assessments with regard to biodiversity and threatened species. My main interests are the Pilliga forest which is also my home.

I recognise the Gamilaroi Gomeroi traditional owners of the country and recognise their ongoing fight to retain connections to country. I will provide a detail written submission to you shortly and I have, really, time today to run through some of the key points with you. But I believe that the biodiversity components which is what I would be talking about today, of the assessment, supporting the EIS is perhaps one of the poorest that I've seen in my career and I think it's probably this has been because it's been a failure of two respects. There's been a mistaken attempt at a kind of brown-washing in the documents. What I mean by that is playing down the environmental significance and nature of the project areas. And, secondly, I think it has been a clear failure of the now widely used biodiversity assessment methodology in identifying and addressing the likely impacts of the mine.

Sally mentioned about the failure to look at the competing land uses. I would just like to say that part 3, clause 12 of the mining SEPP should have been considered. The Brigalow and Nandewar Community Conservation Area Act in 2005 outlines that zone 4, which are state forests, are lands for forestry, recreation and mining. Friends of the Pilliga wouldn't like to see any more parts of the public forest locked up from the public use and enjoyment and also pursuit of scientific and other interests in the area, tourism, other interests in the area.

So the department has joined the – it seems like the brown-washing is everywhere throughout the documents and even this morning Mr Preshaw said that the study area was semi-arid. Well, I'm just here to tell you that it isn't semi-arid. It's actually – and if the Commissioners care to look for themselves – you will see that it falls – the area falls outside that definition and any map you care to look at puts the eastern boundary of a semi-arid zone at about the Macquarie River, which was west of the forest. So I think that this is an attempt to kind of play down the ecological and biological significance of the area and the water, the nature of the water, which I think is a lot more complex than the documents are attempting to paint. The stage 3 is not a brownfield development as was said in – also in the documents, but it's a greenfield development. The – half of it is the Pilliga State Forest, which is virtually pretty good in terms of its structural intactness and it is a very important area in the region for biodiversity.

The other things that were said, I think, were extremely misleading. I just would quickly like to point to them is that they – there seems to be an idea that the Namoi alluvium is somehow separate to the project area when that's not the case. In fact, there is alluvial sediments through the project area and that reality is recognised in the fact that the endangered community, the lowland Darling River aquatic ecological community, listed under the Fisheries Management Act, describes that as so. So the alluvial character penetrates into the project area and is not separate.

And there's another key thing I wanted to quickly say that, somehow, the project area isn't a significant recharge for the Great Artesian Basin. I don't believe that's correct either. The Namoi alluvium, in fact, is a key recharge area for the Great Artesian Basin and the project area straddles both the Namoi alluvium and the Pilliga sandstone to the west, which is a major recharge zone. So, you know, these things by themselves probably don't sound very much, but when you add them all up it seems to be a deliberate attempt to put the public perception out there that it's – that the environment here is something other than what it really is.

Now, I want to move on to some of the problems with the actual biodiversity assessment. I believe that the assessment has misidentified one of the vegetation communities saying that it has stated that there are no New South Wales listed endangered ecological communities in the project area. I believe this to be incorrect. And as these – my evidence – written evidence will show you that I believe that box-gum woodland is present, so has been misidentified and I believe that's a key issue – a key failing of the assessment. The way the biodiversity assessment methodology has been used, I think, has resulted in a failure in a couple of ways, and one of the key ways is that it's failed to identify species that I believe are subject to serious and irreversible impact. I believe – and these are the koala, eastern pygmy possum and the Pilliga mouse. Now, what I'm doing here is using the criteria set out in clause 6.72 of the Biodiversity Conservation Regulation which sets out how you identify what a serious irreversible impact entity is. Again, my reasoning behind all this, it will be detailed for you in my written submission.

I would just like to mention the example of the koala, if I could. It turned up in two years running in the survey at Currajong Creek, which is one of the Namoi tributaries I referred to before. Now, this – I think this is an extremely important area in the project area because, to their credit, the consultants for Narrabri Coal did identify this particular area to be a groundwater dependent ecosystem terrestrial vegetation and I believe it was first discovered during the drought and then, in the following year, after considerable rain in 2020, though, it was detected again. So this is suggesting this is perhaps an important refuge area for the koala regionally and in the forest. These are extremely important areas for the persistence of the koala, recently classified as endangered, as you probably know. My view is that there – in the Pilliga they're probably critically endangered, but we are, I believe, seeing some signs of localised recovery and these refuge areas are so important for koala right now.

I think that the assessment has failed to accurately describe the magnitude and nature of impacts upon the groundwater dependent ecosystems in general and also the assessment undertaken for the stygofauna is, I think, extremely wanting and they basically did not take the necessary steps to test – to survey this groundwater component inaccurately characterised where they could be found saying it's restricted to Namoi alluvium, when, in fact, they're also known from the Pilliga sandstone sediments as well. A colleague of mine, Dr Peter Serov from the University of New England, has undertaken a comprehensive stygofauna assessment for the area and he comes up with a very different picture about the stygofauna: it's quite diverse. A lot of the ..... are not yet identified and it compares to, you know, other important areas in Australia for stygofauna. So, I think that is also - - -

PROF O'KANE: Can I ask you – yes. Thank you. You spoke about some localised recovery sites for the koala. Where are they?

MR PAULL: Yes.

PROF O'KANE: Well, maybe you - - -

MR PAULL: Well, I believe one – yes. So down the eastern side of the forest in general, I would say. I don't really want to pick out particular locations. I have currently been employed by the Australian Koala Foundation to go out and have a look around and see if I can identify where these animals are and this is what I'm currently doing at the moment. I know that there are other areas on the eastern side of the forest. They seem to be using the public forest and the adjacent private land and so they're moving in a cross-tenure sort of way. I believe the Currajong Creek area may be one of these locations.

PROF O'KANE: And would you be able to give me an idea of the numbers, roughly? I don't want to endanger anything, but if you could just tell me - - -

MR PAULL: Well, everyone wants to know what the numbers are, but I would say that the number of animals in the Pilliga at the moment are probably around 100.

PROF O'KANE: Okay.

MR PAULL: It wouldn't be much more than that.

PROF O'KANE: All right. Thank you.

MR PAULL: And in the past – yes.

PROF O'KANE: Yes, yes. No, that's very helpful. Thank you.

MR BEASLEY: Thank you very much, sir. The next speaker is Lloyd Finlay. Mr Finlay, are you there?

PROF O'KANE: Hello. We can see you, but we can't hear you yet.

MR BEASLEY: You might be on mute, sir.

MR L. FINLAY: Okay. Unmute. Is that better?

PROF O'KANE: That's good.

MR BEASLEY: Good, that will be – go ahead.

MR FINLAY: Righto. Okay. Well, good afternoon panel members and thank you for the opportunity to speak about the Narrabri Stage 3 Extension Project. My name is Lloyd Finlay and I am here to speak in support of the project. I have lived in lived in Maules Creek, which is approximately 30 kilometres from the Stage 3 extension. I've lived there for 40 years with my family, running a mixed farming operation. I was a Narrabri shire councillor for the last nine years until December 2021. I have a good working relationship with Whitehaven for the last five years as I lease agricultural property from them. Due to the abovementioned facts – and these are facts – I believe I can give a true and honest opinion about how mining works in collaboration with the local agricultural industry.

I can honestly – I can only speak in favour of how the working relationship with Whitehaven has benefitted my family as it has enabled my wife and I to send our two children to boarding school so that they could get the education that they deserve which wouldn't have happened if I didn't have a good relationship with Whitehaven. I have also seen first-hand how the VPAs have benefitted the Maules Creek area with the contributions they have made to the Maules Creek Campdraft Group and the Maules Creek Recreation Trust of which I am an active member and have been for many years.

Being a councillor for nine years gave me the understanding of how important it is to have a local economy not just reliant on one industry. Mining has proven this in the last five years with the worst drought in 100 years, which you all would have heard about that. There are many businesses that wouldn't be here today in Gunnedah, Boggabri, Baan Baa and Narrabri if not for Whitehaven providing employment and flow-on benefits through the drought, and that is a fact as well. For these reasons, I firmly believe the approval of the extension project should be granted. If – I'm free for any questions, but thank you for the opportunity to put across a local perspective and that's where I'm coming from being a local. Yes.

PROF O'KANE: Thank you. No, that was very clear.

MR BEASLEY: Thank you, sir.

MR FINLAY: Thank you.

MR BEASLEY: Our next speaker is Barry Toomey. Mr Toomey, are you there? Mr Toomey? Mr Murray, are you there; Stuart Murray? It doesn't look like either of those gentlemen are there. Stuart, are you there? Mr Murray, are you there.

MR S. MURRAY: Yes. Well, you've came on just a little bit too fast. There was going to be another person before me and it took my computer expert a minute or two to get our computer.

MR BEASLEY: All right. Well, we can hear you and we can see you now, so it's all good. Go ahead.

MR MURRAY: Okay. This is an objection to the Whitehaven Underground Mine. I'm Stuart Murray, a retired agronomist, now cattle farmer, and unfortunately have the Whitehaven Underground Mine Extension as my neighbour. See the map attached with my property highlighted. The X is where our cottage is in relation to the ventilation shafts, which is pretty important. My wife and I are self-funded retirees and purchased our property in 1995 to help fund our retirement. We were looking for a property that could provide some income, peace and quiet and stimulation for as long as we were capable to manage it.

For 27 years, this has been an important part of our life. Having Whitehaven as a neighbour is particularly galling as we are still reeling from the extended drought and we are now locked into dealing with climate change, to which Whitehaven, as part of the fossil fuel industry, is partly to blame. Add to this the fact that they plan to construct extensive ventilation infrastructure next to our boundary and approximately 800 metres from our cottage is another kick in the guts we do not need. It's going to make our place unliveable and difficult if not impossible to sell. The noise from ventilation shafts has been described as living next to a jet engine that runs 24 hours a day. So it's pretty obvious that this will have to be located a lot further than 800 metres away. There's an example of some ventilation infrastructure which is probably fairly small in comparison to what they're going to put where we live.

My first encounter with Whitehaven was in 2007 when they failed to honour parts of their access agreement with us which was the start of an exponential growth in my lack of trust in fossil fuel companies, and that was coming off an already high base. Whitehaven have been branded a rogue operator and have something like 63 breaches of their approval conditions when the independent environmental audit was undertaken in 2015. I have a list of another 24 noncompliances Whitehaven have racked up since 2012. Of those, seven are attributed to Whitehaven's underground mine proposal. Yet, the Department of Planning had the hide to state on page 7 of the executive summary that:

> *The mine has been operating for over a decade with a range of measures to control or reduce impacts with no major issues or complaints.*

This is obviously not true. Resource companies are notorious for exaggerating the benefits and downplaying the negatives of their proposed projects. Whitehaven

admitted a stage 3 extension will adversely impact several bores which are essential for many farming businesses in the area. Downplaying the impact by claiming this water, and I quote, "is not used for agriculture", which is a straight out lie. This quote is contained in a handout provided at the public information session at Baan Baa. This led to a subsequent meeting between the department and effected landholders where the department reluctantly admitted the EIS was deficient and contained significant omissions, particularly with respect to the impact on underground water that property owners rely on.

