

MR S. O'CONNOR: Good morning. Welcome to the public hearing for the Narrabri Gas Project. My name is Steve O'Connor and I am the Chair of this IPC panel. Joining me are my fellow commissioners, Professor Snow Barlow, John Hann on my left, and counsel assisting, Richard Beasley SC on my right. Before we begin,
5 I would like to acknowledge the traditional custodians of the land on which we meet and pay my respects to their elders, past, present and emerging, and to the elders from other communities who may be participating today. In line with the current COVID-19 regulations we have moved this public hearing online with registered speakers provided the opportunity to present to the panel via telephone, video
10 conference or the studio we have set up in Narrabri.

In the interests of openness and transparency each day we are live streaming this electronic public hearing via our website. As always, this public hearing is being recorded and a full transcript will be made available on our website. Before we hear
15 from our first registered speaker today, I would like to outline how the public hearing will proceed. Each speaker will be introduced when it's their turn to present to the panel. Each speaker has been asked how long – has been advised how long they have to speak. We have received a record number of speaker registrations and it's important that everyone registered to speak receives a fair share of time. I will
20 enforce time keeping rules as the Chair. I reserve the right to allow additional time for provision of further technical material.

You will hear a warning bell at one minute before your allocated time expires and two bells when your allocated time is finished. I also ask that speakers today refrain
25 from making offensive, threatening or defamatory statements as per our guidelines which are available on our website. It is important that all speakers understand that the hearing today is not a debate and the panel will not be taking questions. If there is something that you would like the panel to consider and you don't get the opportunity to raise it, the panel will consider any written submissions up to the
30 extended deadline of 5 pm on Monday the 10th of August 2020. All written submissions are weighed in the same way as verbal submissions made during the public hearing.

It's important to understand that any person can make a written submission
35 irrespective of whether they have been allocated time to speak at the public hearing. If you have a copy of your speaking notes or any additional material to support your presentation it would be appreciated if you provide that information to the commission. Please note, however, that any information given to us may be made public. Thank you. Richard will now call today's first speaker.

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MR R. BEASLEY SC: The first speaker is Mr Lindsay Mathieson from the Gilgandra Shire Council. Are you there, Mr Mathieson?

MR L. MATHIESON: I'm here. Good morning, Commissioners. My name is
45 Lindsay Mathieson. As the director of planning and environment I will be representing Gilgandra Shire Council today. The main areas of concern to council

are the potential contamination of both groundwater and the depletion of underground aquifers with resulting impacts at present and into the future. What guarantees are in place to protect regional communities that rely on underground aquifers for potable drinking water and the needs of the agricultural industry? The waste products generated from the extraction processes, particularly salt waste and heavy metals, from the proposed development is another area of concern for regional communities.

The current method of brine ponds on site are prone to failure with resulting environmental damage and as a – at a regional level, local councils are not equipped to handle this sort of waste product. What guarantees are in place for regional communities that the proponent can safely dispose of the generated waste from the proponent's development? As the panel will be aware, the Dark Sky Park is located in the Warrumbungle and Gilgandra Local Government area. What measures are in place to mitigate the resulting light pollution from the proposed development to protect the night sky as legislated in the local environment plans for each surrounding council?

In relation to council's road networks, should the gas build be approved, then appropriate consideration shall be given to the costs of these impacts and the communities compensated accordingly. Regarding the petroleum exploration licence, the PELs, that cover of the Gilgandra Shire Council area, if the exploration to date has indicated that there is no commercial viable gas reserves, then the PEL should be extinguished to remove this uncertainty which burdens the communities. As with any extractive industry project a rehabilitation plan is required at the completion of the project. What guarantees do future generations have that the environment can be returned to the pre-development state? I thank the commissioners for the opportunity to speak today and their considerations with council's concerns.

MR O'CONNOR: Thank you for that presentation, Lindsay.

MR BEASLEY: Can I just ask you, Mr Mathieson, has you or the council read the report from the water expert panel on the Narrabri Gas Project?

MR MATHIESON: No, I haven't. A couple of guys in council have read the report.

MR BEASLEY: I was just going to ask you whether there were any aspects of that report you disagreed with?

MR MATHIESON: Myself not having read it, I wouldn't be able to comment on that.

MR BEASLEY: All right. Thank you.

MR O'CONNOR: You raised the issue of the disposal of the salt and I take it council operates its landfills and we're being told there are a number of landfills within reasonable proximity to the site. Is your council likely to be a candidate to accept salt if this project is approved?

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MR MATHIESON: Well, about four years ago we actually closed four of our rural landfill sites, so we only have one main landfill site in Gilgandra which we probably wouldn't be able to accept the salt base from these projects.

10 MR O'CONNOR: Thank you. I don't think there's any other questions, so thank you for your time this morning.

MR MATHIESON: All right. Thank you.

15 MR BEASLEY: Councillor Kodi Brady is the next speaker from the Warrumbungle Shire Council. Are you there, Councillor Brady?

MR K. BRADY: Yes, I am. Yes.

20 MR BEASLEY: Please go ahead.

MR BRADY: Good morning, Commissioners. My name is Kodi Brady. I'm a proud local Aboriginal man, president of Yarn, Support, Connect – Coonabarabran Suicide Prevention Network, sit on many local committees and a lifelong resident of Coonabarabran. Alongside that I am a shire councillor for the Warrumbungle Shire, though I have not been endorsed to speak on the organisation, though there is an upstanding motion that clearly state the Warrumbungle Shire Council does not support CSG. I am speaking from my heart and so many people's hearts that I represent shire wide. I speak to you today to add more reason why CSG mining should not take place in the Pilliga.

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The people of Coonabarabran and surrounds are a resilient lot. We endure quite a bit of hardship in silence. It takes a lot to get us to speak out. We come here today to speak out. I want to speak for the Coonabarabran area as a whole to point out the damage CSG mining will do to the mental, emotional and social welfare of our community. CSG mining is dirty. It leaks methane. It involves moving toxic substances in

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MR BEASLEY: We might have to pause there because we can't hear what the speaker is saying. Well, we're going to come back to Councillor Brady though, I assume when we fix this up, okay. All right. The next speaker is Jacinta Green from SOS Liverpool Plains. I'm not sure if she's available yet.

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45 **RECORDING SUSPENDED**

[9.39 am]

MR O'CONNOR: My apologies, Councillor, for that delay. We had some technical
5 difficulties here in the studio in Sydney. We've rectified those now. We would
appreciate it if you could begin your presentation again. We did see the first minute
or two before we lost contact, but we think it would be better if you could start from
the very beginning.

10 MR BRADY: Yes, no problem at all. Good morning, Commissioners. My name is
Kodi Brady. I'm a proud Aboriginal man, president of Yarn, Support, Connect –
Coonabarabran Suicide Prevention Network, sit on many local committees and is – I
am a lifelong resident of Coonabarabran. Alongside that I am a shire councillor for
15 the Warrumbungle Shire, though I am not endorsed to speak for the organisation, but
there is an upstanding motion that clearly states that the Warrumbungle Shire
Council does not support CSG. I am speaking from my heart and so many people's
hearts that I represent shire wide. I speak to you today to add more reasons why
CSG mining should not take place in the Pilliga.

20 The people of Coonabarabran and surrounds are a resilient lot. We endure quite a bit
of hardship in silence. It takes a lot to get us to speak out, but here we are today to
speak out. I want to speak for the Coonabarabran area as a whole to point out the
damage CSG mining will do to the mental, emotional and social welfare of our
community. CSG mining is dirty. It leaks methane. It involves moving toxic
25 substances into open air pools. It will poison the waters of the Great Artesian Basin
guaranteed. How much, who knows? When this will happen, who knows? It will
pollute our gorgeous night sky, the first Dark Sky Park in Australia, with needless
light.

30 Putting CSG mining in the Pilliga shows a lack of regard and respect for an area the
residents of Coonabarabran and surrounds hold deeply in their hearts, souls and
minds. The Pilliga doesn't belong to us. We as people belong to it. It is mother
earth's lungs and it has a big part of who we are today. Unlike the bushfires we fear
every season, CSG is a year-round danger to the environment of the Pilliga and the
35 water for most of eastern Australia. The Pilliga will be stained a toxic no-go area.
Another piece of special habitat destroyed for the sake of money. The people of
Coonabarabran and surrounds have already endured a lot and still not recovered. In
the last few years bushfires and drought, the economic hardships have brought with
them mental illness, depression, suicide and despair.

40 We don't like to air our dirty laundry, but we are suffering. Approving CSG mining
in the Pilliga will add to our social issues. CSG will give people one more reason to
leave, or to consider suicide, or worse – suicide. Why would anyone look to the
future in this area when CSG mining instantly devalues everything around it? Why
45 would you build for the future in this area when it will be worthless? Did you know
that real estate prices in Tara have more than halved in the last 12 months alone?
What affect do you think it is already having in the minds and emotions of the people

of Coonabarabran? The constant nagging fear that we all have worked for will be nothing once the wells start popping up.

5 The tourists will stop coming because no one goes to a toxic dump for fun. Young people will move away in droves. Old people will see a town that was strong in their youth wither and die. We all know what consent means and what lack of consent is. The many polls, gatherings, meetings and our community overwhelmingly says no to CSG. If this project is approved our community will experience the feeling of being violated, our wishes ignored, our lives and living places and livelihoods dismissed as
10 worthless. This will be greatly traumatic for the people of Coonabarabran and surrounds. Another blow, possibly fatal, for the entire town. The mental health costs will be huge. The emotional costs will be huge. The cost to our way of life will be huge. We know what CSG is, what it will do to us, and we don't want it here. Thank you.

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MR O'CONNOR: Thank you, Councillor, for your presentation. We will have our next speaker, but it might take a moment just because of COVID-19 requirements to ensure cleaning before the next speaker.

20 MR BEASLEY: Hello, Ms Cutmore, are you there?

MS M.P. CUTMORE: Yes, I am.

25 MR BEASLEY: Ms Cutmore is from the Gomeri Traditional Custodians. Please go ahead, Ms Cutmore.

30 MS CUTMORE: Hello. Yaama. My name is Maria Polly Cutmore. I come from Moree. I represent the Cubby and Cutmore family. I was born in Moree and I am a local – I'm an original local of the area and that includes this Narrabri area. My nation is a population of 15 to 20 thousand people from the borders down as far as Singleton to the west and to where the rivers meet. Since this time I've been elected as a native title applicant to represent my people and one of the main mandates of that election was that there be no mining in Gomeri – any mining – and especially Santos mining – no gas mining at all. It will destroy our artesian water and the
35 destruction of country. And with that I have consulted with – I've been out to many of towns to my people to talk to them about the consultation process with Santos.

40 Santos they did assure us that they had been speaking with members of my community and I found that that was flawed – that they hadn't been speaking to them. So what I – one of the positions that I've taken as an elected person was to go out to my communities. I visit Coonabarabran, I visit Moree, Tingha, Boggabilla, Walgett, Narrabri, as far as Ashford and I've spoken to my people and they have all said no. They do not want mining in Gomeri. They do not want gas mining and they especially do not want our Great Artesian water destroyed. We do not want
45 that. That is our survivor. That protects us, that gives us food, that gives us medicine.

Yes, I've also – with the Santos when I have spoken with them at our negotiating meetings, I've spoken to them about the Environmental Impact Statements and what I've found is that that report was done in 2008. We are in 2020. We've had bushfires, we've had fish kills, we've had no water in our rivers in Gomerioi from the top as far as Inverell to Copeton all the way down to Walgett. My people have been suffering and we can't suffer no more. We can't put up with this. You know, how much more do we have to put up with in our country? We can't. You can't destroy the water on us because we can't – we're not going nowhere.

10 We've had this done to us over and over for 250 years. It started with the massacres. It started with the bushfires – you know, the destruction of our countries. It started with all this. This is just something else that's come in. Please – can you please just stop it. We don't want it no more. We want to live. We want to be able to live and enjoy life in our country. We can't have this any more. Thank you.

15 MR O'CONNOR: Thank you for your presentation, Maria.

MS CUTMORE: Yes, thank you.

20 MR BEASLEY: Hello. I think the next presenter is Jacinta Green from SOS Liverpool Plains. Is that you, Ms Green?

DR J. GREEN: It's Dr Green.

25 MR BEASLEY: Dr Green, I apologise. Please go ahead.

DR GREEN: I thank the panel for the opportunity to speak and I would like to acknowledge the Gomerioi and thank you, Ms Cutmore, as a traditional custodian of the land. I am president of SOS Liverpool Plains. SOS stands for Save Our Soils. We were established in 2009 and our objects are to promote awareness of women in agriculture and food security issues. Our women, we number over 60, live and work on Liverpool Plains and the majority of our women are farmers. West of the Pilliga still stands the house my great-great-grandfather grew up in on land given to the grandson of a first fleet convict, land still farmed by my family. This is not uncommon, so when I say the majority of our women are farmers what I in fact mean is that the majority of our members run successful intergenerational businesses.

The history of these businesses, the passion to protect and continue these extraordinary family legacies is what drives us to oppose the Pilliga Gas Project. We see a significant threat, not only to our own businesses, but to all similar businesses in the area and it is not an ill-informed ideological response. It has been a significant work of effort. Over the past 10 years we have visited the Pilliga. We have visited gasfields in Queensland, visited properties with 12 gas wells and pipelines going through our black soil. We have spoken to scientists, spoken to doctors, spoken to insurance agencies. We have read proposals and industry documents by the tome.

We have spoken to politicians and attempted to speak to the gas companies. But mostly we ask questions and the answers we get in response are either not satisfactory, not sensible, not backed by any research or data, contradictory responses, or not answered at all. The Pilliga Gas Project is a monty pythonesque
5 foot looming over our futures. One great concern is the ongoing attempt to frame the Pilliga Gas Project as limited to 850 wells within the footprint of the forest. We know that in the long-term this is not financially viable. You know, as we all do, that each gas well has a limited life span and that once the supporting infrastructure is in
10 place it only makes economic sense to maximise the investment in the infrastructure by drilling new wells as the old wells reach the end of their life spans.

And yes, the fear of accidents is great. We know our insurance companies won't cover incident on lands related to gas infrastructure, let alone that a single upstream water contamination event could instantly destroy a business and tarnish forever our
15 reputation. But apart from accidents, the very nature of the gas industry is a threat. We have seen first hand the impact of attempting to run pipelines through black soil and now we've read the research. A simple reassurance from the companies that it will be fine is not enough for us. The access required to our properties, the amount of water extracted – it's all very well to describe it as produced water. It is not
20 produced. It is not created. It is extracted. And to offer it as a potential benefit to farmers is laughable. The best place to store water is in the ground.

Which brings us to the extraction process. A favourite bath time game for our children is turning the cup upside down and creating a high pressure within the cup
25 and then launching it away. The movement of gas and fluids from high pressure areas to low pressure areas is one of the first and most basic scientific principles most of us encounter. The process of drilling for gas creates a pathway for the equalisation of pressure. The extraction of CSG from the seams reduces the pressure. The Santos spin doctors – and I deliberately say spin doctors – because if
30 you talk to the engineers and scientists who work for gas companies they tell a very different story.

To say that there will be no migration, no drawdown, no lateral drawdown, no movement of gases and fluids within layers above and below, is offensive. They
35 have nothing to backup these statements. What we also need to remember is that the two scientist review had very targeted and limited terms of reference. Issues outside the terms of reference also concern us greatly. And today I would like to address one: opportunity cost. How many jobs have we not created in our businesses because we have been busy addressing this threat? How much investment? How
40 much time could have been better spent drought proofing our properties, diversifying our businesses, building our businesses – the list goes on. Multiply that out across all members of the groups that you are – that are speaking out against this project.

And if you approve the project, what then? Will we stop fighting? Perhaps some
45 will. Some so demoralised and ground down from this process may just give up, but I'm sure the cost of those mental and physical impacts are well-addressed by doctors with environment. All that will be achieved is to create a bigger foot looming over

us and you will make it more real, more frightening and more in need of opposing and we will spend more time finding ways to limit the impacts. And in the meantime, we won't be creating jobs, we won't be investing in our farms. That's a cost that's undocumented. But ask yourself, if the project is not approved will
5 Santos and its supporters in State and Federal Government accept the decision with grace and walk away or will they once again use the global pandemic to push through one of their pet projects.

10 MR O'CONNOR: Jacinta, could you please wrap up.

DR GREEN: Thank you.

MR O'CONNOR: Thank you. I hadn't realised you were just about finished. Thank you very much for your presentation. Next speaker, please.

15 MR BEASLEY: The next speaker is Sally Hunter from People for the Plains. Are you there, Ms Hunter?

MS S. HUNTER: Hi, how are you going?

20 MR O'CONNOR: Hi there.

MR BEASLEY: Good, thank you. Please go ahead.

25 MS HUNTER: We represent a diverse membership of over 70 people from across the Narrabri area and Gomerioi country. We have played an active role in educating the community about the Narrabri Gas Project and advocated on behalf of the region at four parliamentary inquiries. We've written dozens of submissions, thousands of letters, met with Santos shareholders and maintained a media and social media
30 presence for years, along with hosting a range of events and attending almost every CCC meeting up until last year. In this tiny slot – time slot that's available today we condense seven years of toil.

35 Re-reading the Narrabri Gas Project documents from as far back as 2012 has been like looking back over old photos. The memories of when this smelly teenager was a baby. As a baby it had the same issues as it has as a teen; they are just getting worse. In recently re-reading the Director-General's requirements and responses to that in 2014 all the exact same issues were raised by the departments: the water model is inadequate, the salt's disposal plan is lacking, the surface water impacts are
40 not mitigated, the baselines are still to be developed. The proponent has had six serious years to solve these problems and you have to wonder why the same government departments have to again raise the same issues again all these years later.

45 When reviewing the SEARs of 2016 we first noticed that the Federal Government identified that this project will impact the Gunnedah-Oxley Basin, the GOB. Yet since that time, Santos has not spoken with a single person who uses this water

source, the Gunnedah-Oxley Basin, nor done any baseline monitoring and yet it can say that it is poor quality and insignificant water. I can tell you this water source is not poor quality nor insignificant for those people who rely almost entirely on this source of water for their stock survival. Our experience with coal mines in the
5 region is that when neighbour's bores go dry they turn to the conditions of consent only to be sorely disappointed.

If a bore user has been ignored and no baseline exists, how useful is a condition of consent that says a trigger level predicted from a baseline will be used to identify if
10 that neighbour has been negatively impacted? If the water model has continued to be questioned by DPIE Water and the IESC right up until this very point, how can neighbours rely on it to have an accurate prediction of the impacts on them? If the proponent does not own enough water licences to cover its base case predicted take, let alone the worst case scenario, how can conditions that state the proponent must
15 have enough water or adjust the scale of operations to suit available water be relevant? How can the department suggest a condition that stops gas wells from pumping in order to control ground water extraction?

Experts suggest that ground wells – that gas wells need to be two kilometres from a
20 water bore to not impact it, yet the draft conditions of consent only state that wells cannot be within 200 metres of a residence; nothing about distance from water bores. This is completely unsatisfactory. Our experience is that once approval is given the conditions of consent become the primary tool for compliance and the EIS documents and all the good science and scrutinising done during assessment fades
25 away. In the cold, hard light of day neighbours then realise how lacking the conditions of consent are. As the IPC, you can have an influence over that and you can make the conditions water tight and useful for us.

In the complete absence of credible science from the proponent on faulting in the
30 region, we encourage you, please listen to the experts later this week that talk to connectivity in the region. And all this risk for what gain? I hear the hollow cry of jobs from an industry that employs less than Bunnings. Narrabri locals who want to work in the gas industry are left to squabble over 40 jobs predicted for them over the 25 year life span of the project. 90 per cent of the jobs will go to people from outside
35 our region. Bearing in mind that for every CSG job created 1.8 agricultural jobs are lost. The assessment report itself identified an overall net negative impact on manufacturing jobs both locally and at a state level from this project.

Finally, the social impacts created by a boom/bust industry are real. I can tell you of
40 young friends in Roma who are now left with a mortgage double of that of the current value of their house having purchased during the construction phase. And I can tell you of contractors who've expanded using debt to meet the quick ramp up of construction and left high and dry in the bust. This industry erodes resilience of communities leaving them worse off than before the industry came to town. This is
45 not what we want for Narrabri nor for the State. No evidence was provided by the assessment report as to how adding expensive gas to the world's largest export marker will do anything to reduce prices for Australian gas consumers.

We want a renewable led future with small scale community owned renewable generation projects that keep the benefits local, build local skills and local industries based on cheap abundant energy. Thank you.

5 MR BEASLEY: Can I just ask you a question, please, Ms Hunter? You said – you mentioned the condition about wells having to be 200 metres or more from a residence. You also said though that the evidence suggests that wells need to be at least two kilometres from a bore not to impact it. Just for the commissioners’ benefit, the evidence you’re referring to, is that something you can point to now or is
10 that something that’s going to be submitted on Thursday?

MS HUNTER: Yes, so a CSIRO report coming out of Queensland suggested that the two kilometres could give some kind of surety to bores not being impacted by gas wells. So I can – I have included that in my written submissions already.

15 MR BEASLEY: Okay, thank you.

MS HUNTER: And it’s only the conditions of consent that say 200 metres from a residence.

20 MR BEASLEY: Sure. Thank you.

MS HUNTER: But there’s no reference to water bores.

25 MR BEASLEY: Understood, thank you.

MR O’CONNOR: Thank you for that presentation Sally.

30 MS HUNTER: Thanks, Commissioners.

MR BEASLEY: The next speaker is Mr Rohan Boehm, also from People for the Plains. Mr Boehm, please go ahead.

35 MR R. BOEHM: Good morning. My name is Rohan Boehm. My wife and I have lived and worked in Narrabri since 2006. This is our home and we oppose this project. I’m a great believer and well-practised in triple bottom line decision making, particularly where public good is enshrined as a cornerstone of effective public policy and governance. Today I’m addressing how and why the Narrabri Gas Project will never become an economically viable project from day one. Without
40 viability, public good becomes into core – into play as a core issue and not a contextual issue as we heard the department incorrectly contending yesterday when we heard it.

45 This project is not economically viable therefore, the public good cannot be reconciled fully. An absence of underlying economic viability ultimately leaves the creation of stranded assets. Around the world and in Australia we’re now seeing first-hand that non-subsidised methane gas mining doesn’t turn profits in the long

haul. Stranded assets are the results of non-viability, so stranded assets can never
ever deal with the 16 recommendations of the chief scientists. Stranded assets can
never provide indemnity against environmental damage. Stranded assets can never
pay taxes or provide revenue to government and neither do they employ anybody.
5 They are stranded and permanently damaging.

So what are the alternatives? Well, none according to Mr Gallagher who told a
packed room of shareholders at the Santos AGM two years ago in Adelaide. And I
will quote:
10

Renewable energy will not compete with CSG until at least 2045.

Like most public utterances from that star Santos witness, truth and its consequences
very often occupy a distant backseat of the public good bus. Renewable energy in its
15 various forms can do everything that methane gas can do only much cheaper –
always much cheaper, and that's this year 2020, not 2045. I should point out that this
proposed explosive factory – yes, explosives – it is after all ammonium nitrate and
that's a banned substance not approved anywhere in Australia for use as a fertiliser –
and making ammonium nitrate or ammonium based fertiliser from renewable energy
20 is doable and we can do it much cheaper this decade.

The levelized cost of utility scale, wind and solar, the LCOE is one-sixth to one-tenth
that of peak gassing – gas peaking plants. This marks the collapse point of non-
subsidised electricity generated by this inefficient polluting technology. Energy
25 consumers, both large and small, are rapidly shifting preferences away from fossil
fuel. We're using much less of it in an accelerating and unstoppable trend. Now that
the LCOE nears a point of collapse that holds all – for all technologies and that is the
ten-times rate and it's nearly here. Methane is not a transitional fuel. Indeed, it's
only transition that's underway is in relation to methane and its consumers. We're
30 all transitioning away from it quickly.

More importantly, fossil fuels are the primary cause of anthropogenic global
warming. It's the single largest cost of methane gas mining, so I'm rejecting the
spurious arguments that we heard yesterday from the department about climate
35 impacts. In conclusion, I'm wanting to put a focus on solutions to economic
development with energy. Today I'm part of a major series of projects that are
poised to develop utility scale renewable energy resources to Narrabri and the north-
west in a couple of years. We're establishing a competitive energy market place in
the north-west and this is far more advanced than the hypothetical soda ash facilities
40 and explosive manufacturing plant that were cooked up in the last few months by
Santos.

I do find it amazing that a top 50 company can come up with such poor last minute
excuses that seek to divert attention away from the gaping holes in their argument.
45 So we're building 800 megawatts of electricity generation in 10 years – and yes, it's
going to be very, very big in gas. Substantial investment in hydrogen production
including fertiliser production, substitute fuels for transport and agriculture, and also

the development of a thermal energy precinct for totally new industries is underway. And we're conservatively targeting 500 permanent local jobs in this district plus many, many more in an expanded local industry.

5 So comparing apples with apples our energy costs to consumers, electrical, thermal and chemical energy will be a fraction of what the proponent can deliver in peaking gas plants. Low cost abundant energy will generate local jobs and new business opportunity and it won't come at the cost of economically hollowed out communities. Finally, a word about the thousands of people who have dedicated a
10 decade or more to oppose methane gas mining in the north-west. Ours has become a mass movement that's lasted the distance. Why is that you may ask? The answer to my question is written large through history. In the final analysis the people and its mass movements never get it wrong. Thanks.

15 MR BEASLEY: Mr Boehm, can I just ask you in relation to wanting the commissioners to accept that the project won't be economically viable and will end up with just stranded assets, is there some research or data you'd like the commissioners to consider about that statement?

20 MR BOEHM: I have an extensive paper that will be presented that - - -

MR BEASLEY: In your written submission.

MR BOEHM: - - - contains all of this in significant detail, yes, certainly I will.
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MR BEASLEY: Thank you. All right. Thanks very much.

MR O'CONNOR: Thank you very much. Yes.

30 MR BEASLEY: The next speaker – let me see – the next speaker is Leah MacKinnon also from People for the Plains. Ms MacKinnon.

MS L. MACKINNON: Morning. My job is to speak for the biodiversity. So I'm presuming you can see the first slide in my presentation?
35

MR O'CONNOR: Yes, we can.

MS MACKINNON: Yes. So if you turn to the second slide, there's a little about me. I've spent a lifetime working with trying to interpret good outcomes for the
40 environment and the last were as a biodiversity and extension officer with the Border Rivers CMA in Moree working with landholders. I think we get time transit scales wrong quite often. We're looking at short-term rather than long-term. In terms of – we should be looking at millenniums and global and continental scales. We're looking at small bits rather than large. Next one – these are sorts of things that
45 you're probably going to be presented by experts – these sort of things that I'm passionate about.

So this left diagram is related to the water cycle but just trying to point out how really important vegetation is – sorry – I actually – I missed it, that’s all right – and the interrelationships between surface and ground water. There’s a really good YouTube video by Professor Andrew Boulton. He’s done a lot of work on sands
5 above ground and below ground, but the fauna and flora of sands and relation to water movement. Just to point out that we are a recharged area of the Great Artesian Basin. We are on the Surat source and it’s not recognised really well. It’s long-term we’re looking at – long timeframes. You know, hundreds of years to recharge. We can’t interfere with it.

10 Our town here is dependent on water as are lots of other areas. We can’t interfere with something we don’t really know much about. Precautionary principle, please don’t do it. Next one – biodiversity flora and fauna. So just a little bit about the Pilliga Forest. It is incredibly important and it is the biggest remnant left in the west
15 and it serves a huge importance in terms of movement from north to south and west to east in terms of climate movement. As you can see, it’s – the little bit to the top of the circle is the Mount Kaputar Ranges, so you can see how big it is and how important it is as a refuge.

20 Next one – so a little bit closer to look at the site. On the right-hand side this is what it is at the moment and the right slide you can see the waterways. Now, these waterways will be totally destroyed by the infrastructure for the mine – the waterways that all vegetation and fauna are dependent on. Although they’re ephemeral, they’re ground water as well and you find eucalypt growing along the
25 water lines. Next one – fragmentation and dissection is going to be what’s going to happen. The image at the top has 425 only. Santos is establishing 850 of these sites, so you can image what this landscape is going to look like; plots, tracks, total dissection, total destruction of composition of the woodlands.

30 Next one – this is a message from Queensland. So you can see some of the things that they’re warning about that we actually are in for if this project goes ahead. So we need to take notice of some of those. What I’ve done here is I’ve listed all the species that are endangered and I put down the threats and also what they’re dependent on. So you can see a lot of this is connectivity, a lot of it is ground cover,
35 a lot of it is tree hollows – next one – and the same with these ones. All of these species are dependent on an intact vegetation.

Yes, next one – there are numbers of them. The interrelationships between these. The ecosystem function – there are stories about things that are interdependent and
40 we’re not just looking at one species. We’re looking at the function of the whole system. Now, those systems are going to be destroyed. Tree hollows are massively important. They’re going to be destroyed by that infrastructure, so there’s a little table there that shows you how many tree hollows there are in some of the species that I looked at. Next one – last page – now these are all the threatening processes
45 and impacts of fragmentation and segmentation, so I’ll leave you there to read those. They’re massive and there’s heaps more. I mean, how do you say anything about biodiversity in five minutes. Please don’t do it. I weep when I go around the

landscape when I see what we're doing to our landscape and our flora and fauna.
Please don't do it.

5 MR O'CONNOR: Thank you, Leah. We might have a question for you, Leah, if
you just could just stay at the microphone for a moment.

MS MACKINNON: Yes.

10 MR HANN: Leah, I just wondered whether you'd have any comment about the
proposed offsets – like for like offsets - - -

MS MACKINNON: Yes.