Apparently, Whitehaven have since committed to make good in respect to these bores. However, the department has recommended conditions requiring Whitehaven to use its best endeavours to finally make good agreements with owners of these bores within two years of commencing the development. The department's assessment should not have recommended the project as approvable until an agreement that is acceptable to the owners of the bores has been made. It'll never get done otherwise.

Why are we in this mess? In 1989, the Weekend Australia recorded that some such as coal and oil lobbies push for policies that accelerate global warming. 33 years and 26 cops later, we see the relationship between self-interested industries, the fossil fuel companies, and the policy makers our State and Federal Governments morph into a powerful symbiotic relationship. Amongst the obstacles we face now to curb global warming, perhaps the most formidable is this relationship a vested interest that continue to stifle progress on climate policy. Justification for the project states:

> *It is approvable as socioeconomic benefits significantly outweigh its residual costs and, on balance, it is in the public interest, subject to strong conditions.*

In fact, the opposite is true. The scientists and the economists have told us why. Just a bit on the economics. I don't think anybody who witnessed the bushfires a couple of years ago would say that more carbon in the atmosphere is good for New South Wales. The Stern Review on the Economics of Climate Change as reported and released to the government of the United Kingdom in 2006 says:

> *The review states that climate change is the greatest and widest-ranging market failure ever seen, presenting a unique challenge for economics, also showing that it is much cheaper to avert climate breakdown than to try to live with it.*

The banks also have concerns about climate change, according to their managing climate change statements. I've chosen the NAB as they are Australia's leading agribusiness bank and agricultural businesses are already suffering the negative impacts of climate change. Part of the NAB statement says:

> *We will not finance new thermal coal mining projects or new-to-bank thermal coal mining customers.*

Interesting, the bank also recognises that we have missed the chance for an orderly transition away from fossil fuels and they need to examine additional scenarios such as a disorderly transition. At the beginning of NABs managing climate change statement they explain why this is important:

> *Climate change is one of the most significant challenges impacting the prosperity of our society and economy.*

The consensus of the experts as described above trumps anything Whitehaven and the Department of Planning would tell you as they try to get this project approved. The bit on employment. The assessment states that unemployment rates in the Narrabri and Gunnedah LGAs have been higher than for both regional New South Wales and New South Wales as a whole for much of the last five years. At this hearing, I expect we will hear from some eloquent young mining employees and others that mining is good for jobs. Never do they mention the fact that about 80 farming businesses along with the associated jobs have been squeezed out by these coal mines and that number is increasing.

Never do they mention the contribution coal mining has to global warming and climate change and the loss of jobs as a result. Recently, job losses for the electorate of Barwon due to the drought was calculated at around 17,500 fulltime jobs equivalent, 2017 and '18, and more than 34,000 jobs in 2018 and '19. Whitehaven Coal, a significant greenhouse gas emitter, would have contributed to job losses not only here, but around the world, and they never mention that. Never do they mention the negative impacts of climate change on the economy: a message delivered clearly over the last year or so. Drought followed by Queensland floods that washed away over half a million head of cattle. Back into drought. Rivers dry up with massive fish kills.

2019 saw many records broken: record heatwaves, hottest year on record, driest on record and the worst fires recorded during 2019/20, and of course the continued bleaching of the Great Barrier Reef, which is now all but doomed. Obviously, this is not good for the employment or the economy. So what does the Commonwealth and New South Wales Governments do to keep people employed and stimulate the economy? Blame arsonists for the bushfires, brush it under the carpet, and I quote, "This is not the time to talk about it", and recommend, approve and subsidise with taxpayers money numerous global warming projects. Give us a break, for goodness sake.

The science. The IPC should be all over this information. However, just in case you missed some of the more recent deliberation, the scientists are now arguing over how to describe our chance of limiting global warming to 1.5. Is it virtually impossible, or possible but super challenging and an extraordinary challenge? Because the world is just nowhere near doing what is required for 1.5 degrees C. Professor Mark Howden, director of the ANUs Institute for Climate and Disaster Solutions, also a vice chair of the IPCC and author of the Australian Academy of Science Virtually

Impossible report says this finding of 1.5 degrees is consistent with peer-reviewed evidence.

He also points to a study in the journal Communications Earth & Environment that found the probability of keeping heating below even two degrees was only five per cent. Scientists are also becoming increasingly concerned about whether we have reached tipping points with negative feedback exacerbating warming and, you mightn't know, but points of no return. The following is an example of a point of no return. New research shows that 2021 saw the hottest ocean temperatures in recorded history, the sixth consecutive year this record has been broken.

When it comes to emissions, the too small to matter argument is absurd, reckless, morally bankrupt and the whole statement is an insult to our intelligence. This is the same as thinking of the nong who drives down the highway and throws out their rubbish because they think their little bit would make no difference; obviously, it does. Bit on biodiversity. The assessment report appears to downplay the impact this project will have on biodiversity. On page 43 of the assessment it states:

> *The baseline surveys encompassing the stage 3 project and surrounding footprint of existing or proposed mining leases was conducted.*

I couldn't find any mention of wombats and the impact stage 3 extension may have on them, despite the fact I mentioned the preference to a Whitehaven representative. During the public information session with Whitehaven I asked, "What would happen to the wombats' burrows when the longwalls collapse?". The reply was, "They will just have to build another burrow". My reply was, "That is providing they survive being buried alive". This is the attached photo of a photograph I took only just the other day on the side of Bulga Hill. It is interesting to know that on page 42 of the assessment report, some 617 hectares of native vegetation and habitat for threatened species will be required to be progressively cleared or else impacted by subsidence. The area covered by the Stage 3 extension is about 2500 hectares, of which about 1100 is state forest. Saying that 617 hectares will be cleared or impacted by subsidence is downplaying the area to be impacted.

In the beginning, I mentioned that our property is a neighbour to Whitehaven and the Stage 3 extension comes to our boundary. Last year I made an application to thin 42 hectares – an area one-sixtieth the size of Stage 3 – of regrowth comprising mostly cypress pine, a recognised invasive native species. No hollow-bearing trees would have been removed and there would have been no subsidence. I explained the need for me to be allowed to do this. Not being allowed to increase grass production or at least maintain current production means our business will on average continue on a downward spiral from now on.

I've attached two graphs just to help prove what's going on and these graphs are for Narrabri, and I emphasise these trends are not unique to Narrabri. Rainfall records since 1890 – using a 20-year moving average to flatten the large yearly variables – has trended downwards over the last 20 years, as you can see. The next graph is the

BOM records for Narrabri showing the number of those of 40 degrees and over have tripled in the last 30 years, compared to the previous 30 years. Attached are two photographs. The first is an image of a series of a section of Whitehaven underground mine showing the damage before subsidence.

Unfortunately, impact of 31 million tonnes of greenhouse emissions cannot be seen in this photo. Add to this the fact that this project is not sustainable, running out in 2044. The next photograph is of our property with the boundary outlined in white, showing relatively open grassland, grassy woodland with scattered patches of trees, and the dark areas that include a thick regrowth. My request to thin an area of one-sixtieth of the mine Stage 3 proposal so that I can adapt to climate change, to which my neighbour Whitehaven has contributed, was rejected. I was able to argue that my request would increase biodiversity and is probably carbon neutral, despite the fact we run cattle.

It is also sustainable but I might admit this depends on how much worse the impacts of climate change get. Bit ironic, don't you think? Conclusion. The tragedy is people are suffering enormously from extreme weather events because our decision-makers are divorced from the reality of what is happening. Until they have to sit on a beach in the pitch black in the middle of the day, struggling to breathe, while the house burns down, they will not wake up to the urgency needed to reduce greenhouse gas emissions. To continue the approval and financing of new global warming projects when Australia, the driest continent on the planet, stands to lose so much is extraordinary.

I understand why the Department of Planning appear to be paralysed by political pressure by political pressure into recommending the approval of coal projects such as the Stage 3 extension but not the Independent Planning Commission. The work of scientists who study the earth's systems give us the answer to the decision the IPC have to make. In fact, it is quite straightforward and it is staring us in the face. If we are to get to net zero, the logical first step would be to stop adding to the problem. Thank you.

MR BEASLEY: Mr Murray, Professor Fell has a question for you.

PROF FELL: Mr Murray, you mentioned that the upcast ventilation infrastructure was going to be 800 metres from your property, I've learnt. Just - - -

MR MURRAY: No, no, no.

PROF FELL: Sorry.

MR MURRAY: It'll be on the boundary, about 800 metres from our cottage.

PROF FELL: Okay. I was just wondering, the concern about the impact of that, is it the noise or potential atmospheric pollution, if you like? Air quality.

MR MURRAY: Possibly air quality as well. I'm not sure about that because I don't know what else comes out besides methane and carbon dioxide. If you think you can live in a house that's 800 metres from a jet engine going 24 hours a day - - -

PROF FELL: Sorry, 800; right?

MR MURRAY: 800 metres. Probably less, depending on where they put it because it was only indicative. I measured it at 800 and I think that was probably a little bit more than what was actually shown on the map.

PROF FELL: Thank you.

PROF BARLOW: I have a question for Mr Murray as well. Mr Murray, one of the nine bores that are shown in the modelling to exceed the aquifer depletion category, are any of those bores yours?

MR MURRAY: No. I rely totally on groundwater and dams, and I've spent just in the last drought $11,000 upgrading two of ours, just so I can store more water to cope with – that's part of my adaption and mitigation of drought measures. I rely entirely – but one of my dams is probably – I don't know – maybe 100, 150 metres on the other side of the fence from the infrastructure, and I will be putting in another submission or a written one which will explain that it may stop inflow into that, it may silt it up. It may even get polluted because there's a dam – a mine storage dam, which I presume is going to store brine, and goodness knows whether it will ever leak or spill over or whatever. So I haven't even mentioned that. I didn't have quite time.

PROF BARLOW: Thank you. Yes.

MR BEASLEY: All right. Our next speaker is Tom Morton. Mr Morton.

PROF O'KANE: Unless Mr Twomey is coming in, is he? Okay.

MR BEASLEY: Well, I'm told Mr Morton is next.

PROF O'KANE: Okay.

MR BEASLEY: Mr Morton.

MR MORTON: Can you hear me okay now?

MR BEASLEY: Yes, we can hear and see you, sir. Go ahead.

MR MORTON: Thank you very much indeed. Thank you, Commissioners, for the opportunity to speak to you today. Just a quick bit of background on me. Until I retired in late 2020, I was the research leader in the Climate Justice Research Centre at the University of Technology Sydney, and I was also Associate Professor of

Journalism there. I was chief investigator on two major international research projects funded by the Australian Research Council. One on coal and climate change, and the second on decarbonising electricity. So I've been researching the connection between coal and climate change, and also reporting on it as a journalist for about the last 10 years.

The focus of my submission today is on Scope 3 emissions. That is, the downstream emissions that will be generated if the proposed mine extension goes ahead. So why the focus on Scope 3? Well, when it's burned, the coal mined over the length of the project will produce 455.62 megatonnes of CO2. That figure's from the EIS and is quoted in the GPIs own assessment report. Just to put that in perspective, Australia's total annual domestic emissions in 2021 were 494.2 megatonnes of CO2. So the total Scope 3 emissions – that is, the emissions generated by burning all the coal produced over the life of the proposed mine extension – are broadly comparable to Australia's total annual domestic emissions from electricity, transport, agriculture, industry, and so on.