15 MR HANN: - - - that are proposed to cover 282,000 hectares. We'd just appreciate
your views on that. In other words, the - - -

MS MACKINNON: They don't work. They don't - - -

20 MR HANN: The assertion they're available like for like.

MS MACKINNON: Yes. There is never like for like. Some of those stories and
the interrelationships between things, bettings and truffles and dung beetles – you
can't do that. You can't shift it from one place to another. You can never find a like
25 for like. It's just – it's a wrong system. You know, like, what are you going to tell
the animals and things? To all move? And how are you going to establish all of
those systems in that next offset? You can't do it. It's impossible. It doesn't work.

MR HANN: Thank you very much.

30 MR O'CONNOR: Thank you. Our next speaker.

MR BEASLEY: We have Sarah Ciesiolka. I apologise – I've gotten that terribly
wrong. Can you – perhaps if you tell us your name and you're from People for the
35 Claims. Please go ahead.

MS S. CIESIOLKA: Sarah Ciesiolka. Yes. Good morning and look, thank you for
the opportunity to address you today. My name is Sarah Ciesiolka. Whilst I am a
member of People for the Plains, I'm actually speaking as an individual today. I
would like to begin though by showing you a short video about farming operation. I
40 think somebody is just going to queue that.

MR O'CONNOR: Yes, it's coming up.

45 **VIDEO SHOWN**

MS CIESIOLKA: Thank you. Look, I want to be very clear at the outset. I object to this project and I believe that it should be rejected. And time permitting today, I will detail just a couple of reasons why. I'm a fifth generation farmer living and farming less than six kilometres to the north and downstream from Santos' proposed stage 1 Narrabri Gas Project. The first of seven adjacent gasfields Santos have flagged to their investors. For 50 years our family has run a successful and sustainable agribusiness at our current location producing potatoes, peanuts and grains for the Australian market. To put that in some context, each year, year in/year out, our farm produces about 70 million potatoes, a million kilograms of peanuts and enough wheat for about three and half million loaves of bread. The end point value of this product is more than \$50 million annually.

We also employ up to 20 permanent and seasonal staff who together with their families live and work locally. And our spend on goods and services in the local community exceeded \$2 million this past year. Now, this is just one farm in the lower Namoi irrigation zone. One example of what is at risk from the establishment of the CSG industry in our region. Today I'm here to represent my community, an area of some 26,000 hectares of highly productive and highly valuable agricultural land and water assets immediately adjoining the Narrabri Gas Project. Our community, like more than 100 others entirely surrounding the Narrabri Gas Project and spanning an area of over 3.28 million hectares to date, has overwhelmingly declared ourselves gasfield free through comprehensive community run door to door surveys.

I can assure you there is widespread local community rejection of the Narrabri Gas Project and that Santos will face sustained ongoing opposition if this project is approved. Our farm sits above the lower Namoi Alluvium and straddles both sides of Bundock Creek which flows directly from the project area. We have the misfortune of being one of the closest large scale irrigators to the proposed project. We rely entirely on underground water from the lower Namoi Alluvium to irrigate our crops and for drinking water and everyday household use. We have no other reliable source of water. Water is without question the most precious asset we have. It is key to everything we do and our groundwater should not be put at risk for any reason. Afterall, it's this groundwater that saw our community through the worst drought in more than a hundred years.

Santos asserts that the water modelling is state of the art, yet nothing could be further from the truth. Use of phrases such as – and I quote, “a high level of inaccuracy”, “seen as a weakness”, or “poor predictive capacity” to describe Santos' groundwater modelling by both the Government's own water agency and the Department of Planning's water expert panel inspires no confidence whatsoever. It is clear that groundwater depressurisation and drawdown in aquifers together with contamination is a real risk and does not respect property boundaries. The risks associated with the CSG industry are so significant that they are considered uninsurable.

Our own and countless other landholders inquiries have demonstrated this to be the case as did the recent NSW Legislative Council inquiry. A major Australian farmer

insurer has now also flagged that they will no longer offer public liability insurance for farmers who host any CSG activities. There is a legitimate concern that this could also extend to include neighbouring properties as well. Now, this has far reaching consequences. Quite aside from the risks of operating without such cover,
5 no financial institution will be prepared to lend to a landholder who is unable to provide evidence that they have this type of insurance.

With no legislative right to refuse access to a gas company, then unable to obtain insurance, leaves producers like myself at serious risk and at the mercy of a
10 company with multiple well documented environmental breaches in both Queensland and throughout their exploration base here at Narrabri, including the contamination of a local aquifer. We are left questioning what consequences there may be for food products sold into the future and whether we may ultimately incur a legal or a financial liability. Detection of contaminants would also mean that we would be
15 immediately suspended from current and future markets for our product.

Our farm contracts for supply all include clauses related to the food safety status of the shipment. And as for the chance of those documents, we know that our supply chain partners will hold us liable for any product contamination caused by CSG
20 activities in our region. It is completely unconscionable that landholders will be placed in this position both now and into the future, essentially, having the risk of CSG operations transferred to them. To date, despite repeated requests, Santos have refused to provide evidence of their insurance policies including how and to what extent they have quantified the potential adverse liability arising from their activities
25 in PEL 238 citing confidentiality provisions.

Santos' Environmental Impact Statement included no contingency plans such as comprehensive environmental insurance to manage a range of risks including residual risk which was specifically referred to in the Secretary's Environmental
30 Assessment Requirements. The NSW EPA says that operators choosing – choosing – not to hold relevant insurance will instead be required to prove to the EPA the existence of sufficient potential clean-up funds. Yet as woefully inadequate as this is, there is absolutely no mention of this requirement in the assessment report or the draft consent prepared by the department.
35

Ultimately though, neither Santos, their insurance company, nor a NSW Government bank guarantee or security deposit to an undisclosed amount can provide certainty of cover for or a remedy for the inability to obtain insurance privately. The failure to fully and completely implement all 16 of the 2014 NSW Chief Scientist
40 recommendations, which the government undertook to legislate as part of its gas plan, only serves to further amplify the risks of this project. Surely it is incumbent on the IPC to reject this project until such times as these important recommendations are implemented in full including appropriate insurances.

45 We hear business groups cry about the supposed benefits CSG would bring to our region. For our business however, we could have doubled our employment and production capacity in recent years as requested by our supply chain partners, but we

have been unable to justify the very substantial investment decisions due to the threat of CSG extraction nearby. We face an uncertain future where our water resources could be contaminated or depleted and we cannot insure against it. This project hanging over our heads for more than a decade now has ultimately meant less investment, less jobs in the region and frankly, the future looks grim for our family farming operation if this project is approved.

So in closing, it seems to me that governments at all levels are quite content to look the other way where Santos and the CSG industry is concerned intent on taking a perceived short-term sugar hit rather than acting in the best long-term interests of the people by adopting the precautionary principle. Politicians, bureaucrats and the like would do well to heed the warning from ACCC Chairman, Rod Sims, in referencing the gas industry earlier this year when he said – and I quote:

15 *Often self-interest dominates what companies tell governments.*

Sadly, it will be communities like ours who will wear the cost; people's health compromised, productive farm land eroded away, jobs in long-term sustainable industries forsaken and precious aquifers permanently just vanish. Once these are destroyed there is no turning back; there is no make-good. Quite simply, we cannot afford to make a mistake. The potential risks are just too great. And so, I implore you; please – please don't condemn us, our neighbours and our community to this fate. Thank you.

25 MR BEASLEY: Sarah, can I just ask you a question about the public liability insurance issue you raised where you said that there was at least one prominent or well-known insurer saying that, "If you host a CSG activity on your land we won't give you public liability insurance." Is that – does that – is that an exclusion of cover from damage or loss associated with a CSG activity, or is that just saying, "We're not going to give you any public liability insurance cover even if someone falls off your verandah"?

MS CIESIOLKA: I understand it as being that they will not extend public liability insurance to you full stop.

35 MR BEASLEY: Period. Right, okay. And what insurance company was that?

MS CIESIOLKA: So that was IAG.

40 MR BEASLEY: Right.

MS CIESIOLKA: And they have subsidiaries including CGU and WFI. And WFI is one of the largest rural insurers.

45 MR BEASLEY: Sure. Thank you very much.

MS CIESIOLKA: Thank you for your time.

MR O'CONNOR: Sally, no, we have another question for you. Over to you, Snow.

PROF S. BARLOW: Thank you. Sarah, could you be a bit more specific about
5 particular contaminants that you're worried about from the presence of CSG
extraction?

MS CIESIOLKA: Well, you know, as we know the CSG process requires, you
know, many, many different chemicals and I'm sure, you know, other experts will
10 talk to the specifics of those. But, essentially, as a food producer we're required to
sign documents relating to the food safety status in much the same way that a
livestock producer has to sign a national vendor declaration. And we can't in all
good conscience sign that if there is the potential risk of contaminants in our water.

PROF BARLOW: Thank you.
15

MR O'CONNOR: Thank you, Sarah, for your presentation.

MS CIESIOLKA: Thank you.

20 MR O'CONNOR: Next speaker, please.

MR BEASLEY: The next speaker is Stuart Murray, again, People for the Plains.
Hello, Mr Murray.

25 MR S. MURRAY: Thank you. The following is a brief precis of a chapter in
People for the Plains submission. Santos do not have a social licence to operate.
Santos understands its importance as they have tried desperately to contrive a social
licence to operate for this project. Now, slide 1, please. In this slide you can see the
30 results of eight surveys that show the opposition to the project varies from 2 to 1
against for the local Narrabri area and up to 9 to 1 against and even more when the
wider community is included. I'm going to focus on the survey carried out by
GISERA who manipulated a 1 to 5 Likert scale survey question into a two-way split
showing that 70 per cent of Narrabri residents approved and only 30 per cent rejected
the notion of coal seam gas.

35
Slide 2, please. In November 2017 People for the Plains met with GISERA who
sought our feedback on phase 3 of their report for them to consider in preparation of
the final report. Our suggestions and concerns were confirmed in writing. The
authors had manipulated the Likert scale survey by curtly choosing subjective words
40 to describe the 1 to 5 choices. Number 1 was object, 2 tolerate, 3 okay with it, 4
approve of it, 5 embrace. The tolerate group were included with those who embrace
coal seam gas in the two-way split. Reject was by itself. We explained the
dictionary definition of the word "tolerate" which means:

45 *To allow the existence, occurrence or practice of something that one dislikes or
disagrees with.*

Which would be like putting up with chronic back pain. It's obvious you do not like it and you'd rather be without it. Therefore, those who answered tolerate should not be grouped with those who embrace coal seam gas. We received a reply to our submission, "We will use this to inform our final report." CSIRO ignored our
5 feedback as the two-way split was retained in the final report. Next slide, please – actually, number 4. As predicted, our feedback meeting with CSIRO, the local newspaper The Courier, and pro-gas supporters seized on these report findings and were using these figures to claim the majority of Narrabri residents were in support. This slide proves this information came from the GISERA report.

10 Next slide, please. Yet, in response to our letters pointing out the misrepresentation by the paper and the pro-gas supporters the CSIRO denied twice in writing having created a two-way split. As you can see in this slide they say:

15 *We did not collapse these five categories into a two-way split in our report.*

Please go to slide 7, please. The top half of this slide shows the manipulated version of the question. The second half of the slide shows a different part of their report where they conducted additional sample checking asking the same question about
20 residents' attitudes to coal seam gas activities in Narrabri Shire on a five point scale from object to embrace. This is a properly designed and balanced five point Likert scale survey question rating peoples' responses numerically from 1 to 5. In addition to the 400 people who agreed to participate this question was chosen to be asked of those who declined to participate in the full survey. The result showed the majority
25 of people reject coal seam gas.

The bar graph is ours, but is typical of how other questions were avoided in this survey. The CSIRO have arrived at two different conclusions to this question. One showing the majority embrace and one show the majority reject; the exact opposite.
30 It begs the question why was the manipulated version that incorrectly supports the notion that the proposed Santos Narrabri Gas Project has a social licence to operate was chosen for the final report? Last slide, please. The article answers the question and combined with what we've just described means that any gas industry funded research that is produced should be closely scrutinised. I would like to quote from
35 the research director of GISERA:

All research that we do is published on the CSIRO GISERA website so that everyone in the community can –

40 listen to this –

investigate, inspect, criticise, question and understand the work we do.

That's from the CSIRO. He should have put at the bottom, "Only if it suits us." One
45 final five words – 10 words. If anybody tells you the majority are in support of the project, please ask them to prove it. Thank you.

MR O'CONNOR: Thank you, Stuart, for that explanation. Our next speaker, please.

5 MR BEASLEY: We have David Quince from the Mullaley Gas and Pipeline Accord. Mr Quince.

10 MR D. QUINCE: Yes, hello and thank you for the opportunity to present to the commission on behalf of the Mullaley Gas and Pipeline Accord. I would like to begin by acknowledging and paying my respect to the Kamilaroi People, the traditional owners of the country on which I stand today, recognising their continuing connection to land, water and culture. I pay my respects to their elders, past, present and emerging. I acknowledge and honour the Gomeroi traditional owners and offer my respect to the Gomeroi elders.

15 The Mullaley Gas and Pipeline Accord is an incorporated identity that represents the community concerns of approximately a hundred residents and businesses of the Mullaley and surrounding districts. All members are involved in primary production and associated industries and seek to have a greater say in how agricultural lands are used. We object to the Narrabri Gas Project on environmental, social and economic
20 grounds. MGPA seeks to ensure that the Narrabri Gas Project is considered in the context of real life issues that confront landholders, not as an abstract list of risk that the assessment report dismisses as insignificant.

25 For MGPA members the risk of the project, for example, water contamination, climate change leading to drought and extreme weather events, damage to the health of people and animals are not hypothetical possibilities without consequence. They make the difference between operating a viable agricultural business and owning land that is next to worthless. There are several environmental issues that are not adequately dealt with in the assessment report. The first issue is the climate crisis.
30 Farmers, along with others, now bear direct costs of climate change as rising temperatures and the concurrent increased severity and frequency of droughts and other extreme weather events are resulting in drastically reduced food production.

35 Crop yields are falling as the duration for growth of major crops is declining which results in less seed available for harvest. The output of crop and animal production enterprises is further threatened as pest and diseases move into new regions as the climate changes. As temperatures rise farmers are unable to work fewer hours outdoor due to a greater risk of heat stroke and the concurrent drop in productivity leads to direct economic loss. The second environmental issue that is not adequately
40 dealt with is the risk of the compromise of gas well integrity. The assessment report states that:

45 *By ensuring the gas wells are drill operated and banded in accordance with the best practice described in NSW Government's Code of Practice for Coal Seam Gas Well Integrity, Well Integrity Code, risk will be reduced to an acceptable level.*

Landholders with CSG infrastructure on their land cannot obtain public liability insurance suggesting that the risk has not been reduced to an acceptable level for insurers. Insurers are expert assessors of risk and likely damage. Their business success depends on the accuracy of their assessments, so the fact it is not possible for a landholder in this situation to obtain public liability insurance must be seen as a red flag. The independent review of coal seam gas activities in NSW conducted by the Chief Scientist recommended that the government develop a plan to manage legacy matters associated with CSG. This recommendation, along with most of the other recommendations of that report, has not been implemented which is very probably another reason that insurers will not consider liability insurance for properties with CSG infrastructure on them.