So the Scope 3 from the mine, 455 megatonnes over the life of the project. That's a bit less than half a gigatonne. According to the IPCC, the world's remaining carbon budget – that's the amount of fossil fuels that we can burn if we want to keep below the 1.5 degree warming target set at the 2015 climate summit in Paris – the total remaining carbon budget is 400 gigatonnes. At present rates of global annual emissions, we will exhaust that carbon budget in about eight years. So to distil down all the facts and figures, my point is very simple. Every time a new coal mine or an extension to an existing mine is approved in New South Wales, the world's remaining carbon budget shrinks.

As the DPIE states in its assessment report, clause 14 of the mining set expressly requires the consent authority to ensure that:

> *Greenhouse gas emissions are minimised to the greatest extent practicable.*

And furthermore, the consent authority must make:

> *An assessment of the greenhouse gas emissions, including downstream emissions, of the development and must do so having regard to any applicable state or national policies, programs or guidelines concerning greenhouse gas emissions.*

The DPEI in its assessment report also notes – and, again, I'm quoting – that:

> *Policy settings relating to climate change and greenhouse gas emissions at an international, national and state level are rapidly changing. The assessment of GHG emissions to this project has been made more difficult due to a range of very recent policy changes at all levels, including international –*

that's the Glasgow Climate Pact last November –

Commonwealth –

that's Australia's long-term emissions reduction plan last October –

and state.

That's the New South Wales Net Zero Plan Stage 1 issued in September last year. All of these changes have occurred after the exhibition of the EIS and the lodgement of the submissions report.

So, in my view, the IPC should now consider whether Whitehaven's application should be rejected on these grounds alone. The EIS is now out of date; it's no longer relevant to the current policy framework and, therefore, it means that the EIS doesn't accurately correspond to those new policy guidelines – policy commitments that have been made at national, state and international level in the last few months.

I'll go on now to talk briefly about the recent legal commentary on the issue of Scope 3 emissions. The commissioners will be well aware that Scope 3 emissions have been an important factor in a number of recent decisions of the commission itself and also judicial decisions on approvals of new coal mines or extensions to existing mines. Broadly speaking, all of this regulatory and legal precedent is now pointing in one direction: that government regulatory authorities and the courts cannot avoid considering Scope 3 emissions and their impact on the global carbon budget in approving any new coal mine or extension to an existing mine.

Now, the DPIE's assessment report does consider Scope 3 emissions at some length, but ultimately, it puts the issue in the too-hard basket. The assessment report says – and again I quote:

> *While recent policy changes and updates appear to emphasise and reiterate the need for action on greenhouse gas emissions in a broad scale, there is no clear policy guidance requiring drastic changes to the approach that has been adopted in recent coalmine assessments. Consequently, the department has focussed on incremental improvements that build on those recent assessments and are targeted at the specific characteristics of the project and its emissions.*

Commissioners, as we heard before, the world will exhaust its carbon budget in just eight years. The department's response to the issue of Scope 3 emissions is a copout. "Incremental improvements" – and I'm quoting there again from the assessment report:

> *Incremental improvements will not enable Australia to meet the emissions reduction targets to which it's signed up, along with 196 other nations, at the Paris Climate Summit.*

A little bit more on the legal situation here: the Land and Environment Court found that the proposed Rocky Hill Coalmine was in the wrong place at the wrong time. It

was in the wrong place because of enduring impacts on community amenity and lifestyle, and the wrong time because direct greenhouse gas emissions and indirect emissions from the use of produced coal would increase global concentration of greenhouse gases, quote:

> *At a time when what is now urgently needed, in order to meet generally agreed climate targets, is a rapid and deep decrease in greenhouse gas emissions.*

The commissioners will be aware that different panels of the IPC have taken different approaches to addressing Scope 3 emissions in their decisions in the United Wambo Mine extension decision, the Bylong Coal Project decision, and the Vickery Mine extension decision. In my view, this panel should take the robust approach of the panel which refused approval for Bylong Coal Project. That panel stated in its decision that distinguishing between direct, indirect, and downstream emissions was essentially irrelevant in the context and stated policies to reduce emissions in New South Wales and globally because, quote:

> *All of the direct and indirect greenhouse gas emissions of the project will adversely impact the New South Wales environment.*

The previous speaker referred to this and, as the commissioners will be aware, climate change is already adversely impacting the New South Wales environment and the people of New South Wales in the form of bushfires, floods and other extreme weather events.

The approach taken in the Rocky Hill and Bylong decisions is in line with the stark reality of global heating, as outlined in the most recent IPCC report and the urgent need drastically reduce the extraction and burning of fossil fuels. It also accords with recent legal analysis by the environmental planning department of Corrs Chambers Westgarth from October 2021. Corrs Chambers Westgarth conclude that in the absence of clear policy guidance at a national level in Australia about Scope 3 emissions, what's created is significant uncertainty for project proponents and the community alike. It erodes investment confidence, increases litigation risk, and hampers progress towards developing consistent climate-conscious decision making. Quoting some more from that advice, or commentary from Corrs Chambers Westgarth, they say:

> *Even in the absence of regulation to this effect, it's clear that decision makers and the community expect clear consideration of the impacts of downstream emissions, including Scope 3 emissions, and consideration of how such emissions can be minimised where practical and to the greatest extent possible.*

Pressure is being brought, not just in environmental assessment processes and courtrooms, but also in the boardrooms, through shareholder activism, and as a consequence of trade pressure, which can only be expected to increase – well, increase ..... the COP26. Well, that's happened already, and trade pressure is increasing.

In these circumstances, industry investors and the community would all benefit from clear and consistent national policy guidance on the assessment and management of Scope 3 emissions. Commissioners, in the absence of such guidance, at least to date, the IPC can and should follow the path laid out in the Rocky Hill and Bylong decisions and reject this application. The coal from the proposed extension will be burnt in Japan, South Korea, and Taiwan, but the emissions from the burning of that coal will affect the people of New South Wales and the environment of New South Wales for hundreds, possibly thousands of years to come, because global heating is not a state problem, it is a global problem. Thank you.

PROF O'KANE: Thank you.

MR BEASLEY: So, Mr Morton, can I just ask you – you raised the most recent IPCC report, which, I think, is about 4000 pages, so we're not going to be able to go through it. But, in summary, I think, the view expressed in that was that even on the lowest current emissions trajectory for GHG emissions, we're likely to overshoot the attempt to keep global daily average temperature rises to 1.5 degrees C; is that your understanding?

MR MORTON: Yes, that's absolutely correct.

MR BEASLEY: And, in summary, your evidence is that the approval of this mine would be inconsistent with the new advice from the IPCC's recent sixth report?

MR MORTON: Yes, that's absolutely correct. I mean, there's – you may be aware that a study that was published in Nature just before the 2015 Paris Climate Summit, the result of 10 years of research in the United Kingdom, that study showed that if we wanted to stay below 1.5, 96 per cent of Australia's coal reserves – current coal reserves – have to stay in the ground.

MR BEASLEY: Yes.

MR MORTON: That obviously includes the coal from this proposed application.

MR BEASLEY: All right. Thank you. Is – I'm not sure if – Professor Barlow, do you have any questions?

PROF BARLOW: No, thank you.

MR BEASLEY: All right. Thank you very much, sir.

MR MORTON: Okay. Thank you very much indeed.

MR BEASLEY: And I think we have Mr Kelaher – Mitch Kelaher from Kelaher Instrumentation & Electrical; are you there, sir?

MR KELAHER: Yes, correct, mate.

MR BEASLEY: We can hear you. Go ahead, sir.

MR KELAHER: Yes. So good afternoon, guys. As I said, Mitch Kelaher here, and I will be speaking for my support for the Narrabri Coal Expansion Project. Firstly, my opinions will differ slightly because Narrabri Coal has been quite instrumental in our growth as a business locally and their support is much appreciated ongoing. I believe this investment from Whitehaven Coal is critical to our area. Given the struggles we have all faced as businesses and individuals over the last two years, many people around our country towns are in need of some help. An investment of this size from Whitehaven represents some hope and stability to a lot of families out here.

From my own experience and dealings with Narrabri Coal, they've shared the resources and spends very, very evenly through the local communities. And, you know, we've been a beneficiary of that, and I know a lot of other smaller operations have really found their feet under the help from Narrabri Coal. Given that benchmark and how they've operated, we – it's quite exciting to see that $247 million worth of predicted spend has been declared it will be evenly shared between local businesses. So that's exciting for us as businesses, but more exciting for us as a community as a whole. I know a lot of people have dug into some saved funds and entitlements during the pandemic and, more importantly, probably the floods we've had out her recently. So this commitment from Whitehaven allows families to have some clarity and security for the foreseeable future.

The fact that Whitehaven are saying 75 per cent of the workforce is to be predominantly local is also very exciting. And so what that sort of means is a large proportion of the people in the region can benefit from this investment and possibly better their careers and earnings from this investment. As we all know, mining at times has a large turnover rate, but I'm a big believer in that's not always a negative. I think what that means is a large portion of people in the region can actually benefit from the turnover, and 75 per cent of local people means that 75 per cent of local people are getting tickets, bettering their careers, and actually moving out of the industry and providing the town and the community with other businesses of skilled resources.

I know a large chunk of the local business owners and a lot of the managers out here of the bigger companies, at one stage, had worked directly for the mines. This experience has allowed them some financial freedoms and setup in their skillsets to offer that to the local community with what they've learnt and the progression that the mines have allowed them to have. I honestly believe this extension is not only significant during its impacts of the workings, but for decades to come out here in these smaller towns. As mentioned at the beginning, I do strongly support the extension and look forward to offering more local families work and stability, which is achievable from approval of this project, I think. So, yeah, thank you, guys.

PROF O'KANE: Thank you.

MR BEASLEY: Thank you, sir. Doesn't seem any questions, and so I think we're going to go to a break now and recommence at 3 here.

PROF O'KANE: 3 o'clock.

MR BEASLEY: Thank you.

PROF O'KANE: Thanks.

RECORDING SUSPENDED [2.37 pm]

RECORDING RESUMED [3.03 pm]

MR BEASLEY: All right. We're resuming the public hearing for the Narrabri Underground Mine Stage 3 Project, and I believe the next speaker is Kayla Kelaher from Kelaher Industrial Services. Are you there, Ms Kelaher?

MS K. KELAHER: Yes, I'm here.

MR BEASLEY: We can hear you, so go ahead, please.

MS KELAHER: Great. Good afternoon, everyone. Thank you for the opportunity to speak here today to support – to voice my support for the Narrabri Underground Stage 3 Extension Project. My name is Kayla, and I'm the owner of Kelaher Industrial Services. From a professional level, my business would not be what it is today without the ongoing support that we receive from Narrabri Coal. Back in 2020 when I started the business, Narrabri Coal was our very first client. We started out with only three employees, and without Narrabri Coal putting their confidence and trust in my business, we would not have been able to grow and expand to now employing 32 staff, all who live locally to the region.

On a personal level, having grown up in Wee Waa, a small town in the Narrabri Shire, I have seen firsthand how having Narrabri Coal in the region positively impacts on the communities around it. The job opportunities for individuals and businesses in the region has significantly grown and continues to grow due to the continued success of Whitehaven in the region. I could guarantee if you ask anyone in Wee Waa now if they know someone who works in the mines, they could easily rattle off a handful of people at a minimum. So without Narrabri Coal supporting and utilising our local businesses, we would not be able to continue to employ local people like we do.

The employment opportunities that this extension project could provide if approved would without a doubt secure economic stability and provide the communities in the Narrabri Shire the opportunity to continue to thrive and grow for decades to come,

and that really does excite me that it is a possibility. So thank you for the opportunity to voice my support today for the extension project.

MR BEASLEY: Thank you.

PROF O'KANE: Thank you.

MR BEASLEY: Our next speaker is David Watt. Mr Watt, are you there? Mr Watt, can you hear me?

MR D. WATT: Yes, I can. Sorry, I was expecting to be further down the list.

MR BEASLEY: No, sorry. We've had to change your order, but, anyway, we can hear you loud and clear. Please go ahead.

MR WATT: That's all right. Good afternoon, chair and panel members. I'm a landholder and I'm a member of the Pilliga East Landholders Group. With my family, I own and operate – excuse me just for a second. I've just got to adjust this screen. I own and operate the property Blairmore approximately 23 kilometres south of Whitehaven's existing Narrabri Underground Mine. It is a diversified farming operation where we grow a variety of cereals and oil seed crops and fatten cattle for the local market. Our underground water is central to allow operation, particularly in the extreme dry times such as we experienced over the past few years.

Blairmore is sandwiched between two of the nine bores identified by the proponent as having impacts exceeding the Aquifer Interference Policy thresholds. They have concerns that the proponent has understated the number of impacted bores and springs, and that the number is likely to be far greater. This is because they have singularly used the depth of the bores from ground level to determine which are likely to be impacted. I'll just share my screen here, if I can.

PROF O'KANE: How many do you think are likely to be affected, roughly, roughly?

MR WATT: You know, there's hundreds – hundreds of bores in the area.

PROF O'KANE: I know.

MR WATT: It's – I – I'll go into that in a bit more depth now.

PROF O'KANE: All right. Thank you.

MR WATT: Yeah. So you've got that map on the screen.

MR BEASLEY: Yes, that's come up. Thanks.

MR WATT: My initial concerns were raised after I realised that our property was excluded from the bore sensis and the groundwater impact assessment. After contacting the Department of Planning, the proponent sent out a hydrologist in April last year to have a look at my property and prepare a report on my three bores and two springs, so I was then privy to see how they conducted their assessment. So if you have a look on that map, my property is outlined in blue. And the property shaded in light green were those that were included in the – in the assessment.

My layman's understanding is basically that, from a desktop model, they determine the degree of drawdown for a particular geological formation which decreases with distance from the mine, so they end up with lines on a map which show the extent of the drawdown for each geological formation of which the two relevant to our groundwater systems are the Garrawilla and the Napperby formations, with a degree of drawdown extending further from the mine in the lower Napperby formation. I'll just get this screen back up. Whilst the hydrologist did take samples for chemical analysis, the only means used to determine which formation each bore was drawing from, and hence the degree of impact, was the depth of the screens from ground level which were obtained from the bore logs. And this is my concern; it is, at best, an estimate.

It is an estimate because these two formations varied greatly in thickness, with the overlying Garrawilla Volcanics often appearing as isolated islands. And from what I can find, it is only mapped on a regional scale. Appendix 5 of the EIS states that the thickness of the Garrawilla Volcanics can range from 90 metres to being fully absent. And that the groundwater levels in the Napperby formation can vary by more than 70 metres in the vicinity of the mine and the Garrawilla by 100 metres. Added to this is the – added to this uncertainty is the varying depths of the overlying material above the aquifers which often varies with the topography.

So using this method, the proponent has estimated that the drawdown from this project in combination with the Narrabri Gas Project on my two operational bores is 1.3 and 1.5 metres, hence not exceeding the Aquifer Interference Policy thresholds. This is despite my neighbour's wall one kilometre south of mine, and hence further from the mine, estimated to drop by 3.35 metres. The reasoning for this is that they say their bore is in the Napperby formation whilst mine is in the Garrawilla Volcanics. Again, at best, a guess based on the depth of the screens below ground level. I also have a problem with a post-EIS assessment of the two springs on my property, one of which is – was permanent right through the last drought, unlike the two that were examined on the neighbouring property in the actual EIS groundwater assessment. But that – and those springs haven't had a flow for the past 10 years.

With no actual evidence, my springs were dismissed as being unlikely to be affected by the project; however, they did concede that the permanent springs electric – electrical conductivity was unusually high for the Garrawilla Volcanics and could be from an alternative source and that further regular monitoring may be required. I understand that the groundwater assessment, in particular the modelling, has been peer reviewed; however, I don't believe that the designation of bores to the

particular aquifers has. Surely we have better tools at our disposal for determining groundwater connectivity than a best guess. Is it too onerous to ask the proponent to use isotope hydrology for example to determine the hydraulic connection between the aquifers that they are intercepting and our groundwater to either verify their results or determine the real impacts of the project.

Whatever the solution, we need something better than what we have now, and we need a much more comprehensive baseline data set on all our groundwater sources before this project is commenced. In this instance, it is especially crucial – crucial that impacted water sources are identified now as most impacts will not be apparent until this mine is long gone and it is far too late then to consider a make good approach. Initially, it was eight impacted bores. Now, it is nine, but what if that true number is 30 or 50. Where is the number that makes this project no longer in the public interest. As a farmer at the frontline of the impacts of climate change, I am strongly of the opinion that this project is in contrast to the direction we need to be moving as a State and as a country. It is contrary to the commitment of Net Zero by 2050.

The department's Clayton's approach to ramping down omissions seems to be reliant on the possibility of either future policy or technology to reduce omissions; it is not a solution. Now, I'd just like to talk a bit on how this project is being assessed and, to be clear, I am in no way taking aim at the IPC. There is a real feeling amongst landholders that this assessment by the Department of Planning and Environment is a so-called stich up and I tend to agree. They have been through it all before and so have I. This is now the third coal or gas development application to impact my farming business and fourth IPC hearing in just over three years. Initially, we thought it was the Department of Planning's job to assess these projects. But we have come to the realisation that it is actually their job to approve them.

It is now clear to me that the agenda from the Minister down is to approve as many of these mines and gas fields as they can – while they can and in – and if the law or consent authority gets in their way they work around it. This application is no exception. As you were aware in 2019 Minister Stokes initiated a review into the Independent Planning Commission. The terms of reference identified several issues to be considered one of which being thresholds for the referral of matters to the Independent Planning Commission. This subsequently resulted in recommendation 8 being adopted with the aim of reducing the workload of the IPC by only focussing on the most contentious state significant developments. The IPC website states that:

> *The Independent Planning Commission is the consent authority for state significant development applications in circumstances where there are 50 or more unique public objections, the applicant has made a reportable political donation's disclosure and/or that local council has objected to the state significant development application.*

So why are we here? There are only three unique public objections - - -

PROF O'KANE: No, because of – the Minister can do it under delegation 2.

MR WATT: I – I understand that the – it is at the Minister's discretion. But on what grounds? The applicant has not made a ..... - - -

PROF O'KANE: But it doesn't have to have grounds. For that bit it doesn't have to. So you've really got four routes.

MR WATT: In my opinion, we are here because it is – has extinguished all rights the public had to appeal the decision. The Department of Planning could have approved this inhouse if they so wished. This, however, would leave that decision to be subject to a merits right appeal. It is my opinion that the Department is not confident that an approval would be upheld should it be challenged in the Land and Environment Court primarily because of the massive amounts of greenhouse gases that will be emitted. I respectfully ask the Commission that you consider this in your deliberations. Thank you.

PROF O'KANE: Thank you. Professor Fell.

PROF FELL: Yes. I just had a question about water. You said you had, I think, three bores on your land and two springs.

MR WATT: Yes.

PROF FELL: Are the bores used for irrigation or just for cattle watering and domestic?

MR WATT: No, there's – so the three – there's three registered bores. One of them is decommissioned and I think that was the only one that – that the – the water mob for – for Narrabri Coal had picked up on. Then – and the other two are stock and domestic bores as well as the spring which supplies stock water.

PROF FELL: And I just had a question. You mentioned the Garrawilla. I think that's where you're drawing from. And the ..... formations. My understanding is geometry suggests you've got the – the Digby overlying the Hoskissons seam and underlying it you've got the ..... formation and they're not ..... seam. So I'm not sure that you've taken that factor into account in your thinking about the water model.

MR WATT: Well, those – those seams are nowhere near our aquifers according to all the maps – the geological formations that the proponent has provided. We're nowhere near the Hoskissons seam. We're – you know, our water is at – my two bores are 20 metres and 72 metres. The neighbour's bore that's impacted is 68 metres. The Digby formations and those – they're much further underneath that. But my point there is, you know, we – we're taking a stab in the dark. Why not use something such as isotopes to, really, verify it?

PROF FELL: Okay. Look, thanks ..... that's helpful.

MR WATT: Sorry?

PROF FELL: That's helpful. Thank you.

MR WATT: Yes. And then the other point is – they could look at chemistry. But between the Garrawilla and the Napperby formation the – the chemistry, really, overlaps. So it is near impossible to distinguish those two formations from chemistry alone.

PROF FELL: Now, the chemistry in the Hoskissons seam is very much carbonate and what's the story on those two seams, then, that you've just mentioned?

MR WATT: I'm – I'm a farmer. On – I am by no means a hydrologist.

PROF FELL: But if you use the water you should know.

MR WATT: The – sorry, the Hoskissons seam which is probably, what, 500 metres below where we – we draw from – I – I've got no idea what – what's in it.

PROF FELL: Thanks very much.

PROF O'KANE: Professor Snow.

MR BEASLEY: Professor Barlow, you might be on mute.

PROF BARLOW: My apologies. Sorry, Mr Watt. The question is maybe one way to sort this out is what's the quality of your water, Mr Watt? Is it – do you know – have any idea of the – you must because you use it – the ..... suitable for, perhaps, irrigation or just stock water.

MR WATT: No, look, it's not suitable for irrigation and nor are the – the quantities that we get there. It's very suitable for stock water. For spraying. For any of those sort of needs. So we – we're talking about EC values ranging from, sort of, 2000 – sorry, microsiemens to centimetre through to 6000. Of those – of my work sources the – the highest DC is the spring water which – which naturally flows to the – to the surface.

PROF FELL: Well, I think we're just very impressed – sorry – by those beautiful green fields behind you.

MR WATT: Yes. So – so the pictures you see from Whitehaven aren't – aren't totally representative of the district we live in. This is Blairmore behind me and – and this was the crops we were growing – growing here last year. So - - -

PROF FELL: Thank you.

MR BEASLEY: All right. So just to clarify one thing you've said. As was pointed out by Professor O'Kane that the – this determination was referred by the Minister. The commissioners then have to determine the application on its merits. I know you've got your view about why that happened. We heard that. But the commissioners just determine it on its merits after that.