The third obviously closely related environmental risk relates to the contamination and drawdown of groundwater. The assessment report accepts Santos' assurances about physical separation of aquifers by aquitards whilst seamlessly noting that there is a lack of details information about the deeper geological strata. The understanding of the geology and the hydrology at a regional scale is inadequate to protect the groundwater on which agricultural industries rely. The assessment report both suggests that Santos should be required to upgrade the model over time and assert that the current knowledge is adequate.

Experience in the petroleum producing Cooper Basin in South Australia, a long-term petroleum production, has produced disturbing results showing that previously unknown and unsuspected faults are acting as conduits allowing water to drain from the upper aquifers of the Artesian Basin into the Permian Basin and the Pilliga – sorry – Permian layers. Given the known hydrology similarities between the Cooper Basin and the Pilliga and the lack of detailed information about the deeper geological strata, the confidence expressed in the assessment report regarding physical separation of aquifers by aquitards is misplaced.

The Narrabri Gas Project would also have serious adverse social impacts. The claim in the department's assessment report that any adverse social impacts of the Narrabri Gas Project can be mitigated to a large extent can only be a belief expressed by people who don't know, understand or live in the region. The notion that Santos can build a social licence to operate when it has so significantly failed to do so over more than a decade is absurd. Rigorous community based surveys about residents' preferences in relation to gasfields in the area have been conducted over many years. The Mullaley-Tambar Springs area was the first community in north-west NSW region to participate in these surveys December 2012 when 98.5 per cent of the residents expressed a clear desire to maintain a gasfield free community. Since then over 100 communities in the north west have overwhelmingly rejected any proposed industrialisation of their land and surrounding environments by the CSG industry. Overall, 96 per cent of all respondents want their homes, farms and communities gasfield free. To express their determination and solidarity these communities have subsequently declared themselves gasfield free by the will of the people in an area covering almost 3.3 million hectares encircling the Pilliga involving nine local

government areas. The assessment of the Narrabri Gas Project as approval on economic grounds is also deeply flawed.

5 For example, the assessment report acknowledges that the assessment does not include consideration of extern legalities, ie, consequential benefits and costs associated with the project. For example, loss of agricultural production or downstream greenhouse gas impacts. The report relies on the cost benefit analysis completed by GHD to conclude that the benefits of the project outweigh its costs. 10 However, some of the assumptions and calculations of direct and indirect costs of agricultural production impacts are inadequate and fail to consider factors that are key to members of the MDPA and to other rural land holders.

15 First, the cost benefit analysis does not provide for impact on agricultural land which continues long after extraction of coal seam gas is finished. Second, the analysis assumes that when agricultural land is no longer needed for the construction of bays to the project it will immediately return to the prior level of agricultural production. Similarly, the analysis assumes that land will immediately return to its previous level of production at the end of the operational phase of the project. The calculations 20 assume that agricultural production recovers instantaneously. In fact, CSG infrastructure on agricultural land disturbs the soil surface through compaction, soil mixing and layer inversion.

25 Soil compaction reduces both crop and pasture growth as the increased bulk density reduces air permeability, water infiltration and compaction persists for a considerable period of time. Other costs shifting to farmers is not considered with the costs benefit analysis. Costs not accounted for include the decrease in land values during the construction and operational phase, ongoing rehabilitation costs borne by the property owner post the operational phase and the loss of revenue to agricultural service providers. Properties that host coal seam gas infrastructure suffer reduction 30 of land values due to severance and injurious this has a negative impact on the succession planning on farms and reducing and level of borrowing available from financial institutions.

35 The assessment report dismisses various concerns of land holders and communities individually as though they were isolated objections to independent sections of the project rather than the fundamental cause and the project as a whole. The Narrabri Gas Project must be objected to the environmental, social and economic reasons outlined above and because, as a whole, the project is simply not a rational response to the current needs of the people of New South Wales. Thank you very much. 40

MR O'CONNOR: Thank you, David, for your presentation. Our next speaker, please.

45 MR BEASLEY: Our next speaker is Helen Carrigan from the Moree Plains Gas Pipeline Group. Ms Carrigan.

MS H. CARRIGAN: Good morning. Thank you, Commissioners, for the opportunity to address you today. My name is Helen Carrigan – a grazier from the Nagrah district north west of Moree. I am representing the Moree Plains Gas Pipeline Group – a group of land holders who will be directly affected by the proposed Queensland-Hunter Gas Pipeline. The pipeline’s route in the Moree Plains Shire begins in our area at the Queensland New South Wales border near Boomi. Today I bring a message that we strongly oppose the Narrabri Gas Project and we strongly oppose the Queensland-Hunter Gas Pipeline which was proposed to service the Narrabri Gas Project travelling through our lands.

I know you have already heard Queensland-Hunter Gas Pipeline mentioned several times and as a representative of our group it would be fair to ask why we are so concerned and opposed to the Narrabri Gas Project. You may say we will be affected by a pipeline not a coal steam gas wheel. But we are and we will be if your recommendation is that this project is approved. The link between the two can be summed up in the words addressed to the Commission yesterday from Mr Kevin Gallagher – Santos’ CEO. The development of the Narrabri Gas Project will provide a catalyst to other projects. Santos’ own admission they will be using the Queensland-Hunter Gas Pipeline to evacuate gas from its site to various buyers through the gas hub.

On the HGP’s website they also confirm the pipeline will be connected by the Mr Gallagher is right. This will be a disastrous catalyst for our area. Our group are concerned that one of the most valuable resources – our water sourced from the Great Artesian Basin – will be endangered through the approval of this gas project within the greater Artesian recharge area of the Pilliga State Forest. Over the past few years land holders have been through the worst drought in recorded history. In our area most properties are connected to the Cap and Pipe Artesian Bore Scheme – a system which enables properties to have continuous supply of water. Having access to this water has been a lifesaver for graziers enabling stock to be kept alive, to maintain valuable stock numbers coming out of drought and for cropping farmers to have access to water for their needs.

In our Artesian system the average poly pipe is 50 mils wide and is buried between a metre and a metre and a half in the ground. With the nature of our soils which are constantly moving, cracking, shifting and contracting it is in average times – dry times – we have large cracks in the ground which can be well of a metre in depth. In severe drought times the cracks are much deeper and wider. Cracks and leaks in this poly pipe are often an ongoing issue and they require regular maintenance and repairs. The HGP company proposes to run high pressure gas from the Narrabri Gas Project with a solid pipe 550 to 600 mils in diameter buried only 750 mils in the ground. 75 centimetres. As the soil cracks and shifts what happens when the pipeline gives? This is an environmental disaster waiting to happen.

HGP has had over 10 years since their first and only contact with our land holders in letters dated December ’07 to initiate surveys, impact statements and make further contact. In recent times as activity on the Hunter Gas Project has started to move

ahead the – sorry, the Narrabri Gas Project to start to move ahead the HGP pipeline has had to apply for an extension. This extension is granted and now they have up until October '24 to build. Not only, within the last week land holders have been
5 bombarded with letters from HGP with a letter and a map saying they were bringing the route through our area. We are very concerned that this will all be rushed so that Santos buyers of their gas can meet their requirements.

Our land holders have other concerns that Santos has already indicated the intention to open up further gasfields and destroy more areas in our shire – the richest – one of
10 the richest shires in Australia. These decisions also can make concerns about succession planning. Effects on the land holders' ability to sell their farms. Who wants to buy a property which has a high pressurised gas pipeline running through it? Liability insurance, as touched on by so many people. WFI have indicated they will not cover properties with coal seam gas infrastructure. What about properties with
15 high pressure gas pipelines? CGU may still be considering their position. Currently, Elders' position is that they – the Elders farm PDS – would respond to a liability occurrence where the insured is deemed to be negligent.

Also, it would respond to defend the insured when the occurrence is not due to their
20 negligence at this stage. Soil contamination and, finally, we have to be concerned about the stress and damage – mentally and physical – to our farmers and – to our farmers and graziers. We love and cherish the lifestyle and the choices we make by growing food and fibre for the world. Why do the decisions and operations of the business that we have have to be allocated now to spending time and resources to
25 research and respond to threats such as this one? Threats to everyone's food, fibre, air quality and water. It seems more and more that anyone involved in agriculture is constantly having to justify and defend themselves every single day in some way or another.

And, in closing, the land holders of the Moree Plains Gas Pipeline Group implore
30 you to recommend that the Narrabri Gas Project is not approved. Santos needs to be told this is deadening our health Great Artesian Basin waters. I ask you to consider what personal sacrifices the proponent, Santos, will make if the gas project does not go ahead. Apart from financial losses for the company and its shareholders, whereas,
35 our agricultural lands, precious water, farming, families and communities will make personal sacrifices and will suffer for generations to come if you recommend this project to be approved. Thank you.

MR O'CONNOR: Thank you for your presentation, Helen.
40

MR BEASLEY: We now have Robert McNaught from the Astronomical Society of Coonabarabran. Mr McNaught, please, go ahead.

MR R. McNAUGHT: Yes. Thank you. I want to acknowledge the Kamilaroi
45 people on whose land I live. My name is Robert McNaught and I worked at Siding Spring Observatory for 30 years but have been involved in astronomy for 50. My passion is observing the night sky and have retired to Coonabarabran to live under

the observatory's dark sky umbrella. I also lived in Narrabri for 10 years, was involved with community biodiversity surveys in the Pilliga, was active with the Pilliga and am a member of Coonabarabran Landcare. Following a huge Pilliga fire in 1997 I assisted with injured wildlife rescue. I will concentrate here just on the effects flares have on sky brightness.

In my written submission I will flush out all the arguments given here and deal with other concerns regarding flares and several other issues like the significant emission of a magnitude 5 earthquake in the southern Pilliga in 1969. Coonabarabran amateur the long-term measurement of sky brightness several years ago to assess changes in light pollution and to monitor the infrequent natural events that change the sky's brightness. We recently obtained a grant to expand the network of automated monitors around the region. Legislation to protect the existing dark sky conditions around the observatory also allow the creation of the Warrumbungle Dark Sky Park. To obtain the status of that sky park it's a requirement to measure the sky brightness within the park and its surroundings and the Astronomical Society of Coonabarabran are conducting these measures who can assess the potential influence of the gas flares

The original for the gasfield had a customary assessment for the lighting impact. So I took measurements around the and Bibblewindi pilot flares. These measurements formed the basis in my 2017 submission to the DPIE. It was clear that the effect of the pilot flares was detectable overhead out to four kilometres. Appendix K of the response has conclusions that are dramatically discrepant from my measures and understate the issues. We have four problems with that work. One, the flares have a much lower flow rate at the time of appendix K measurements compared to the quoted average flow rate. Their quoted values were one eighth the average suggesting the flame was tiny.

Two, the measurement device they used has double the uncertainty in the measurements over the device I use as I pointed out in my earlier submission. Their data shows significant scatter and the measurements of the Milky Way which should be systematically brighter than the other measurements weren't. Three, the measurements were made without regard for tree obscuration. The measurements were made within the forest with hand held units. This precludes me from valid measurements that obstructed the views above the horizon which they claimed they did. Four, the effect of tree shielding of the pilot flare is not incorporated into their extrapolation to estimate the brightness of the non-routine safety flare.

The safety flare sits well above the trees and appendix K at page 21 referring to sky glow caused by the safety flare record "the horizontal DK rates will be the same as the existing flares and consistent with" ". But the safety flares have no tree shielding. The results from the tree shielded pilot flares cannot be validly applied. Thus, their conclusions on the extent of spread of light from the safety flare will be significantly understated. Different measures are made in appendix K at page 22 to estimate the brightness of a non-routine safety flare as seen from the observatory.

Based on the Bibblewindi location they write. “The observatory would be 0.001 lots” which is essentially the brightness of Venus in the morning sky at the moment.

5 Using this brightness the apparent brightness at a closer distance to the flare can be simply calculated using the inverse square law. At one 1.8 kilometres it would be the brightness of an average full moon. Viewing the leeward flare from its closest point on the Newell Highway would make it 10 to 15 times brighter still. Thus, for about a two kilometre stretch along the Newell Highway either side of leeward the direct light from a full safety flare will be brighter than the full moon. There is no mention of this or any assessment of such extremely bright flickering flame as a potential distraction for night time drivers. I believe the non-routine safety flare will have a dramatically greater impact than Santos claim and potentially beat observatory limits.

15 The current sky brightened sky lines are problematic and the progressive developments will have less and less leeway as cumulative sky brightness increases. If the Vickery Extension is also improved the problems could be significant. How can any assessment of light pollution made of one project without considering the cumulative effect of both. Finally, the significance of sky is not just relevant to indigenous people worldwide. From me, the night sky has been a driving force throughout my life. I grew up in Scotland a few hundred metres from a quality every house had a coal fire and the night sky was a mixture of smoke and light pollution. But I learnt the constellations nevertheless. The first time I saw the sky from a dark location I was lost in awe. I couldn't recognise a single constellation from the myriad of stars. It's too easy for people to forget that what we can experience in country New South Wales just by going outdoors is unavailable to the vast majority of the world's population. We must not take it for granted and throw away the astonishing treasure we have here. Thank you for listening.

30 MR O'CONNOR: Thank you. I just have a question. Have you looked at the conditions relating to trying to protect the night sky in – that the Department of Planning have proposed?

MR McNAUGHT: Well, in a sense of shielding, I mean, you're trying to – you're trying to fix something that has already bolted.

35 MR O'CONNOR: So you don't think shielding is a very capable option?

40 MR McNAUGHT: I'm – there's other things that I'm going to write in my presentation regard things like not – not flaring at all. Like, the Western Australian government are not going to flare from – I can't remember the date – but I've got it elsewhere. There's a quote from their mining minister saying that they should pump it back into the – pump the gas back into the ground rather than just waste the

45 MR O'CONNOR: Thank you for your presentation, Robert.

MR BEASLEY: The next speaker is Tina Phillips from the Knitting Nannas Hunter Loop. Please, go ahead, Ms Phillips.

MS T. PHILLIPS: Thank you. My name is Tina Phillips and I'm speaking on behalf of the Hunter Loop of the Knitting Nannas Against Gas. We would like to acknowledge the original and continuing custodians of the Pilliga region – the Gomerioi people – and we pay our respects to elders past, present and emerging. We
5 note the sustainable life ways of indigenous peoples in Australia and, indeed, globally and consider the Narrabri Gas Project to be just yet another example of the complete disregard for those ways which have nurtured this country for millennia. We are based in Newcastle and the Hunter Valley and many of us come from farming or rural backgrounds.

10 We dedicate time and effort to ensuring long-term environmental outcomes which will benefit everyone's grandchildren. We submit that there are many reasons to reject this proposal including but not limited to the lack of economic need, threats to biodiversity, impacts on Aboriginal culture and heritage, disposal of the toxic salts,
15 lack of social licence and risks to ground water. However, as we are an organisation that has intergenerational equity at the heart of everything we do I shall focus on that. We believe that approving the Narrabri Gas Project will lead to unacceptable environmental costs being borne by future generations. We oppose new fossil fuel projects on the basis of the wealth of current peer reviewed scientific evidence that
20 quite clearly points to an unliveable future climate if drastic measures aren't taken immediately.