MR WATT: I do understand that.

MR BEASLEY: Thank you.

PROF O'KANE: Thank you.

MR WATT: But - - -

PROF O'KANE: And thanks for your presentation.

MR WATT: Thank you.

MR BEASLEY: All right. I'm not sure we've got a - - -

PROF O'KANE: We've got Richard, haven't we?

MR BEASLEY: I'm not sure if Mr Avendano is there. Are you, sir?

MR R. AVENDANO: Yes, I'm here.

MR BEASLEY: You are. Very good. Go ahead. We can see you and hear you.

MR AVENDANO: Awesome. Thank you very much. I will just get my screen sharing if possible. Yes, it's not going to happen. That's all right. Thank you for your time this afternoon, Commissioners. My name is Richard Avendano and I am a second generation farmer and ergonomist from Boggabri. I'm from a family farm which directly supports five households and produces on average 800 steers and wieners – steers and heifers into the feedlot market and then approximately 2000 tonnes of a mix of grain annually. So for Whitehaven to claim there is no productive agricultural land in the vicinity of the expansion I feel is an outright lie. Our farm is less than seven and a half kilometres south of the proposed underground stage 3 expansion and we're also one of the nine landholders identified as those whose bores will be affected under the ..... interference policy by the proposed expansion.

We were first contacted in April 2021 by Mark Vile of Onward Consulting about a meeting to discuss the proposed expansion and the fact that we were facing underground water loss. It was a farming operation – as happens. We were busy selling canola after a rain event and we were afraid of losing our moisture. Our reply to him was for him to call us again and organise a meeting in June after we had finished planting. We did not hear from anyone associated with Whitehaven until early January 2022 where we then had a meeting with Mark Vile and Andrew

Garrett, formerly of the DPIE, and the other community engagement manager of Whitehaven. Their proposal to us was to put down a new bore. It was to be as close to the original bore that was identified that was going to be affected and as close to the depth and like quality. Now, this automatically raises the issue as to what good this bore will be when the neighbouring bore, which is on the same aquifer, the Garrawilla Volcanics, will be negatively affected under the aquifer interference policy, so our drill down – expected drill down was over two metres.

I raised this question with Andrew at the meeting, who had disclosed that his parents had or currently – or owned property themselves, and I said to him, "How would you see this if a neighbouring project made the same offer to his parents?" His reply was simply a mixture of a laugh and a comment that it would see it as close to satisfactory. Mark made a comment echoing his similar sentiments to us. I then asked how Whitehaven can see this proposal – as the applicant must use its best endeavours to complete all measures required under conditions B27 to B29 within two years of the date of commencement of development under this ..... consent, which is outlined by the DPIE condition of consent.

This is when the Whitehaven employees and contractors themselves see this offer as a laughable one. It seems to me to be clearly not made in good faith or to the best endeavours. Water, including underground water, is a key to success, viability, long-term sustainability and value of any farming enterprise. With this in mind, I believe a fair question to ask is how does this recognition from Whitehaven in relation to loss of underground affect the value of farmland as an asset. In November 2021, the New South Wales Valuer General reported that the value of the state's farmland had ..... 26 per cent in the 12 months to June 2021. 2020 saw a 12.9 per cent increase, and 2019 saw a 17.2 per cent increase in the capital growth of farmland.

If this underground expansion were to negatively affect the capital growth of surrounding farmland, as it likely will, even to the tune of five per cent, then likely lost capital growth of these farms could easily exceed $3 million a year, all at a loss to existing family businesses. It then continues to defy logic as how Whitehaven Coal's proposed make good agreement with us even begins to bridge the gap of how aquifer interference affects us in the short- and long-term, both financially and sustainability-wise. How will my children continue to farm on this property in the future?

Both the DPIE and IPC have taken strong positions that Whitehaven Coal ..... 100 per cent of their emissions, but they have said they are unsure on the best way to do so. In Whitehaven's submissions, they estimated their total net economic benefit at 599 million; however, this is only accounting for 0.0031 per cent of their total emissions, which is a long way short of 100. One way of assigning a cost to Scope 2 and 3 emissions of the proposed expansion would be to use ACCUs as a way of offsetting this. Whitehaven's expected Scope 2 and 4 emissions is in the vicinity of 34 millions tonnes. Current ACCU price has risen from $20 in July 2021 to a spot price value today of 52.50 with the highest spot price in late January of $59.

ACCUs are a viable pricing mechanism for these emissions that is issued by the Clean Energy Regulator and are, therefore, the chosen mechanism by the Australian Government via their Emissions Reduction Fund. To work some simple numbers shows the sheer environmental costs of these emissions. If priced at $20 an ACCU, the cost is over $680 million; if priced at $52.50 an ACCU, the total cost is $1.785 billion to the environment; or, using the best current bid contract price, currently at $39 for an ACCU, which is what you would call a median expection – expectation – sorry – the total cost is $1.326 billion. Even at the low price ..... for ACCUs, this number easily outweighs Whitehaven's estimated net economic benefit whilst at the highest end of the ACCU price, the difference is – the difference of the cost is incredible.

With such rapid rises in ACCUs – well over 200 per cent increase in just over six months – and the continued demand for them by companies seeking to become carbon neutral, market consultant and analyst RepuTex is bullish about further price increases, further increasing the environmental cost of their emissions. It is with these facts in mind plus innumerably more than I implore the IPC to put a stop to Whitehaven Coal's proposed expansion.

MR BEASLEY: Thank you, Mr Avendano. Professor Fell has got a question he'd like to ask you.

MR AVENDANO: Yes. Sure.

PROF FELL: Well, just for the record – sorry. For the record, if I might, Mr Avendano, you have bores – and, in fact, are they for irrigation? I mean, you are producing grain. Or are they just - - -

MR AVENDANO: No.

PROF FELL: - - - for stock and domestic?

MR AVENDANO: Just for stock and domestic. There's no - - -

PROF FELL: Thank you.

MR AVENDANO: - - - irrigation in this area. Well, I mean, our farmer, David Watt - - -

PROF FELL: Do you know which foundation – sorry. My apologies. Would you know which foundation you were tapping? Which formation. I'm sorry.

MR AVENDANO: Garrawilla.

PROF FELL: Thanks.

MR AVENDANO: We have – over our property, we have – there's nine bores in commission, three that are, well, out of commission but about to be put back in. We had to save a bit of money after the drought to go back down that path. But some of them are in the Napperby, as well. But the one they've identified is Garrawilla.

PROF FELL: .....

PROF BARLOW: I have a question for Mr Avendano, as well. You have a bore that is one of the affected bores.

MR AVENDANO: Yes.

PROF BARLOW: And you have, as you've described, you know, met with, you know ..... but that hasn't – could that be described as, you know, a negotiation about what a make good agreement with Narrabri Coal would look like, or was it just a meeting?

MR AVENDANO: Well, that was – they tabled to us the letter – or proposal with the letter – sorry. But the contents of that were, effectively, a bore, like I described, like for like quality. I hardly think it was suitable or even close to any kind of, you know, make good agreement when it's as close to the existing bore as possible, and if that existing bore is dropping by nearly three metres – well, expected to – I mean, what good is our other bore? And they, themselves, thought it was a pretty absurd offer, so I don't think it was really made in good faith, more so to be seen to be doing something. I mean, we had to wait over – nearly 12 months – nine months to hear back from them. So I think it's easy for them to tick a box and say they've engaged with this and made an offer, but, you know, it's a long way between meetings and, you know, a fairly unsuitable offer, in my opinion.

PROF BARLOW: Thanks.

MR BEASLEY: Thank you, sir.

PROF O'KANE: Thanks.

PROF BARLOW: Thank you.

MR BEASLEY: I think we've run out of time there, sir. If there's anything - - -

MR AVENDANO: Yes. That's all right.

MR BEASLEY: - - - further, you can mail in your written - - -

MR AVENDANO: No. I was just wrapping up then, anyway.

PROF O'KANE: All right. Thank you.

MR BEASLEY: Great. Thank you very much. Next speaker is Peter Wills. Mr Wills? I'm not getting anything. It must be Jackson Balme.

MR J. BALME: Hello. Can you hear me?

PROF O'KANE: Yes. We can.

MR BEASLEY: Yes. No. That's - - -

PROF O'KANE: Thank you. Hi.

MR BALME: Perfect. Well, thank you to the Commission for letting me make a submission today. My name is Jackson. I'm an environmental law student at the ANU, and, at the outset, I would like to urge the Commission to reject the approval of the mine. And today, my submissions are twofold, firstly, regarding the huge greenhouse gas emissions produced by the extension and, secondly, if approved, the inadequacies of the performance measures provided in the draft conditions of approval.

So, firstly, I would like to draw to the Commission's attention the significant greenhouse gas emissions of the extension itself, and I would like to note that these submissions come from joint research that I conducted with the Australian Conservation Foundation. And we found that, if approved, the extension would be the second-largest single producer of Scope 1, 2 and 3 emissions approved by the IPC since the Paris Agreement was ratified in 2016, and, furthermore, if approved, the extension would be the largest single producer of Scope 1 and 2 emissions approved by the IPC since the Paris Agreement was ratified in 2016.

Secondly, I would like to bring to the Commission's attention the cumulative impact of the greenhouse gas emissions approved by this Commission since 2016. Since 2016, the IPC has approved 23 extensions and greenfield mines which, cumulatively, will produce 3.2 billion tonnes of carbon dioxide equivalent. Furthermore, there are currently six major mine extensions awaiting approval in New South Wales, and, assuming that these – this Commission will be the consent authority, which is likely, due to their size, and assuming that they are approved, the IPC will approve an additional 1.8 billion tonnes of carbon dioxide equivalent. So if this eventuates, the IPC will have approved at least five billion tonnes of carbon dioxide since 2016. And using the intergovernmental panels on climate change – their latest carbon budget of between 300 to 400 billion tonnes, if approved – all these extensions are approved – which this one is one of them – the IPC will be responsible for between 0.7 to 1 per cent of the remaining global carbon budget so I urge the commission to consider the huge impacts of global – on global greenhouse gas emissions of not only this decision but of the cumulative effect of all the previous approval decisions. Thirdly, I'd also like to bring the Commission – I would also like to discuss the inadequacies of the greenhouse gas performance measures if approved for fugitive emissions intensities which are in table 3 of condition B16 of the draft conditions of approval.

Now, the thing I want to draw your attention to is the lifetime, over the course of the lifetime, the emissions intensity for that, which is the long-term performance measure which is set at 0.155 tonnes of carbon dioxide per tonne of ROM coal. Now while it's not entirely clear in the New South Wales Assessment Report where this figure is in or where it comes from, I'm assuming that the 0.155 tonnes of carbon dioxide per tonne of ROM coal was selected because it's the average scope 1 emissions per tonne of ROM coal mined and I think you will be able to find that in paragraph 262 of the assessment report.

However, I would also like to draw your attention to paragraph 340 of the assessment report which states that of 85.7 per cent of scope 1 emissions are fugitive emissions therefore over the life of the extension the average tonnes of carbon dioxide of fugitive emissions per tonne of ROM coal is actually 0.133 not 0.155 which is the figure in the conditions. Therefore we're actually setting the cap above what is estimated by Whitehaven itself and by setting it above at 0.155 instead of 0.133 we are allowing the extension to produce an additional 4.4 million tonnes of carbon dioxide of fugitive emissions more than what was ever estimated by Whitehaven.

So I therefore recommend that, first of all, that the mine isn't approved and second, if it is, that the long-term fugitive emissions performance intensity is set at 0.133 not 0.155.

MR BEASLEY: Thank you, sir.

PROF O'KANE: And thank you, particularly, for addressing the conditions. That's always helpful.

MR BALME: Thank you.

MR BEASLEY: Next speaker is Leah Rees from Pilliga East Landholders. Ms Rees, are you there?

MS L. REES: Yes. It's Leah but thank you very much.

MR BEASLEY: Sorry about that.

MS REES: That's okay.

MR BEASLEY: Just blame the mask.

MS REES: What's that, sorry? Yes. That's exactly right, thank you.

MR BEASLEY: Go ahead. We can hear you.

MS REES: So good afternoon, Commissioners. I know what you're thinking, here's another whinging farmer. Well, you're half correct. I am a farmer. A farmer who is completely dissatisfied that Whitehaven Coal are unacceptably willing to risk

the security of our groundwater which is core to our productive cattle breeding and fattening business. When I say "our business", I mean our family business. Their family business. Our family has been farming - - -

PROF O'KANE: Could you put it up a little bit?

MS REES: - - - this land – yes. Sure.

PROF O'KANE: Okay. I didn't. Okay. Great.

MS REES: Our farm – our family has been farming this land since 1909. Let's do the maths, that's right, we have been here for over 113 years and these two amazing young people are fifth generation farmers. Approximately five years ago we relied entirely on rainwater for our business. However, with climate conditions changing, our water source was nearing an end. That gut-wrenching feeling and complete devastation at the thought of either losing cattle, destocking, or even worse having to sell up is something only once you have had to live through can you understand how traumatic that was.

Literally, with only one week of water left equipped a bore. It is this water that we rely on 100 per cent that is core element in our cattle business only to find out now that Whitehaven Coal are willing to jeopardise it if not completely destroy it. The IPC must consider the compatibility of agriculture, and mining, and land uses under the State Environmental – the State Environment Protection Plan. I can tell you, if my family has continued to farm this land for over 100 years, that this land is compatible with a grazing business. It is only compatible with grazing, however, if our valuable water that we rely on 100 per cent is protected.

That's how you successfully farm in one location for over 113 years. I constantly seek ways to operate that reduce carbon emissions. Whitehaven Coal are wanting a 13 year extension to their already existing license. Their coal operations are finite. They expect it to end. They know it will end. It has an end. They will take out of the land what they can and leave. On the other hand, I expect my farm – my family to be farming here for another hundred years. Whitehaven Coal has not offered me any makegood agreement when my only water source, the water source that I rely on 100 per cent is damaged or lost.

Two points I would like to make. How can there be anything offered to make good on the loss of invaluable water? It can't be replaced, it can't be substituted with anything else. It cannot have a dollar value put on it. My grazing business cannot survive without it. I rely 100 per cent on it. Secondly, the likelihood of Whitehaven Coal still being in existence when my water is affected by their project is highly unlikely. Who then will be offering any compensation to us? Who will be taking liability for the loss of our valuable water? Where will Whitehaven Coal be then? Probably not even Whitehaven Coal.

Whitehaven Coal are counting on the fact that by the time this happens it will be far enough down the track Whitehaven Coal will no longer be in business. On the 14th of April last year, two representatives from Whitehaven Coal came to my farm to discuss this expansion project and dip my bore for standing water level. Upon reading my bore information they were quite alarmed and somewhat surprised that my bore is as deep as it is at 140 metres. They clearly did not know its depth and did not know how it could be that deep. So how in heck's name can they be sure my bore won't be affected when their mining operations alter the underground water? I asked them this very question.

The response I was given was that, "We can just simply move the line on the map." How can Whitehaven Coal tell us our bore won't be affected when they don't even know the depth of it? Commissioners, you ask us to sacrifice our land, our water, our way of life for the sake of a line on a map that simply can be moved? How can our futures be staked on inaccurate modelling that is so fallible? What we know is true, that we have access to high quality water that suits our operation and can sustain multi-generations of livelihoods. Anyone who has ever paid a driller to put in a water bore knows it can be a fickle business. It is hard to predict where the water source is and what depth it is at.

When you manage to get your bore in the right spot with reliable good water, you protect it with your life, and that is where we are at. We are fighting today for our life. I am part of the Pilliga East Landholders group and sharing information without that group we are still perplexed between the clean cut lines on the maps compared to the reality of the locations, depths, and quality of our bores, and we do not believe the modelling is accurate. We know that the Department of Industry and Water and the independent experts Scientific Committee also highly questioned the modelling which has been disregarded by the Assessment Report. Our group demands - - -

MR BEASLEY: Ms Rees, just I'm going to have to ask you to wrap it up soon. But one of the Commissioners has a question for you, Commissioner Fells.

MS REES: Yes.

PROF FELL: Sorry, it's the same question I have asked other people. Do you know which formation you draw your water from?

MS REES: Yes, sure. So thank you for the question. I've actually had to come into town to get better internet service and as I left the door my paperwork is still on the table, but I will take that on notice and I'll put that in as - - -

PROF FELL: Thank you very much. That will be helpful.

PROF O'KANE: And I was going to ask that you, presumably, the Pilliga East Landholders Group is putting in a submission which will show all the bores in question. Is that right?

MS REES: That is correct.

PROF O'KANE: And it'll show yours, like, so we'll know which is yours, and which is David Watt's, and so on?

MS REES: That is correct, yes.

PROF O'KANE: Great.

MS REES: And my neighbour, the Avendano's family.

PROF O'KANE: Yes. Yes. Thanks.

MS REES: As a general idea, yes.

PROF O'KANE: Good.

PROF FELL: Thank you very much.

MS REES: I am nearly finished. So our group demanded from the Department of Planning an effective baseline be prepared for all the bores in the region from all the water sources predicted to be impacted by this project. This has not occurred and the IPC cannot approve this project without an effective baseline in place on which we can be sure to hold the company to account in any future if they still exist. So Commissioners, after farming for over 100 years how then is it okay that the Whitehaven Coal, which is renowned for breaking the law, can get on with business at the detriment of my business? A business which was here first, a business which is clearly sustainable, and a business which is always striving for best practice, and a business who is just trying to protect its most valuable resource, water.

MR BEASLEY: Thank you.

PROF O'KANE: Thank you. Snow, did you have anything?

PROF FELL: No. Thank you.

MR BEASLEY: Thank you.

PROF O'KANE: Okay. Thanks, Mr Beasley.

MR BEASLEY: The next speaker is Lynn Trindall from the Narrabri Local Aboriginal Land Council. Ms Trindall, can you hear me?

MS L. TRINDALL: Good afternoon.

PROF O'KANE: We can't hear you. I think you're on mute.

MS TRINDALL: Okay.

PROF O'KANE: Now we can.

MR BEASLEY: All good.

MS TRINDALL: Now you're right?

MR BEASLEY: Yes.

PROF O'KANE: Yes. Thanks.

MS TRINDALL: Okay. My name's Lynn Trindall. I'm the CEO of Narrabri Local Aboriginal Land Council and I've been in this job since 2007. Firstly, I'd like to acknowledge the traditional owners, the Narrabri Gomeroi people, on the country on which Narrabri Coal Mine work. Also, I'd like to thank the Independent Planning Commission of New South Wales for giving me a few minutes to speak about extension stage 3. Just a brief on – mainly what I'll be talking about is the Aboriginal cultural heritage side of things, in aspect to Narrabri Coal Mine and other mines in business. So in the year 2008 the archaeologist Pat Gaynor and a local Gomeroi Traditional Owner, Edward Trindall, commenced surveying and recording of Aboriginal cultural heritage findings on a local property at Turrawan.

It was noted, at the time, the amount and significance of the Aboriginal culture and heritage that was seen and recording throughout the process. Basically, we'd be gobsmacked if we went back to and looked over the original farm. Now, in 2010 the local Gomeroi people had met with the project managers of the consortium, to establish greater outcomes for the protection of Aboriginal culture and heritage and management and the employment of local Aboriginal people, because, at that time, you could understand, Aboriginal people have – and did not have many jobs, in relation to employment.

The Narrabri Mine was established in 2012, with the implementation of an Aboriginal Cultural Heritage Management Plan. The Narrabri local had been working with – in partnership with the local Gomeroi Narrabri Aboriginal Corporation since 2012, when the mine first started, and it involved the Narrabri Coal Mine, to ensure that protocols and the working document of the Aboriginal Cultural and Heritage Management Plan are adhere to and to make necessary changes to support the protection of Aboriginal culture and heritage that is found and recorded within the whole aspect of whether it's the first stage, second stage or the new stage, stage 3. But there's a promise there that everything is always protected.

One part of the working document was to ensure that the artefacts were protected by enclosed fencing. Previously, there was just a string of wire. So we worked closely with the Narrabri Coal Mine and their workers to ensure that all the fencing was proper, with strainers, you know, ring wire and all that. And this was to alleviate wildlife destroying the actual artefacts that have been recorded over the whole

process. These fences are a new part of the landscape. A local Aboriginal company was granted the procurement of completing current works. All the areas of Narrabri Coal Mine are surveyed and this is also with stage 3 of the project.

These areas were surveyed by the Gomeroi Narrabri Aboriginal people and also the Narrabri Local Aboriginal Land Council. These areas are protected on top, within the whole of the project. Stage 1, there was some subsidence and some artefacts were salvaged. These will be placed back to the original area, when the project in the area is completed. Stage 2, Narrabri Land Council has been advised that the areas where large grinding grooves are on top, areas underground for mining will be diverted away from those areas. I haven't got a template to show you, but we've been fully aware that instead of going in the longwall, straight ahead, they actually go around and about and underneath, so that it doesn't affect the artefacts that are on top.

PROF O'KANE: We saw a photo, when we were talking to the applicant. So we've got a little bit of an idea. Thank you.

MS TRINDALL: Yes. Yes. Okay. So they're all being diverted away from the big, significant areas that are on top. Stage 3 has been recorded within the area and these will be managed under the current Aboriginal Cultural Heritage Management Plan. Over the years of the Narrabri underground mine, Narrabri Land Council has had over 30 workers, who have been employed as cultural and heritage monitors. In this period, some have moved onto Maules Creek site, employed within Whitehaven, and the other time employment – full time employment within the Narrabri Shire. Our partnership works with the Narrabri Coal Mine and we have regular meetings, for updates on the Aboriginal Cultural Heritage Management Plan and also the upcoming projects.

Narrabri Land Council not only has employment with Narrabri Coal Mine, but also receives support and contributions from Whitehaven for NAIDOC as well as assistance for upgrade of our kitchen, which is in this building, to cater for the community. They also support other community initiatives, like Clontarf Foundation at the high school, the local group of primary and high school kids, who love their dancing and speak Gomeroi language, and this is the big initiative from one lady in this community. At present, this industry is supporting employment for the community and many people are planning a better way of life.