The UN's 2020 sustainability report published this month expressly states that in order to achieve the goal of keeping global temperature rise to 1.5 degrees this
25 century greenhouse gas emissions must fall by 7.6 per cent every year starting now. Even with the COVID shutdown we are only on target for a six per cent reduction this year which will undoubtedly rise as and when society opens up again. If we carry on in a business as usual manner we are instead headed for a global temperature rise of 3.2 degrees by the end of the century with all the catastrophic
30 consequences which that entails. Clark Williams-Derry of IEEFA is quoted as saying that the global growth of the LMG industry is actually not compatible with a two degree scenario.

The governor of the Bank of England has said that the vast majority of fossil fuels
35 are un-burnable if we are to achieve our Paris targets. Expert after learned expert is telling us, especially now in pandemic times, that we can and must rethink the destructive relationship we have with our life sustaining environment. We contend that the approval of this project would contribute to compromising the right of future generations to a healthy, diverse and robust environment. It is disingenuous to
40 suggest that coal seam gas is a bridge fill to more environmentally friendly sources of power generation or that such a transition fill is even necessary.

The methane emissions from CSG extraction are of great concern as you know. Methane is much more effective than carbon dioxide of trapping heat in the
45 atmosphere. When Santos say that natural gas is a low carbon alternative to existing fossil fuel energy sources they are conveniently omitting the fact that flaring, venting and leaks will increase the concentration of methane in the atmosphere. Instead of

investing in even more fossil fuel extraction we should be throwing everything we've got at already viable and well researched alternatives. Delaying such only serves to make these methods more expensive to implement in the future and reduces our chances of avoiding catastrophic climate change.

5

Additionally, the risks associated with coal seam gas extraction cannot be understated. You only have to experience the toxic spill sites in the Pilliga as we have to know there is no possibility of proper rehabilitation. Those precious places will never be the same again no matter how much money you've thrown at them.

10 Haven't we already caused enough harm to the natural world? Do we really want to risk our grandchildren's right to clean air, safe water and a healthy environment? Courts in Australia and all over the world are rejecting proposal that risk exacerbating anthropogenic climate change and the Narrabri Gas Project would do exactly that. b We request that you reject this project on the ground of its
15 unacceptable impacts on future generations, on those that are not here to speak for themselves, those whose lives will be adversely affected by every fossil fuel project we allow to go ahead. We believe that the independence of the panel, the transparency of the process and especially public participation are all vital components in the major project's decision-making procedure and we thank you for
20 the opportunity to present here today. Thank you.

MR O'CONNOR: Thank you, Tina, for your presentation.

25 MR BEASLEY: We now have – our next speaker is Judy Summers from the Knitting Nannas Against Gas from Lismore. Ms Summers, go ahead.

MS J. SUMMERS: Thank you. I acknowledge that I'm standing on Kamilaroi country and pay my respects to the custodians. I am speaking today on behalf of the Knitting Nannas Lismore Group. The Knitting Nannas Against Gas was founded in
30 the northern rivers of New South Wales in June 2012 in response to a coal seam gas exploration licence being granted to Metgasco. Like many Knitting Nannas I am a mother and a grandmother. My husband and I are small crop farmers at Eltham in the northern rivers of New South Wales. As a Knitting Nanna I was involved with the close knit community in stopping Metgasco from causing irreparable damage to
35 land, air and water in the Glenugie, Doubtful Creek and Bentley Blockades back in 2013/14.

We remain vigilant as the licence bought back has not been cancelled. We are deeply disturbed about the New South Wales state government planning
40 department's approval of the Narrabri Gas Project and that MGP has been referred to the Independent Planning Commission requesting a decision be made within 12 weeks. The Knitting Nannas have experienced firsthand the impacts of coal seam gas exploration and production having visited the Queensland and Pilliga, Coonabarabran and Narrabri gasfields five times. We have been in close
45 communication with many families in Queensland and have monitored activities in Queensland for over an eight year period.

We have seen that there is more than sufficient evidence of well leaks, flaring, toxic chemicals, spills, water contamination and health impacts on both children and adults as a direct result of the gasfields in those areas. We were distressed to see some of the children living in close proximity to wells suffering regular nosebleeds and
5 headaches and hearing of the daily stresses to parents and farmers caused by the CSG industry being so invasive in the region. We are committed to doing what we can to convey our concerns at the continuation of the coal seam gas industry. We will demonstrate our concerns until Santos can provide substantial independent evidence that it will not cause any detrimental impacts to land, air, water and human health.

10 We refer to the New South Wales chief scientist's final report of the independent review of coal seam gas activity in New South Wales. Of the 16 chief scientists' recommendations only two of those have been fully implemented and other six partially. They have had five plus years to respond to implement the 16
15 recommendations and they have not done so and I provide a list of those in our written submission. The government in its reply to the chief scientist report has stated that it supports all of the recommendations. But in the New South Wales gas plan it refers to, one, an environmental data portal and, two, the independent expert gateway panel. As far as we can see neither of these have been fully established.
20 Our question is how can the government approve the NGP when it has not put in place the body's regulations to ensure all of the chief scientist recommendations are addressed? Based on this lack of response we cannot condone the Department of Planning referring this project to the IPC. The Knitting Nannas acknowledge the science behind the recommendations and will leave the scientific perspective to those
25 experts in their fields of study. However, we are seriously concerned about specific issues and the impact of the NGP on them. Our written submission covers these issues in more detail. They are water, environmental degradation, climate change, indigenous cultural impacts. The NGP will cause more trauma to the regional Aboriginal community, the Kamilaroi people. The whole area of the Pilliga forest is
30 vitally important to their spiritual, cultural and social life. Their connection to that land is who they are. It is their identity being destroyed by the NGP.

And the final issue is economics and we refer to the University of Technology's institute for sustainable futures report, renewable Narrabri shire, solar and wind
35 versus gas in north western New South Wales 2018. And the final one is health and social impacts. We firmly believe that approval for Santos 850 wells in the ecologically sensitive environment of the Pilliga would be akin to a licence to destroy that environment. In summary, we believe that the NGP should not be approved. The land, air and water are at stake. The future generations of the
40 Narrabri region have the right to inherit a healthy, balanced and sustainable environment. We urge the Independent Planning Commission to reject this project and make the Great Artesian Basin recharge and Pilliga forest off limits to gas mining. Thank you.

45 MR O'CONNOR: Thank you, Judy, for your presentation. We will take a break now, and we will return at 11.45. Thank you.

RECORDING SUSPENDED

[11.32 am]

RECORDING RESUMED

[11.46 am]

5

MR O'CONNOR: Welcome back to the public hearing. Our next speaker, please.

10 MR BEASLEY: We have Ms Anne Kennedy from the Artesian Bore Water Users Association. Ms Kennedy.

MS A. KENNEDY: Hello.

15 MR BEASLEY: Hello.

MS KENNEDY: Can you hear me?

MR BEASLEY: Yes.

20 MR O'CONNOR: Yes, we can.

MR BEASLEY: Please go ahead.

25 MS KENNEDY: At last. Dear Commissioners, I am a farmer from Coonamble in north-west New South Wales and I'm president of the Artesian Bore Water Users Association, ABWUA. Thank you very much for this opportunity to present to you our great concerns with the department's assessment report. Artesian bore water users, ABWUA, strongly objects the Narrabri Gas Project on many grounds, but our greatest concern is to for the impacts it will have and, indeed, is already having, on
30 our Great Artesian Basin. There are so many other valid objections to this project such as the fact that the industry is literally uninsurable; that the chief scientist's recommendations have not been implemented; economically, the project's flawed; the incredible fire risk of gas flares in the middle of the Pilliga Forest.

35 There are literally dozens of valid objections to the Narrabri Gas Project. I'm sure so many others will cover all these issues, so in the brief time I have I want to focus on the Great Artesian Basin. The single greatest asset that Australia has is not coal or gas or minerals, but our Great Artesian Basin. Australia's the driest inhabited continent on earth and we have the largest, deepest artesian basin in the entire world
40 under 22 per cent of Australia. So almost a quarter of this country, most of inland Australia, would be entirely uninhabitable without our GAB and the most critical recharge area for the GAB is Pilliga sandstone. Firstly, Santos' opening statement in their EIS was a blatant untruth. Santos in their introduction stated:

45 *The project is not located within a major recharge cell of the Great Artesian Basin.*

All the CSIRO maps, geoscience, all the GAB mapping show clearly and irrefutably that this statement was untrue. I was told by an expert from the department that the entire EIS was, therefore, invalid and should be thrown out and have to be rewritten for making such a misleading statement at the beginning. He said it is actually
5 against the law to lie or to intentionally mislead in an EIS and that this was outright misleading when, according to the best maps and science, they are in a recharge cell of the Great Artesian Basin. I was told the rest of the EIS should've been ignored based on this one fact. But now the department, in their assessment report, repeat the same misleading statement. The assessment report misleadingly downplays the
10 importance of the project area as part of the GAB southern recharge. According to the department, they state that:

*The water expert panel accepts that the project area is not a significant recharge zone of the GAB. But nowhere in the water panel – water expert
15 panel report is this phrasing “not significant” used. In contrast, the New South Wales DPIE southern and eastern recharge groundwater sources literature review and recommended recharge rates, dated February this year, clearly identifies the majority of groundwater recharge of the GAB in New South Wales occurs along the elevated eastern margins of the GAB or the sandstone
20 aquifers, predominantly, Pilliga sandstone, and the permeable layers of beds, outcrop or subcrop. That is to say, the Pilliga sandstone, including the area affected by this project, supplies the majority of GAB recharge in New South Wales.*

25 In 2015 ABWUA commissioned a report by SoilFutures Consulting into the recharge systems in petroleum gas licences. This peer reviewed report clearly states that in New South Wales, the main occurrence of recharge greater than 30 mil is in the East Pilliga between Coonabarabran and Narrabri. Other findings in the report included that only 0.2 per cent of the GAB has effective recharge of 30 to 79 mils a year and
30 both the Pilliga and northern Surat gas fields occur in the very limited critical recharge above 30 mil areas of the GAB. Excessive drawdown of pressure heads in the recharge zone of the GAB associated with gas extraction has the potential to reduce the pressure heads on the artesian water across much of the GAB and potentially stopping the free flow of waters to the surface at springs and bores.

35 Drawdown of many hundreds of litres is reported in Ransley and Smerdon's report 2012 for the northern Surat case in coal seam gas fields where the coal seams have been dewatered to release the gas. That was a quote. Whereas Santos claim a mere half a metre drawdown. Ransley and Smerdon say many hundreds of metres. Santos
40 say, “No, half a metre.” So the drilling through the southern recharge of the GAB will destroy the pressure which allows the groundwater to be brought to the surface. There's so much evidence of this in the Queensland gas fields already where so many bores have failed already. With the GAB, recharge and pressure are everything.

45 Without pressure, the water can't be brought to the surface. I've personally been fighting to save our Great Artesian Basin, the GAB, for over 20 years. When I first

learned from Professor Endersbee that the GAB water was millions of years old, that it was virtually finite and that it was depleting faster than it was recharging, I looked around at all the free flowing gushing millions of litres daily down the open bore drains and I learnt that many of the bores out west stopped flowing because they'd
5 lost pressure. So, initially, I was on the GABSI Cap and Pipe Bores Committee and as I tried to get people to cap and pipe their free flowing bores to save the water and to conserve the pressure, over half a billion dollars was invested in GABSI, government and private funding, and it was working.

10 The pressure started increasing, the old dribbler bores, as they were called, started flowing again. And then a friend said to me about 11 years ago, "Why are you working so hard about capping and piping? Haven't you heard about coal seam gas mining?" I hadn't, so I started researching and studying about it. I went to the Darling Downs in Queensland to look at the CSG industry there and I then realised
15 that CSG mining does the exact opposite of what we had been achieving with GABSI. We had been conserving the water and building up pressure while CSG mining does the exact opposite. It drains the water and destroys the pressure.

And then I learned about the Narrabri Gas Project in the Pilliga, how it was going to
20 turn the Pilliga into a gas field and drill hundreds of gas wells, for a start, through the Pilliga sandstone, the most critical vital recharge area for the GAB. Vast areas of Australia rely 100 per cent on artesian water. Our agriculture industry, our rural communities must not be put at risk for this short term CSG mining. All over the world the aquifers are drying up. Fossil water is now far more valuable than fossil
25 fuel. As our excellent MP for Barwon, Roy Butler, said:

Water is by far our most precious resource. You can make energy in other ways but you cannot make water.

30 He also said:

*We shouldn't risk long term groundwater security for a short term gain. So many of our towns and communities are totally reliant on groundwater. Gambling with water should not be considered when it's central when we
35 do. There are alternate sources of energy but no alternatives for water.*

Thank you, Roy. What a wonderful statement. The GABCC economic report shows over \$13 billion per annum in reduction produced from the GAB. The proposed Narrabri Gas Project is in that critical over 30 millimetre recharge area of the GAB
40 and yet Santos acknowledges:

The drawdown of groundwater heads within coal seam aquifers is a necessary process and an unavoidable impact associated with the depressurisation of the coal seams.

45 That's their quote. In Queensland, OGIA, the Office of Groundwater Impact Assessment, have monitored and modelled the cumulative impacts of the CSG

industry on groundwater since 2011. In their most recent underground water impact report in 2018, OGIA predicts that 571 privately operated and licensed stock and domestic water bores will no longer be available due to the impact of CSG, and this was two years ago. And this was a 10 per cent increase on their 2016 predictions.

5 They have reported that:

In some areas water levels have declined over 250 metres in the immediate vicinity of CSG production.

10 That's a quote. Also I must query why the expert science that is provided in the evidence against gas and is and also follows the same scientific and statistical approaches for scientists and medical professionals who are advising the government on COVID-19, why is ours ignored? Why do they listen to the science on COVID
15 and shows there is a problem - - -

MR O'CONNOR: Anne, if you can wrap up now, please.

MS KENNEDY: All wells leak. Pardon?

20

MR O'CONNOR: Could you please wrap up?

MS KENNEDY: Oh, okay. All wells leak. Industry figures are seven per cent of wells leak immediately, 30 per cent of wells leak within 20 years. So these gas wells
25 when plugged and abandoned will continue to crumble and corrode deep underground and to poison our artesian water. We have evidence that the GAB has already been damaged in many instances by the practice below the ground and many of our most highly respected water experts are calling for a stop to this industry until more studies can be done. One of the few things scientists all do agree on, they all
30 agree the damage to an aquifer is irreversible. Once an aquifer is poisoned, it can never be cleaned up. Once it's damaged, it can never be repaired. Once our groundwater is gone, it's gone forever.