Many people have an option on – have an opinion, sorry, on matters. They even use Google to get more opinions. I believe that people, you know, talk a lot about different things. The system that is under review is stage 3 of the Narrabri Underground Coal Mine, extraction of coal. They have been doing this for over 10 years, extracting coal under stage 1 and now starting on stage 2. And as an Aboriginal person and Narrabri Land Council and still is engaged to protect culture and heritage, I am happy with the process that we have put into place, in relation to Narrabri Coal Mine and also Whitehaven. We also have the opportunity of doing biodiversity works out at Maules Creek, biodiversity farm. I know a lot of people

have great concern – and, you know, as a normal person, myself, I am sympathetic to people with farms and all those things as well.

But I don't have a speciality in water, I don't have a speciality in gases and I don't have a speciality like other people who may have presented to you today. But I can assure you that there have been a lot of changes with the coal mine, in relation to protection of culture and heritage and also, you know, we're fully informed. We have regular meetings, you know, not only with the head crew out at the Narrabri Coal, but also with Whitehaven Aboriginal workers out there and, also, the team that works through Maules Creek. I just think – this business has been around for a long, long time and probably will be here for a long time in the future.

We all dream of the green day. Green day is something that, you know, I grew up with. We never had industry around when I was growing up. We lived off the river. We lived, you know, without electricity, all those sort of things, but, sometimes, people have also got to realise that, at the end of the day, they need these resources so they can go and turn a light on, do this sort of thing, and also jump in a car, drive a car, answer a phone, have technology that we need. It's the old saying, "You need to have these resources to get on in life." And I want to thank the Commission for letting me speak today. Like I said, I've been involved with the Narrabri Coal Mine since its inception and they've always worked closely with the Land Council and the local Gomeroi people and also, you know, there's local contractors out there now that are working for the thing. We're always going to have a water issue, no matter where we live in this country or in this world and I'd just like to thank you guys for letting me talk and thank you very much.

PROF O'KANE: Thank you.

MR BEASLEY: Thank you.

PROF FELL: Thank you.

MS TRINDALL: You're welcome.

MR BEASLEY: Yes. Next speaker is Russell Stewart from the Narrabri and District Chamber of Commerce and Regional Development Australia Northern Inland. Mr Stewart.

MR STEWART: Well, thank you, folks. I've got a really bad line here, so I hope you can hear me because I'm battling hearing you.

MR BEASLEY: We can hear you well. We're talking behind masks, so - - -

MR STEWART: Terrific. Well, I'm not. I'm out in the bush.

MR BEASLEY: Good. Go ahead.

MR STEWART: Look, I firstly appreciate the opportunity to speak. It means a lot to me and the people I represent, so thank you very much. I'm a born and bred local, son of a soldier settler out here in Australia, and old enough to remember and have experienced the initiation of many new industries in the region, and old enough to have been able to assess the outcomes. Now, we know that the healthy survival of regional communities relies heavily on the ability to retain our quality local young people. A key to healthy regional growth is closely – you know, closely related and linked to that critical fact. We know that from our own studies.

Put simply, you know, if we can't retain our quality young people, we have no hope of attracting new ones because there are young people already being supported and acclimatised. We have a wonderful ag industry and with some of the best farmers and best country, not only in Australia but in the world, however, we all know healthy regional growth can't be attained as a one-trick pony. It simply can't. You know, what if Sydney were restricted to, say – I don't know – retail. You know, just restrict Sydney to retail. Clearly, restricting the bush to ag – which clearly in this region is our number one, our favourite, and always will be, however, as I said before, you can't be a one-trick pony to sustain healthy, ongoing growth in the bush.

Our studies say that there are two critical reasons for the loss of our quality young people, and these are sustainable, quality, long-term and diverse career opportunities, and further – and the second one being further education available locally. Now, we've addressed the second one in recent years with the establishment of the Country Universities Centre, which is full to brimming. Now, during the recent record drought – record-breaking five year drought and, you know, we've all experienced this firsthand because, you know, COVID runs a very poor second in the bush to weather, particularly drought. This area – which is largely sustained by our local coal industry.

Without the input of Whitehaven Coal, I know that many local businesses, their employers and their employees, wouldn't have survived, and it's largely due to local financial input and community support of Whitehaven Coal. You know, it's all very well for out-of-town opponents to do their best in any way they can to close down our critical local industries because clearly their ability to support their families and community won't change. Simply won't change. There are in excess of 1000 workers and contractors in the region relying on Whitehaven to sustain their families and community. Whitehaven have been outstanding corporate and community citizens.

You know, and we know locals that have a lifetime here can vouch for it. They're actually a delight to work with and truly commit to sustaining all aspects of local life. While representing Narrabri and District Chamber of Commerce and numerous other groups, including Regional Development Australia – Northern Inland, all my contact with Whitehaven Coal – including CEO Paul Flynn – has always been responded to immediately and with interest. It's been fantastic to deal with them, and Whitehaven truly grasp what it means – in my opinion, they truly grasp what it means to belong,

be treated, to assist in the healthy growth of country communities, and I can say this with conviction because I've experienced it myself firsthand.

Narrabri is very gratefully blessed with the finest agriculture land and the finest in resources, and let me add, the finest in people. We're the hub of a major highway splits – like the newer highway, Kamilaroi and the East-West Road – and now about to see the inland rail arrive in town, again making the area critical for food and resources, not only locally but for Australia, in our belief. Thanks to the success of Whitehaven Coal and our other resources industry operators, we have seen never before numbers trickling in of quality young workers who are bringing their families and electing this region to stay and raise their families and commit to all life has to offer here.

You know, there's a fear amongst many of us long-term locals that, you know, are probably third and fourth generation, that political and individual opinions could tear this wonderful lifestyle apart and our future apart which we've worked so hard to put in place. Many years of that. By the way, that's all when we're just starting to see the benefits of all our communication and hard work. I'd like to just give – you know, I can tell you that we rely in this region on numerous and varying jobs. We have to do it. Clearly, those country communities which are showing healthy growth and sustaining themselves always – despite the fact of being agricultural areas – always have a secondary or – and a third industry.

Is simply – with the weather conditions that we rely on and changing weather conditions, is simply as good as ag is and as great as it is – and as important it is, not only to us but the entire Australian community, and also with our exports, the world at large – we simply cannot – we simply cannot sustain quality growth and quality numbers of young people and families without options, you just can't. That's why we're so concerned that – and supportive of Whitehaven and with their remaining time that we hope that gets extended. We know that if it's – they've got a current nine years, and clearly if they can't – if they can't extend, any mining organisation, as far as I can see, starts to cut back at a five-year – would cut back at about the halfway mark, four and a half years.

Start cutting back or close down, and that would an absolute huge blow to the bush up this way because we're just starting to work together to build. All my requests to Whitehaven Coal in relation to community sport – that includes missing equipment at our local hospital. We were raising money to put equipment in our local hospital in the community. Whitehaven heard about it and said, "Hey, that's important to us and we support the youth, so it's important to us. We will come in and we will provide that equipment". That's just one example. I've got many of those and I can tell you that many of our community events here – and they are well enjoyed by all – simply would not happen without Whitehaven support.

Even just before Christmas, we had a Christmas carnival for the first time in ages. It attracted between two and a half and three thousand locals. Guess who came to the forefront with the – all the expenses? You know, it wasn't – it wasn't anyone but

Whitehaven Coal, and that might seem trivial to many but when you're feeling pretty lonely and you're out in the bush, and you're really trying to do community events, I can tell you it is very much appreciated. Now, I think I've told exactly how I feel and my members – many members feel about Whitehaven Coal. We can't even have a meeting without Whitehaven wanting – ringing to say, "How can I assist and I'll be there".

You know, that's wonderful. Wouldn't it be great if we could always have that sort of commitment from our industries. It'd be terrific. It sounds like I heard the bell, so thank you, folks. I really appreciate this opportunity and I hope the decision falls the right way for those of us in the bush and the right way, clearly, for Narrabri and region would be to commit Whitehaven to continue doing the good things they do.

PROF O'KANE: Thanks.

MR STEWART: So I make myself available in future for any genuine comments and answer any questions.

PROF O'KANE: Thank you, Mr Stewart.

PROF BARLOW: Thank you, Mr Stewart.

PROF FELL: Thank you.

MR BEASLEY: Next speaker we have is Justin Field MLC. Sir, can you hear me?

MR FIELD: I can indeed. Can you hear me?

PROF O'KANE: Yes. We can. Thank you.

MR BEASLEY: I can see you. Go ahead.

MR FIELD: Well, thank you, Commissioners, for the opportunity to make a submission to this public hearing. I am an independent member of the New South Wales Legislative Council. I've spent a considerable amount of my time as a legislator in recent years on issues relating to mining impacts and the need for a transition away from coal and other fossil fuel extraction to reduce New South Wales' carbon footprint and contribute to the global action that is required to avoid catastrophic climate change. I urge you to refuse the Narrabri Underground Project because of its unacceptable greenhouse gas emissions, especially at a time when the state urgently needs to reduce those emissions to meet its stated policy objective of net zero by 2050.

It is inconceivable to many, including myself, that, in a global environment, where there is a consensus scientific view that emissions must peak and fall dramatically to reach net zero by 2050, that we would be giving consideration to expanding coal mining in New South Wales. In the case of the Narrabri Underground Project, it

would extend operations for an additional 13 years to now end in 2044 rather than 2031 and contribute, cumulatively, with Scope 1, 2 and 3 emissions, almost 500 million tonnes of additional carbon dioxide equivalent emissions over that time.

I understand this project has the highest emissions of any coal mining proposal considered by the Independent Planning Commission and the highest emissions intensity of a thermal coal project considered by the Commission. It is clear in the proponent's documentation and the department's assessment report that this extension is considered gassy with relatively high greenhouse emissions and limited scope for mitigation. Even if there were grounds to consider additional coal mining in New South Wales, this is clearly not the mine that should be considered. Commissioners, the assessment report states – and I quote:

> *The impacts of coal mining on climate change have become an increasingly important issue for the assessment of coal mining projects in recent years.*

And it goes on:

> *Importantly, clause 14 of the Mining SEPP expressly requires the consent authority to consider whether or not the consent should be issued subject to conditions aimed at ensuring the development is undertaken in an environmentally responsible manner, including conditions to ensure the following –*

And I'm quoting here from point (c):

> *…that greenhouse gas emissions are minimised to the greatest extent practicable and –*

And I quote:

> *…an assessment of the greenhouse gas emissions, including downstream emissions, of the development and must do so having regard to any applicable state or national policies, programs or guidelines concerning greenhouse gas emissions.*

Commissioners, there is now a bipartisan consensus, in terms of public policy, at both state and national level for Australia to reach net zero emissions by 2050 and in support of the Paris Agreement. Any new project that contributes additional emissions that cannot be mitigated or offset puts a heavier burden on other businesses or projects to reduce or offset emissions. Otherwise, it would delay the pathway to emissions reduction, jeopardising the policy objectives of both State and Federal Governments, and the ecological and economic imperative to drastically reduce emissions.