35 There's no insurance policy in the world that covers us from the risk from CSG mining. It's literally uninsurable. So why is the government so ready for us to take this risk? How do they justify it? How do they possibly consider sacrificing Australia's single greatest resource, our Great Artesian Basin, for such a short term industry and one that comes with such an enormous future cost? This water is needed for towns, communities, for people, for food production, for Australia's
40 future, not for gas companies to make a quick profit. The evidence of the damage has unfortunately appeared already in Queensland. The coal seam gas mining has been going for well over a decade. All - - -

45 MR O'CONNOR: Anne, I'm going to have to ask you to finish up now, please.

MS KENNEDY: Okay. Thank you. My final thing was Dr Philip Pells many years ago said:

To allow CSG mining to proceed before more is done to understand its impact is a reckless gamble with our future.

He said:

5

We should learn from past lessons involving asbestos, tobacco, thalidomide, and Agent Orange.

He said:

10

Damage will be done that can never be repaired.

I am 72 years old. I know there'll be enough food and water to see me out. I'm thinking of future generations. I have 13 grandchildren and I honestly fear for the future. CSG mining is a short term destructive industry that will leave an industrial wasteland behind and destroy our aquifers. We don't want to be remembered as the generation - - -

MR O'CONNOR: Anne, are you going to be making a submission - - -

20

MS KENNEDY: Yes.

MR O'CONNOR: Lodging a submission with the Commission?

25 MS KENNEDY: Yes.

MR O'CONNOR: Well, we can take up those final points in that submission. Thank you.

30 MS KENNEDY: Can I just finish off?

MR BEASLEY: Can I ask you a question- - -

35 MS KENNEDY: We don't want to be remembered as the generation - - -

MR BEASLEY: - - - rather than you keep reading this out? Can I just ask you, you said - - -

40 MS KENNEDY: Sorry.

MR BEASLEY: You said, Anne, that the project that - sorry. The department's assessment says that the project area for the mine is not a major recharge area for the Great Artesian Basin. I think you said you disagreed with that. Is there anything you want the Commission to look at in terms of why the department's wrong?

45

MS KENNEDY: No. The department said - I'm sorry, I'll have to go back to the beginning. Santos said it wasn't a recharge area in their EIS.

MR BEASLEY: Yes. But just – no, just listen to my question. That the department’s assessment says that the project area for the mine is not a major recharge area for the Basin.

5 MS KENNEDY: Yes.

MR BEASLEY: Is there something - - -

MS KENNEDY: Not a significant - - -

10 MR BEASLEY: Is there something you want the Commission to consider about that?

MS KENNEDY: Yes. Well, nowhere in the water expert panel report is the phrase
15 “not significant” used.

MR BEASLEY: Okay. So you want the commissioners to look at that expert report for – on that issue?

20 MS KENNEDY: Yes.

MR BEASLEY: Thank you.

MS KENNEDY: And the New South Wales DPIEs recharge report, too. I’ll – I’ve
25 got links and documents - - -

MR BEASLEY: All right. Great.

MS KENNEDY: - - - I can send with my submission.

30 MR BEASLEY: Thank you very much.

MS KENNEDY: Thank you very much. Thank you very much for the opportunity.

35 MR O’CONNOR: Thank you, Anne. I just want to ask one last question. You mentioned about seven per cent of wells leak immediately and a higher percentage leaking after 20 years. Have you got a link to that source for that information in your submission as well?

40 MS KENNEDY: Yes.

MR O’CONNOR: Good.

MS KENNEDY: Yes, I have. Yes.

45 MR O’CONNOR: Okay.

MS KENNEDY: That's – that's – I've got a whole lot of science and reports and whatever I would love to send. And I'm sorry I'm such a long-winded woman. I'm begging you please don't approve this project.

5 MR O'CONNOR: Thank you.

MS KENNEDY: I don't want to be remembered as the generation who let the GAB be destroyed.

10 MR O'CONNOR: Thank you for your presentation, Anne.

MS KENNEDY: Thank you.

MR O'CONNOR: Next speaker, please.

15

MR BEASLEY: Okay. I think the next speaker is Jane Judd who's Friends of the Pilliga. Are you there, Ms Judd?

MS J. JUDD: Yes, I am.

20

MR BEASLEY: Please go ahead.

MS JUDD: Okay. Good morning, Commissioners. Thanks for this opportunity to speak regarding the Narrabri Gas Project. I must start by acknowledging the
25 Gomerai People on whose land I live and the project is sited. The Elders managed this land for millennia and they did it well. We have a responsibility to do the same. I represent Friends of the Pilliga, a small but longstanding environmental group based in the south of the Pilliga in Coonabarabran. Members of our group have extensive experience of the Pilliga and relevant qualifications. We may not be in
30 Narrabri in the local government area but the Pilliga matters to us as it matters to all of New South Wales, Australia and, in fact, the earth. We are all part – we are part of the North West Alliance.

35 Someone likened the North West Alliance to David against Goliath. I feel we're more like Dad's Army, a motley crew aligned against corporate power, money and resources. Most of us do this in our own time at our own cost. It has taken large slabs of our lives. We're from a wide range of backgrounds with a wide range of issues but we're all working for a common cause. We don't want this industry. There are too many risks involved. A few people will probably make a lot of money,
40 but we who remain behind and future generations will bear the costs. Others have spoken or will speak for farms, water, climate. I speak for those who cannot speak; our native plants and animals and their habitats. Santos dismisses the Pilliga as the – in the – sorry.

45 Santos dismisses the PEL in the forest as dry scrubland. This is so wrong. The Pilliga is unique. It's all that's left. A large relatively intact island in an otherwise cleared and modified farming landscape. It's a refuge for increasingly threatened

native plants and animals. Small woodland birds such as finches, Pardalotes, Brown
Trecreepers, have almost disappeared from large areas of the farming belt, but they
continue here. We were part of the stakeholders group for the regional forest
agreement decision in 2005. Santos implies that the community conservation area,
5 zone 4, the forest, was so designated because it was of lesser value than zones 1, 2
and 3. This is not so.

In fact, all parts of the forest have great ecological value. This is based on its very
size. You can see it in every – every night on the weather map. The very act of
10 creating zones already cause ecological impacts. Zone 4 was actually established to
continue to allow some sustainable timber harvesting as well as use of the forest for
recreation. The reference to mining was slipped in under the radar by a gas industry
that knew just what it wanted. Back in 2005, neither the community nor the relevant
government agencies had any idea of this destructive industry. The Pilliga is home
15 to the Ringtail Possum, the Feathertail Gliders, koalas, Microbats, Masked Owls,
Barking Owls, Grey-crowned Babblers, Glossy Black Cockatoos, the list goes on.

I've shown you a picture of the Darling Lily which just came out in vast amounts
during the rainfall that happened in February. We found in our survey of the project
20 back in 2011 – sorry, we found this. Many of these are considered in Santos' EIS,
but there's no investigation of invertebrates. The insects are the very basis of the
forest food webs. The mussels found in the existing waterholes which were
impacted by the drawdown of the watertable, no mention. The stygofauna dismissed
by Santos as being opportunistic, leaving the between the sand grains in the
25 creeks that continue to flow beneath the rivers of sand ignored. What you don't look
for, you don't find.

By definition, sensitive receivers are human. There's no consideration that the forest
fauna might be impacted by light and sound pollution, not to mention fugitive
30 emissions. Though claiming to impact only 1000 hectares out of a total of 95,000 in
the PEL, Santos will have exclusive use of the forest, of 20 per cent of the forest. It
will be closed to recreation. This will surely involve security fencing large swathes
of land. At present, Black-striped Wallabies in the two small isolated Brigalow
Reserves can move between there and the population in the forest. This is important
35 in maintaining the populations. Fences will make this impossible.

Each road, pipeline, WellCAD vent changes the ecosystem. Wide gas pipeline
corridors and gathering lines already radiate out from Bibblewindi and Leewood.
Add to that the corridor for the inland rail and the clearing of the fence for the
40 Rewilding Project and it's death by a thousand cuts. The integrity of the forest is
challenged. Massive fragmentation occurs. What the gas industry does at the
surface, Whitehaven's adjacent underground coal mine repeats in Jacks Forest.
Bibblewindi will clear more forest to triple in size. That's the Bibblewindi treatment
plant. This is rampant industrialisation with cumulative effects that are not
45 considered. I've travelled around the gas fields near Roma.

There's an electricity grid across the countryside, massive processing and water storage sites, smaller infrastructure every couple of 100 metres, tracks going everywhere. The countryside is depopulated, the air smells of hydrogen sulphide. Much of Santos' analysis is based on desktop reviews and models. Their water
5 predictions are assessed as level 1, only reliable at a regional scale. They deny the existence of koalas in their PEL, though they certainly lived there in the past. The population declined dramatically this century probably because of the millennium drought, but as was shown on Kangaroo Island, they can and will breed back. There are two seed populations already present in the northern Pilliga. Their habitats need
10 to continue so they can repopulate them.

There isn't enough good quality habitat left In the wider area to fulfil their phase 1 offset obligations, let alone phase 2. They dismiss the possibility of methane leaking to the surface due to fracturing of the overlying rock. In fact, the Pilliga has many
15 small intrusions and much folding and faulting as a result of the vulcanism associated with the Warrumbungle and the Nandewar Ranges. These could provide pathways and are ignored. Adequate rehabilitation of mature ecosystems take a long time. You only have to look at the mountains of grey spoil in the Upper Hunter Valley with little more than invasive grasses living on them. Species diversity takes
20 hundreds of years to develop.

According to Santos, many of the impacts to water and the Great Artesian Basin may take 200 years before they become apparent. What right have we to do this to the future generations? To paraphrase Greta Thunberg, "How dare we?" The chief
25 scientist's report says that the project could only go ahead safely if all her recommendations were implemented before it started. You've heard about that before. Santos already owe 18,554 residual biodiversity credits for such ecosystems as Broombush, Belah Woodland, Brigalow and Green Mallee. These may – must be retired before phase 1 commences. There are so many conditions that it will need an
30 – that there will need to be imposed an army of – I'll start again.

There are so many conditions that will need to be imposed that it will need an army of corruption resistant public servants to monitor this project. And the biodiversity management plan, along with many other plans, won't be produced until after the
35 project is approved. I've known, loved and used the Pilliga for over 40 years. I've lived in it, worked in it, walked, cycled, camped in it. If this industry is given approval, it will change it irreparably. The independent planning commission must not approve this project. We will be providing a more detailed submission online. And thank you for your time.

40

MR O'CONNOR: Thank you, Jane. We have a question for you from John.

MS JUDD: Yes.

45 MR HANN: Thank you, Jane. Yes. Look, it relates to the offsets and you mentioned that already the applicant is required or has – I think in your words, owes a certain number of credits and one of the mechanisms for credits to be retired is

through offsets, and fairly substantial offsets, on privately held land. Do you have any particular views on that?

5 MS JUDD: Yes, I do. Offsets are an incredibly dreadful way of paying back. You start with twice the amount of countryside which has vegetation on it, ecosystems on it, and when you provide an offset, that means you're chopping down something over here and you're keeping something over there, but the bit you're keeping over there you've already lost over here. So it halves the amount that we've got and there isn't nearly enough held in reserves and in places where it can be reserved in the old
10 sheep-wheat belt.

MR HANN: Thank you very much.

15 MR O'CONNOR: Thank you for your presentation, Jane.

MS JUDD: Thank you.

MR O'CONNOR: Next speaker, please.

20 MR BEASLEY: The next speaker is Ms Helen Strang from the New South Wales Farmers Association. Ms Strang.

MS H. STRANG: Hello?

25 MR BEASLEY: Hello.

MR O'CONNOR: Hi.

30 MR BEASLEY: Please go ahead.

MS STRANG: Okay. Thank you, Commissioners. Good morning, well, good afternoon now. I'm Helen Strang and thank you for the opportunity to present to the Commission on behalf of the New South Wales Farmers Association. I would like to acknowledge and pay my respects to the Gamilaroi People, the traditional owners of
35 the country on which I stand today, aware of their connection to the land, waters and culture. I pay my respects to the Elders, past, present and emerging. Members of our Tambar Springs, Gunnedah branch strongly object to the proposed Narrabri Gas Project as it is placing agricultural production in north-west of New South Wales at grave risk of groundwater and food production contamination and devaluing our
40 family assets.

Our properties are in the petroleum exploration licences 1 and 12 of the proposed Banda gas field, commonly known as part of our treasured Liverpool Plains. The unique and highly productive vertosol soils, which is only present in three per cent of
45 the world, producing up to four times the average yield in food production without the need to irrigate. We all need our underground water for domestic use, stock use and weed management. Attending a public meeting at Mullaley in 2010 was

alarming. The Pilliga was undergoing gas exploration and locals were being told they must agree to a parkland on their land with confidentiality clauses.

5 Aware we are the current custodians, community members had been defiant to
protect our future generation's livelihoods. Mullaley Gas and Pipeline Accord was
formed to stop the Narrabri to Wellington Gas Pipeline. We have been writing non-
stop submissions opposing this destructive industry on our turf and at a high cost to
the lost hours away from our own businesses. It has ruined lifetime friendships but,
10 for wrong to triumph, it takes good people to do nothing. So to stop this, we ask –
we're doing this to stop feeding a greed, not a need. Over the past 10 years, the
misleading information associated with this proposal has just never stopped. I use
the example of Santos' latest update, July 2020, Narrabri Gas Project, PEL 238:

15 *Critical for energy security and reliability in New South Wales.*

Energy analysts have questioned the feasibility of the Narrabri Project to meet
competitive extraction price due to the global oversupply heightened by the COVID-
19 pandemic:

20 *Deliver significant economic benefits to New South Wales and the Narrabri
region and would stimulate economic recovery from the effects of COVID-19.*

Proponents typically overinflate their employment. Economic benefits is mainly
during the construction phase of a gas project as demonstrated in Chinchilla
25 Queensland. Gunnedah businesses often comment, "If it wasn't for farmers, we
would not stay open." Secondly, the demand for gas in Australia has decreased with
the reported gas use in our national electricity market over the past five years being
down 60 per cent. Gas usage during this pandemic has been reduced furthermore:

30 *Has been designed to minimise any impacts on the region's significant water
resources including the Great Artesian Basin, the biodiversity and heritage
of the Pilliga State Forest and the health and safety of the local community and
would not result in any significant impacts on people or the environment.*

35 Turning to Santos' Narrabri Coal Seam Gas tour for CWA members in October
2019, the environmental officer of this tour stated they were looking at sites for their
brine waste. And just recently we've had – we've been told that the contaminated
brine now is going to be turned into baking powder. Santos and a US company are
going to carry out a study for a potential plant at Narrabri along with a potential
40 fertiliser plant and, of course, more jobs are promised. Nothing concrete, just
promises. The Santos chief executive, Kevin Gallagher stated that when the project
is not successful, they'll use the water for irrigation. So is this the same water that
they use in a failed Lucerne crop two years ago?

45 Risk of environmental damage is uninsurable and landholders are left to bear the risk
posed by its coal seam gas activities. Our farmlands are going to be worse. How
would the New South Wales politicians who failed to support the recent Coal Seam

Gas Moratorium Bill 2019 and the Santos board react if this affected their private assets? What is insignificant impacts to the authors of the Narrabri Gas Project is very significant to many individual members of the association. Thank you very much.

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MR O'CONNOR: Thank you, Helen, for your presentation. Our next speaker, please.

MR BEASLEY: Next speaker is Xavier - - -

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UNIDENTIFIED MALE: Oh, sorry.

MR BEASLEY: Xavier Martin from the New South Wales Farmers Association Tambar Springs, Gunnedah Mr Martin, are you there? Can you hear me?

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MR X. MARTIN: Yes, I can hear you.

MR BEASLEY: Please go ahead with your submission.

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MR MARTIN: Yes. So my name's Xavier Martin and I'm the branch secretary of the Gunnedah – the Tambar Springs, Gunnedah Branch and I appreciate that I'm following one of our members, Helen Strang, just a moment ago and – but I do want to present to the Commissioners the bona fides of our branch membership and so – and their – and their appreciation of this issue and their response to the department's assessment. So our branch demographics are based in – well, they represent

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hundreds of farms and households, contractors, share farmers across the southern and south-eastern side of the project area, Pilliga and the surrounding forests.

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They're – they're ratepayers in Gunnedah, Narrabri and Warrumbungle Shires and they effectively live and operate in the upper Namoi Valley and its tributaries just to the south of the project area. So whilst many of your presentations over the last days and planned ahead are from near – or either well away from the project area or just to the north of it, particularly Narrabri, our members are really next door to this Pilliga site to the south. Now, Commissioners, I must make a declaration of interest at the outset that I have no direct interest or indirect interests in Santos or any of its

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subcontractors. And I've already had some of our members approach me after yesterday's submissions where it was obvious some individuals did not declare their interests in support of the project, so I alert to that fact that you might consider a declaration of interest.

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Now, there's a high level of awareness in our membership of this industry, particularly through family and friends in southern Queensland and so it's been an issue that's been debated by our membership locally for some years. It culminated in a recent meeting where we resolved that the New South Wales Farmers Association lobby the New South Wales government to (a) not approve the Narrabri Gas Project and (b) extinguish the 11 expired and inactive petroleum exploration licences. So that resolution was discussed, debated and carried without dissent. Now, I

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appreciate, Commissioners, that in facilitating these meetings, you have asked for – you want to hear the views on the department’s assessment report – merit of the DPIE report and so I will try to represent members’ views but you’d appreciate it’s – with a large branch, it’s not that easy to summarise.

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But if I could go to the start. A word search of the document and it’s source documents very – if you word search on words like “may” and “should” and “uncertainty”, it’s just extraordinary, so it’s a hugely qualitative documentation. It’s all very qualitative and all based on – another word that comes up a lot is “adaptive”. It’s a really interesting word that – because it’s all an adaptive response to what may happen. So that is a red flashing light to our members. It’s not an orange caution, it’s a red light because we – our membership – well, what I’ve heard them say is they have a low level of confidence in the bureaucracy. During their careers, during their lifetime, our members have found that bureaucracy pushes out a lot of theories and assumptions, translates them into rules and regulations but, in practice, we’re left with the failures.

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We have to – we have to deal with the reality of their problems. We don’t just get to walk away and retire down the South Coast. We have to stay and manage the landscape and produce clean food and fibre. So our members have a rather jaundiced view of that approach. Another matter that’s consistently raised with me is the – I have actually asked members to go out and read and report back to me on some of these supporting documentation and whilst one said it was very good for if you had low blood pressure, it’d increase your blood pressure. Really, they came up with a lot of feedback about conflicts in models and it does result in recommendations in the expert water panel process where they, you know, effectively are giving orange lights.

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But our members would say because of those conflicts in the models, they should be red lights and should stop the project. Commissioners, the minimised spin throughout the DPIE document is endemic – well, it’s carried over from the Santos EIS. It starts right in the first sentence where there’s talk about developing 850 wells on 1000 hectares. The reality is it intersects the surface and groundwater and disrupts the flora and fauna over a quarter of a million acres, not 1000 hectares. This would be like one of our members saying, “Oh, I’ve got 850 cattle and I can fit them in one hectare in a corner of the paddock.” The reality is that those cattle run over a large area of the farm and utilise the water, utilise the landscape, utilise the vegetation, just as this gas project does.

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So a quarter of a million hectares – a quarter of a million acres. Another member raised with me the independence of GISERA and their sample size and validity of looking at six wells out of 19,000 in Queensland. They made the point that if one of our members looked at, say, a flock of sheep or hens of 19,000 and looked at six of them and said, “Oh, therefore, it’s all fine. Yeah, they’re a healthy herd – health flock,” it’s not a valid sample. So they were quite dismissive of the GISERA approach. The point that I’m getting to is the members came back to me with they can produce food and fibre without this gas, but not without water. And if I go to the

water modelling, page 43 of the DPIE work talks about how it's important to demonstrate the model water balance is achieved and that all inflows and outflows should be in balance.

5 The reality is in this area, in this valley, is we already have declining groundwater,
surface water, our springs are disappearing. We've got villages and locations named
after springs here and yet where are the springs? They're disappearing. So the
disingenuous and elastic use of spatial data is a real problem and it's reflected in the
DPIE work. They haven't used the Namoi Catchment waterscaping model. They
10 haven't used – updated the scenario to take into account this project or – and other
projects that are known now that weren't known in 2012 when the study was
conducted. There's a problem with the transparency of data input, too, including in
Santos' own modelling which is a submodel, still using MODFLOW but it's so
granular that, you know, it's problematic. And on page 43 of the DPIE report, it
15 says:

The study did not indicate any discontinuity –

but they:

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...can't rule it out, given the method of sampling used and the extent of the

So members do not agree that the project is designed to minimise the impact on
water. Nothing – nothing of the sort. Recent water scarcity has reinforced the local
25 impacts and it can put our – or it does put our members out of business when that
water disappears. So water quantity and quality, both surface and groundwater, is
critical to our members. I won't repeat what Anne Kennedy said about artesian bore
water use except to say that when I listened to what she just said a moment ago, it's
exactly what many of our members have said to me. So the issues around GAB
30 capping and piping and recharge, I'll skip over. We've seen modelling that creates
enormous elasticity.

There's a roughness factor taken into account, granularity taken into account in
gaining and losing segments of the recharge that misrepresents then the effect of the
35 roads, the, the gas and water piping and electricity that's put through the project
area. So we also have a membership that's very aware of the dysfunction of the
Santos Kahlua site at Emerald Hill and the problems with misgrouting and
concreting of the wells there. So there's a lack of trust – it goes to a lack of trust that
the membership has in Santos. Our members have an investment break on at the
40 moment. They see this as a Trojan horse. Once you get a gas field, you get
pipelines, then you get more gas fields.

They see it impacting the decisions they're making now to invest in improvements to
their farms they would ordinarily make; housing sheds, silos, even affecting
45 succession planning. Others have covered off on insurance so I won't go to that.
But one key matter I must say is our members make up a lot of the volunteers for the
RFS, the Rural Fire Service and we've been asked for decades, for generations, to go

and put fires out in Pilliga. If you look at Santos' approach and DPIEs approach is ring triple O. I mean, that's us. They want us to come and put the fires out. So, you know, the point is they want to put naked flames and flammable gases into the atmosphere, into the – into the vegetation of what we know is a high risk and
5 important region of fauna and flora, and yet they expect us to come and put it out.
So - - -

MR O'CONNOR: Xavier, if you could please wrap up now.

10 MR MARTIN: Yes. Look, I'm happy just to leave it but with the point that we can produce clean food and fibre without gas but we can't produce it without water.

MR O'CONNOR: Thank you for your presentation. Next speaker, please.

15 MR BEASLEY: Next speaker is Malcolm Hartley from the Coonabarabran Landcare. Are you there, Mr Hartley?

MR M. HARTLEY: Yes, I'm here.

20 MR BEASLEY: Please go ahead.

MR HARTLEY: Good afternoon, Commissioners. I'm opposed to the establishment of an industrial estate in the North-East Pilliga. My name is Malcolm Hartley. I'm a committee member of the Coonabarabran Landcare Incorporated and
25 I speak today on behalf of all the members of our group, especially the chairperson of the group, Peter Thompson. I'd like to acknowledge the Gomerai Nation, traditional custodians of the land on which I stand today. I pay my respects to their Elders, past, present and emerging. I came with my family to Coonabarabran 44 years ago to work as an astronomer at Siding Spring Observatory where I continued
30 to work until the devastating bushfire of 2013.

As well as a decades long association with Landcare, my wife and I have been active members of the Coonabarabran Residents Against Coal Seam Gas, or CRAG, for over 10 years. In that capacity, we visited gas fields in southern Queensland and
35 talked with communities in Chinchilla and Roma about how the industry has affected their communities. And, of course, we've protested, demonstrated along the way, encouraging the miner to leave well alone in the Pilliga. They haven't listened to us. It's indeed a trauma to see the country invaded by the industry just as much as if it had been devastated by a bushfire.

40 The Landcare movement is a community-based approach to managing and protecting our natural resources, creating more productive and sustainable farms, conserving our environment, its fauna and flora and building more cohesive, resilient communities so it can hardly be a surprise that we oppose totally the Narrabri methane extraction project in the Pilliga, not the Pilliga scrub that's too often referred to in Santos' publicity. Our Landcare group is especially focused on the
45 availability of clean, unpolluted water and the potential for growing water

contamination, which this project poses, is simply not worth the risk. One of the greatest existential threats to humanity on our planet is, in our opinion, climate change brought about by the gross over-consumption of fossil fuels since the industrial revolution.

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Professor Will Steffen of the ANU enunciated forcefully the threat posed currently by the continued use of fossil fuels in his presentation to the Vickery Extension just a couple of weeks ago. Unless more action is taken now to ensure that any degeneration is sustained by renewable technologies, the future of our grandchildren and great-grandchildren, yours as well as mine, will be gravely compromised as the world gets warmer and warmer. Greenhouse effect is real. It's an inconvenient truth but a huge majority of climate scientists tell us this will be the future reality. Coal seam gas is a fossil fuel and for that reason alone, the world does not need yet another gas field out of sight and out of mind. Coal seam gas mining in the Pilliga will benefit a few in the short term but it will be yet another step along the road to a much greater crisis than we're currently facing with the COVID-19 pandemic.

The Prime Minister, Scott Morrison, talks of a gas-led economic recovery to the current COVID-19 induced recession and he claims it to be a much cleaner fossil fuel than coal. However, less than a week ago, Bob Carr, a former New South Wales Premier, and currently professor of climate and business at UTS, wrote an opinion piece in the Sydney Morning Herald which casts great doubt about this claim. Imagery from the European Union's Sentinel-5 satellites is mapping the methane over every two square kilometres of the earth's surface and the data to date is causing much alarm to scientists as the gas surges skyward from coal, oil and gas development.

Evidence is mounting that the gas industry is grossly under-reporting the amount of methane which leaks into the atmosphere from its operations. The data undercuts the industry's claim to provide a clean fuel. Over a 20 year timeframe, one molecule of methane is 86 times more effective in trapping heat in the atmosphere than a molecule of carbon meaning that if gas leaks are to raise it more than three per cent, it's worse than coal. BP report that 3.2 per cent of its gas leaks. Santos claim less than one per cent leakage over a very small sample of wells. We await the satellite data of Australian assets with interest.

A letter published in the Herald again at the weekend by Andrew McConville, the CEO of the Australia Petroleum Production & Exploration Association, casts doubt on the satellite data but he does not comment on the BP admission of the 3.2 per cent leakage. It seems highly unlikely that a gas and oil giant would overestimate their emissions. By reading the presentation of the proponent and its final endorsement by the DPIE is that it's contentious in many respects and the key recommendations of the New South Wales Chief Scientist have certainly not been met in full. The hydrogeological uncertainties of the project modelling are minimised to put our minds at rest.

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Our minds will certainly be put at rest over the uncertainties by a decision to halt the project? No. In so many respects, the case for the project to proceed, we're asked to trust the miner. They will self-regulate their activities and abide by the strict regulatory regime under which the industry is managed. Sadly, it seems that for the most part, the EPA will be unable to carry out this function adequately because of their limited resources. We've been told there will be a shortfall of gas in New South Wales by 2024 and that gas from Narrabri will save the day. To justify going ahead with the project, this is exactly what would – what one would expect the industry to say.

We've also been led to believe that gas from Narrabri will put downward pressure on gas prices. A realistic economic analysis shows that both of these claims are untrustworthy. In reality, gas from Narrabri would be uncompetitive with gas sourced elsewhere in Australia. Australia is the biggest exporter of methane in the world. New South Wales is a State within Australia. New South Wales doesn't need to be independent of the other States within the Federation for its energy sources. The economic imperative for New South Wales is the food and water security of the State and it must be – it must not be compromised, I beg your pardon, by the threat of contamination to the greatest of all our resources which is water.

The legacy of a gas field in the Pilliga could so easily be continued, methane seepage from abandoned wells as well as a drawdown of water from artesian bores because of the dewatering of the deeper coal seams. The risks are simply too great. The fire risk, for example, even in catastrophic weather conditions, is calculated to be as low as one in a 70 year possibility. That doesn't mean it will be 70 years before it can happen. It could happen at any time. It could happen next year. And so onto the multiplicity of other objectives which I haven't time to elaborate on but which, nevertheless, carry the weight and genuine anguish that so many of us have endured over such a long time in our campaign, especially having been told years ago that the project was a done deal by persons in higher places.

The produced self-disposal arrangements. Santos needs to come clean on which specific landfills are prepared to accept any of this mountain of waste. The recent addition of Natural Soda as a potential user for this source, with an MOU signed with Santos, seems a total non-starter given the quantity of water which would be needed in the purification stage. Just search for Natural Soda online and watch their promotional video. The threat to the indigenous cultural heritage of the Pilliga. Will a team of archaeologists accompany the engineers as they stress out over the next well location? The actions of Rio Tinto in the far west hardly fill us with confidence. The implications for fauna and flora.

All those creatures, great and small, don't have a say in this hearing and as we face more and more specie extinction in Australia and the world at large, now is the time to stop before sealing the fate of yet more. As well as the obvious effects on habitat, the effects of Artificial Light at Night, or ALAN, are just as important as air, water and soil contamination. A well illuminated industrial park has a significant ecological cost to an enormous range of nocturnal fauna as well as the moths and

other species that fly by night. Flora and fauna have developed under a cycle of moon phases and darkness. Having six pilot wells across the region permanently alight will both fragment the region and affect the behaviour of wildlife and their interactions with flora such as pollination. Quoting from the Australian Science edition July/August 2019:

Behavioural patterns such as foraging, courtship, mating, navigation and migration as well as predator/prey and plant pollinator relationships can vastly alter the biodiversity.

Ecosystems, crop yields and food production. Change, weaken or break just one thread in the web of life and the repercussions can be dire. Reject this project. Narrabri can thrive without it by embracing the renewable future and a far healthier environment for its citizens and the surrounding farming communities. Leave the methane well underground in coal seams where it's been dormant for millions of years. Thank you for listening to me today.