Your decision here has an impact far beyond this individual project. The New South Wales Planning Minister recently responded to a question on notice I asked

regarding the operation of greenhouse gas emission conditions as it relates to the existing New South Wales coal mines, and he stated in his response – and I quote:

> *The current New South Wales policy framework requires coal mining companies to demonstrate they have mitigated Scope 1 and 2 greenhouse emissions from coal mining developments to the greatest extent practicable through operational efficiency measures. It also requires consent authorities to consider conditions to further mitigate greenhouse gas emissions from coal mines.*

Now, Commissioners, the department's assessment report highlights the challenges of conditioning a project to achieve greenhouse gas emissions to the greatest extent – or to limit them to the greatest extent practicable, noting the lack of methodology to assess relative scales of emissions, the lack of performance standards, challenges in assessing mitigating methods and a lack of guidance in setting offsets.

The reality of the New South Wales planning system is that there is no criteria as to what would constitute the greatest extent practicable or an independent assessment of whether or not the expectation of the current New South Wales policy framework is even being met; however, the recommended conditions relating to carbon emissions contain – for this project, as stated by the recommended conditions, contain equally non-specific "where reasonable and feasible" clauses. Furthermore, the proponent, Whitehaven, has failed to meaningful offer the Commission options regarding emissions conditions. The proposed generic condition:

> *…to take all reasonable and feasible avoidance and mitigation measures to improve energy efficiency and minimise Scope 1 and 2 greenhouse gas emissions –*

is unlikely to result in meaningful emissions reductions over time. And I point to – the Commission to the work of Professor Ian Lowe in his report Emissions From Recently Approved Fossil Fuel Projects in New South Wales – and I understand that Professor Lowe has made a submission to you already. Further to the generic answer I received from the Planning Minister to my question on notice, which I noted before – and I will attach questions and answers I received from him to my written submission – when I asked about voluntary offsets of Scope 1 and 2 emissions by existing coal mines, the Minister noted no coal mines are currently operating in New South Wales that are required to offset Scope 1 and 2 greenhouse emissions and stated that the New South Wales policy framework requires coal mining companies to demonstrate they have minimised Scope 1 and 2 emissions from mining developments to the greatest extent practicable through operational efficiency measures. You can see we hit a circular logic here.

To measure the effectiveness of any efforts to minimise to the greatest extent practicable, I asked further questions relating to Scope 1 and 2 emissions of existing coal mines. The answers showed that there has been negligible – a negligible fall in total Scope 1 and 2 emissions since 2014 or '15 despite relatively flat coal

production over the same period. Commissioners, I contend that the current policy framework for addressing greenhouse gas emissions through the planning system is failing to achieve the stated policy goals of the New South Wales Government. In the absence of clear direction by the New South Wales Government as to how to address these limitations, the IPC is both sufficiently empowered and has an obligation to the people of New South Wales to set that direction through their decisions and any conditions that they put on projects.

There is an acknowledgement by the proponent and the department that options to reduce emissions from this project are limited, and, that being the case, I call on the IPC to refuse the application. I question whether conditions like what have been proposed will do anything to reduce emissions for this project should it be approved. And I note, for example, that Whitehaven's most recent Air Quality and Greenhouse Gas Management Plan for the Maules Creek Mine – and, in there, against the requirement to implement all reasonable and feasible measures to minimise the release greenhouse gas emissions, they simply state, in their most recent report, when it comes to the target that they're trying to achieve – and I quote:

Energy use is in line with operational requirements.

No one can consider this to be a meaningful condition that can be meaningful applied to reduce emissions, and it's quite evidence in the answers from the Minister and even in the way the companies approach this very question in their reporting requirements that they've made no effort to reduce emissions to the extent practicable.

Commissioners, I'd like to make a short statement regarding the application in clause 12 of the Mining SEPP to this proposal, which requires the consent authority, before determining a development application for mining, to consider the compatibility of the proposed mine with other land uses in the vicinity of the mine and, in particular, whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority, having regard to land use trends, are likely to be preferred uses of land in the vicinity of the development. And I note the significance of this clause in the decision to – in the Land and Environment Court to uphold the refusal of the Rocky Hill Coal Mine.

I do not accept the position outlined in the assessment report that this project is compatible with other land uses in the area or likely preferred uses. I note that you will hear evidence during these hearings from local farmers about their concerns, particularly regarding groundwater. I also note the significant vegetation clearing that will result from this project and the importance of this area as the largest contiguous woodland in that part of the state. If there is an argument to consider future additional coal mining in New South Wales, this is yet more evidence that this is not the area where it should occur. Commissioners, thank you for your consideration of my submission today, and I urge you to refuse the project.

MR BEASLEY: Thank you, Mr Field. I think there might be a couple of questions. I've got one. I'm just wondering if you have a view about how you think the commissioners should approach Scope 3 emissions. So we know Scope 1 and Scope 2, and New South Wales has policy targets for the reduction of greenhouse gas emissions, and they can be somehow met across the New South Wales economy. But assuming the Scope 3 emissions are emissions outside of the jurisdiction of New South Wales, if the fuel is burnt outside of New South Wales, but those emissions, by contributing to the amount of carbon in the atmosphere, will still have, the scientists tell us, some impact on the New South Wales environment, do you have a view about how the commissioners, leaving aside their statutory obligations, should approach Scope 3 emissions?

MR FIELD: Thank you, Mr Beasley. Look, I guess I take the view that, globally, we need to reduce emissions as quickly as possible, and I would hope that every jurisdiction takes their contribution to that effort seriously and has laws in place to minimise their contribution to global greenhouse gas emissions. I reject the idea that just because the coal is burnt overseas – that we don't have an obligation or that, simply, jurisdictions that burn that coal will get it from other places. Obviously, that is going to – if that coal is not available, it is going to make it more expensive for coal, and that will have a cost implication and, I think, hasten the speed of transition away from coal-fired power.

So I don't think we can put aside, unfortunately, the statutory obligations of the commissioners and the extent to which government policy has tried to minimise the degree to which this can be a consideration, but what I would say is this particular mining proposal has the largest Scope 3 emission of any mining proposal considered by the Commission since they came into effect in their current form in 2018, and I think that it is inconceivable, after the last few years of climate debate, and finally getting to a point in Australia where both State and Federal jurisdictions have agreed on a target of net zero by 2050, that we would be considering the largest thermal coal mining project at this point in time that would continue almost to that 2050 deadline. So I'd urge the commissioners to consider everything they can possibly do to prevent that from happening.

MR BEASLEY: All right. Thank you. I think Professor Fell has a question, as well.

PROF FELL: Mr Field, I'm just wondering what you – what comments you'd make about the Commonwealth's mechanisms to safeguard, in the National Greenhouse Energy Registry – in terms of reducing, particularly, what they call covered emissions or Scope 1. Do you think that can effectively bring down the level?

MR FIELD: Well, if I understand the question properly, Commissioner, I mean, Scope 1 emissions here are not insignificant when you compare them to other recently considered projects by the Commission. Whether or not the Commonwealth has additional powers that can be exercised here to prevent that – I think that what – if my reading of the assessment report and the documentation by the proponent is

accurate – that mitigating a lot of the emissions expected from this mine are very limited, and I think that that must be a factor. And we haven't seen much evidence of where abatement programs or other systems to try and minimise emissions from coal mines have been successful. And I think we're running out of time to see those be tested or piloted in coal mines in New South Wales. The imperative is to reduce emissions quickly, and setting that back just levies that burden on other parts of the economy much more heavily.

PROF FELL: Yes. Thank you. I understand your comments related – earlier comments related, principally, to S3. That's when the coal was used. But the S1 is quite high for this mine, as has been discussed, and the baseline that's set could well determine how that tracks down – through the Commonwealth, that is.

MR FIELD: Well, I think that setting a baseline is all well and good. But at the end of the day I – I think that if we're not going to have the ability to reduce those emissions below the baseline we are, again, just contributing to a problem that we've agreed every level of government needs to try be solved. So I'm not sure if that's the mechanism that we should be relying to do that. I think the Commission should be brave here. I think they should be prepared recognising that historical conditions to ..... as much as practicable have not worked – and this is for scope 1 and 2 emissions. They should – they should demand either these emissions be offset by the company or that they be required to implement technologies to dramatically reduce that even beyond what is practicable today. There is little incentive for mines to come up with methodologies to reduce emissions once they get their approval under the current suite of measures that are used by the Planning Department to control these things.

PROF FELL: Thank you .....

PROF O'KANE: Thank you. And, Professor Barlow.

PROF BARLOW: I – Mr Field, you essentially answered the question that I was about to ask you, namely - - -

MR FIELD: Sure.

PROF BARLOW: - - - that you would support the use of offsets to – to offset scope 1 and scope 2 emissions when appropriate technologies were not available to negate those – negate those emissions completely. How do you see where those offsets might come? Do you support the – the purchase of international offsets to do that or, you know, what's your view on offsets assuming you agree that using offsets to mitigate ..... emissions? What's your view on where they might come from?

MR FIELD: Commissioner, I've just made clear my preference would be that you refuse the project. But in the event that you don't and you want to address the significant greenhouse gas emissions that this project would create I would encourage conditions that would require them to be offset as a minimum. Where they can be achieved – this is quite challenging because these are significant

emissions and I would hope that we would ensure that whatever program of offsets were available to the company that we would have some confidence in their – in their integrity. Now, there are schemes that, you know, are accepted through national greenhouse emissions markets. But I think at the end of the day the preference, from my perspective, is that they would occur domestically where there are added benefits that can be gained from – from those offsets being achieved through – through domestic contributions whether that be through the protection of – of forest environments. The regeneration of the landscape. But these things are very hard to achieve at scale for coalmining projects which produce substantial emissions. So I don't deny that it's a challenge. But this is why it is so contentious that we are seeing such large additional coalmining proposals enter the planning system in New South Wales when they seem to cut so heavily across those stated objectives to reach net zero emissions.

PROF BARLOW: Thank you.

MR BEASLEY: Thank you.

PROF FELL: Thank you.

PROF O'KANE: Ad can I say thank you not just for this presentation but for your continuing engagement with Commission projects. We really appreciate it.

MR FIELD: Thank you, Professor O'Kane. Thank you.

PROF O'KANE: And I think we're coming to the end of the day. So I've just got a short closing statement. So thank you to everyone who presented today for your thoughtful presentation. A transcript of today's proceedings will be made available on our website in the next few days. In terms of things that are going on our website I've been told that the mining panel meeting from last Friday where it was the mining panel, as it's referred to informally, along with DPE representatives is now on our website. Just a reminder about submissions. The Commission will accept written submissions on this project – the Narrabri underground mine stage 3 extension project – up until 5 pm Australian eastern daylight time on Friday, 25 February 2022.

It's particularly helpful to us if you can comment in your submissions at this stage both on the Department's assessment report and the draft recommended conditions. You can submit your comments using the "have your say" portal on our website or you can send them in by email or by post. We will adjourn until – it says in my notes 8.30 on Friday. But, actually, we probably will start at 8.20 because gentlemen that couldn't come today would like to join us on Friday. So it's almost certainly we will adjourn until 8.20 am on Friday, 18 February 2022 for day 2 proceedings. Again, thank you very much and good afternoon.

RECORDING CONCLUDED **[4.24 pm]**