MR O'CONNOR: Thank you very much, Malcolm, for your presentation. Our next speaker, please.

MR BEASLEY: The next speaker is Ms Rosemary Vass from the Coonabarabran Residents Against CSG. Ms Vass.

MS R. VASS: Can you hear me? Good afternoon, Commissioners. Thank you for this opportunity to address you. I would like to acknowledge the lands we meet on here today are the homelands of the Gomeroi People who are the traditional custodians, land never ceded. My name is Rosemary Vass. I was born on the western side of the Pilliga but now live about 70 kilometres south of the proposed Santos project near Coonabarabran. The Pilliga is central to my sense of place, my landscape. There is a PEL over my property and we are dependent on bore water to live there. Any impact to bore water, either in drawdown or contamination, would make it unviable.

Today I am representing the Coonabarabran Residents Against CSG and we're part of the North West Alliance. Our group has engaged with our community and beyond by conducting surveys, public meetings, information stalls, events, articles, displays and rallies over at least the last six years or more. We know our community and the wide opposition to this project. Local survey show upwards of 90 per cent opposition to the project. It has no social licence to proceed. We should be discussing the joys of our children and grandchildren, not fighting for their future, threatened by climate impacts exacerbated by projects like this which will cause intergenerational inequity and an unliveable planet. This project poses multiple risks that remain unresolved.

These include increased greenhouse gas emissions from carbon and methane incompatible with our climate responsibilities; failure to implement all 16 of the New South Wales Chief Scientist's recommendations developed to protect the

community from the known risks of CSG extraction; depressurisation of underground water sources and impacts on the recharge of the GAB and the water of the Gunnedah-Oxley Basin with lack of data regarding connectivity due to using a basic model; economic questions regarding price reduction; viability in a declining market; lack of monetary benefit to the Australian community and need for subsidisation; incomplete assessment of the Aboriginal cultural heritage of the Pilliga prior to any approval; exposing it to the high probability of destruction; fragmentation of the Pilliga itself with an unacceptable impact on the biodiversity of the flora and fauna of this unique landscape; risk of broad social and economic impacts to communities and landowners from cumulative mining expansion and a boom and bust cycle that this brings; contamination and pollution of air, water and land from toxic wastes including no satisfactory plan to safely dispose of the high level of salt waste from the RO process.

As scientists, you understand the precautionary principle where uncertainty of outcomes must be resolved in favour of prevention of harm. Currently worldwide, we are seeing a real life experiment play out in real time. It is an illuminating example of the application of the precautionary principle or not, as the case may be. I refer, of course, to the COVID-19 pandemic. The outcomes are becoming clearer daily. For example, in Australia, New Zealand and places like Norway, modelling data and scientific advice are being used and the precautionary principle applied to policy and actions. The community is being protected from the worst of the pandemic.

In the United Kingdom, United States and Brazil, it is not, with disastrous results. The coal seam gas industry can well be compared to an epidemic. Like a virus, CSG extraction must continually find new hosts and it spreads across the landscape to infect the forest and farmland with industrialisation. Like the pandemic, it can leave behind many forms of damage to water, land, health, environment and communities and the climate. Our approach, therefore, to a proposed new fossil gas project should be to apply the precautionary principle. We should heed the examples of previous experiences. We should get complete data and we should follow the best scientific advice.

We should do this in order to get the best outcomes for the greatest benefit and least harm to the whole community and not for a short term monetary advantage for a few. We should look to protect the future for the next generation. The project should be rejected on the climate impacts alone. The assessment report claims that the project will only increase Australia's greenhouse gas emissions by one per cent. The 2019 report, the Production Gap, clearly outlines the case that our budget for coal, oil and gas has nothing left for further expansion. It matters not if it is one per cent, .1 of a per cent or zero one per cent. We can, in climate terms, afford none of it. It must stop and it must stop now or in the very near future and certainly in the future of our children and grandchildren, the planet will not be liveable.

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Recently Professor Will Steffen explained that the pathway from one degree Celsius warming to two degrees of warming is not linear. It will not simply double impacts but will be three or four times the level of impact. The production gap report states:

5 *Oil and gas are also on track to exceed carbon budgets as countries continue to invest in fossil fuel infrastructure that locks in oil and gas use. The effects of this locking widen the production gap over time until countries are producing 43 per cent more oil and 47 per cent more gas by 2040 than would be consistent with a two degree Celsius pathway.*

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The report found that to meet Paris climate goals and to have any hope of keeping warming to 1.5 degrees, then gas production needs to peak this year in 2020. The department's assessment report claims that emissions are justified because the electricity grid needs gas for dispatchable energy to support increasing renewable
15 sources. In fact, according to AEMO's recent report, the current grid can support up to 75 per cent renewables without additional gas fire plants. The amount of gas needed in the grid is reducing, not increasing.

20 In data from the open NEM, Tim Forcey reported that in no financial year since 2006 have we seen so little gas burned to make electricity in eastern Australia. The big battery in South Australia has performed beyond expectations and new battery developments are now on the cusp of producing batteries that will dwarf the South Australian version.

25 Business analysts are stating that gas pipelines will need to be repurposed because reduction in fossil fuel demand - fossil gas demand, will mean pipelines will become stranded assets. The assessment report appears to completely ignore the latest research on fugitive emissions and the role that methane is now understood to have on global warming. New satellite imagery has exposed the gas industry's dirty big
30 secret.

The emissions from venting, extraction, production and transport have been vastly underestimated. An article in nature in February 2020 stated that methane emissions from the production were as much as 25 to 40 per cent higher than industry
35 estimates. As IEEFA analyst Bruce Robinson says, it is the fossil gas industry's Volkswagen moment. Methane lives fast and dies young and in the short-term, 20 years, one molecule is 86 times more effective in trapping heat than a molecule of carbon. That is methane is worse than carbon. To tap gas as a bridge fuel to take us from coal and support renewables is now simply wrong and dangerous to climate.
40 The quote a smart guy on Twitter:

Yeah, it's a bridge all right. A bridge to extinction.

45 Another very dubious claim made by the assessment report is that research from CSIRO showed fugitive emissions from wells was lower than expected. This was from GISERA and it's not robust research. It tested six wells selected by the industry from a possible 19,000 in Queensland. Let's give it a COVID 19 analogy. There are

19,000 arrivals from overseas with possible COVID disease. Officials test six people and declare all remaining 19,000 disease free. Sounds very Trumpian to me. If you don't test, you won't find.

5 In September 2014, the New South Wales chief scientist, Mary O'Kane, released her report to the New South Wales government. The 16 recommendations were to be in place to form a gas plan, to reduce risk and safely manage the coal seam gas industry before it began. New South Wales State Parliamentary Inquiry was set up in 2019 to see if they were implemented. This reported in February of 2020. In the six years
10 since the chief scientist's report, only two out of the 16 had been fully implemented. Recommendations 4, 5, 6, 8, 9, 11, 12 and 16 have not even been partially implemented.

15 However, in particular, I will note, rec 8, which would examine cumulative impacts, rec 9, which would establish long and short-term insurance cover for landowners and rehabilitation fund, rec 12, which would establish a standing expert advisory body on CSG. That the insurance provision is not in place raises the possible question is this project uninsurable? To approve the Narrabri fossil gas project without all
20 recommendations fully in place would not be following the precautionary principle and would expose our communities to many serious risks, which the chief scientist had acknowledged.

The economic problems with this project will be explained by experts, but I draw attention to one aspect. Australians are currently and will continue to massively
25 subsidise this project by supplying the gas for free to power Santos's production. Gas power generation on-site will enable Santos to defray any power cost for the massively energy intensive process of reverse osmosis. The Australian community will not get one jot of royalties until gas produced is sold on by Santos. All the gas they use on-site to reduce their production cost will be a free gift from the Australian
30 people. If they actually had to pay for this gas, then would their already expensive fossil gas be entirely uneconomic.

In summation, this project fails on many grounds. It fails economically because it is expensive gas being sold into a declining domestic and international market which is
35 already swamped with gas. Renewables are now cheaper, providing power without risk to water or climate, and creating more jobs. It is opposed widely across the north-west and far beyond, so it has no social licence. It fails utterly on climate impact as it blows the carbon and methane budget, heading us to dangerous extreme temperatures and weather events.

40 I respect the panel for its independence, experience and scientific knowledge and because of this, I am not hoping but I am expecting you will decide that the Narrabri fossil gas project is not approvable. The scientific, economic and other expert evidence is so strong that this project is not in the best interest of the Australian
45 community at any level, local, State, or national. Thank you for listening.

MR O'CONNOR: Thank you, Rosemary, for your detailed presentation.

MS VASS: Thank you.

MR O'CONNOR: Our next speaker, please.

5 MR BEASLEY: The next speaker is Johanna Evans from the North West Protection
Advocacy. Ms Evans.

MS EVANS: Thank you. I would like to acknowledge the traditional owners of the
country we are gathered on here today. I pay my respects to elders past, present and
10 emerging. Thank you to the Commission for this opportunity to present my evidence
on behalf of NWPA. We are a member of the North West Alliance group. My
name a Joanna Evans, I am from Kyogle and I have been searching for the truth
about gasfields since 2012 when I observed the gas drilling operation 10 kilometres
from my home.

15 NWPA is a grass roots volunteer-based group. We strongly object to the Narrabri
Gas Project and, indeed, coal seam gas anywhere. My search for the truth led me to
the Queensland gasfields where I spent many weeks looking at the industry both on
the ground, through company documentation, reading through numerous scientific
20 documents and reports, and speaking to impacted gasfield residents who have lived
through the experience of becoming collateral damage.

What I have seen can be likened to an invasion, a slow creeping, insidious takeover
of land, air and water. The proponents attempt to justify the project are based on
25 misrepresentation and a cherry-picking approach to data and facts. Our submission
will contain detailed examinations of gas composition, water-based line monitoring,
health and other issues.

During our search for the truth in Narrabri we have witnessed and experienced an
30 alarming and worrying series of events that are unrelated except by the common
themes which are bullying and intimidation. I personally have been witness to
events such as a Santos contractor throwing eggs at peaceful community members.
He was charged with assault. A Santos drone flown into our proximity, seemingly
breaking CASA laws. I've seen Santos employees rough up peaceful protectors
35 whilst they were exercising their lawful right to protest. I've seen numerous
occasions of police misbehaviour. I've been followed off site into the bush by Santos
security, filmed at close range and had a tracking device placed on my car which was
reported to police.

40 I am a member of the CWA. In 2019, I attempted to go on the Santos tour. I
travelled to Narrabri to attend. Santos wrongfully accused me and another member
of being charged with trespass and would not allow us on the bus. Last week the
Financial Times reported rival groups have divided the community with boycotts of
some social and sporting clubs that accepted funding from Santos.

45 The facts are diametrically opposed in that some clubs in Narrabri have turned down
bookings from the gasfield free movement under pressure from Santos. One

cancelled a movie screening claiming it had overlooked a prior booking. This was proven false when investigated. And just - and with just two days notice, another cancelled a longstanding booking for a North West Alliance conference addressing concerns regarding the risks and damage from unconventional gas mining in the
5 Pilliga. Santos, who rang the club, threatened to refuse its sponsorship money if the meeting was allowed to proceed. Last Friday, a page we manage on Facebook that discusses the gas debate, with 6,000 followers, was coincidentally restricted for the week of the IPC hearings with no explanation and no apparent breach of Facebook policy, suppression of the truth.

10

In regards to Santos being responsive to questioning about their operations, we have tried on numerous occasions to gather information. In nearly every instance we've had to resort to GIPA request and still dozens of questions, some nearly 12 months old, are unanswered through the malfunctioning community consultative committee,
15 withholding the truth.

15

In New South Wales, we are faced with a situation whereby the company Santos and the government refer to the Queensland experience as being a positive one. When something is negative and bears further investigation, government agencies in New
20 South Wales, like the EPA, say that's Queensland. That won't happen in New South Wales. From our experience, though, Santos will operate in much the same way.

20

In respect to Queensland, we would like to highlight the New South Wales Planning and Assessment Commission department's trip to Queensland that occurred in June
25 2017. They went to get a better understanding of CSG operations and were escorted by Santos around several sites on a private briefing and familiarisation tour. This information was only revealed by GIPA. The truth is hidden. Obviously, then, if this is where New South Wales Planning was seeking understanding of the industry, it must be noted that what happens in Queensland does apply here in New South
30 Wales. Why would New South Wales Planning bother going to Queensland if it did not apply here? The truth about gasfields does lie with the Queensland experience.

25

30

We ask the Commission to look into the issue of microbiologically induced corrosion. It is an issue that impacts directly on well casing which purportedly is
35 meant to protect aquifers from contamination. Santos claim state of the art technology in a robust multi barrier and tested system that will ensure isolation between the well and the surrounding environment. The WEP considered the potential corrosion risk to CSG wells and did not believe that they presented a significant risk. This, in our opinion, is worrying and akin to blind faith in a company
40 that have failing and corroded well head equipment. This quote from Charles Arboj of Schlumberger contradicts the WEP Santos. He says:

35

40

*Microbiologically influenced corrosion seems to be systemic in the region
and other operators might encounter similar issues in their CSG wells.*

45

This quote was published in an article by Saltel Industries. This article was removed from the internet after it received unwanted attention. Questions were asked at the

CCC about this issue and it was shut down with the EPA and Santos refusing to comment. The DPIE final assessment report says 348, the WEP considered the potential risk, the potential corrosion risk to wells including the potential for acid attack due to carbon dioxide or sulphate reducing bacteria dot dot dot. The WEP
5 does not believe that corrosion presents a significant risk to the project and could be effectively mitigated by using suitable corrosion resistant casings and cements, if necessary.

10 Saltel, who make the product known as expandable patches, which are mechanical well repair patches that isolate external bacterial corrosion, are owned by gas industry world completion specialist, Schlumberger. MIC can be incredibly rapid and eat through corrosion resistant alloys, according to Saltel and in understanding corrosion basic principles.

15 There will be no market for this product if the problem did not exist. Ignoring this risk is foolish, at best, and catastrophic at worst. Limited testing data is available for bacteria here in Narrabri, such as sulphate reducing bacteria. This is a serious emission. This issue has been continually highlighted by community for many years. SRBs have been blamed for causing MIC in oil and gas wells.

20 Santos had provided no clear proof that the resource they are targeting is economically perspective. Keith Spence, Santos Chairman, told shareholders at the AGM earlier this year that they had gathered 250 samples, 2014 to 2019, that show an average CO2 content of just under 5 per cent in PEL 238. Later, a Santos staff
25 member from Narrabri indicated to DPIE that far fewer commercial in confidence samples exist and Santos have refused to make these samples publicly available. The Commission must review all the public - all the available public data and use existing geology reports. Did Keith Spence knowingly mislead shareholders?

30 NWPA believe that it is impossible to know where to drill to hit high percentage production quality methane in PEL 238, due to CO2 migration upwards through faulting. The - this refutation is backed up by several scientific reports which I will detail in our submission. NWPA have analysed over 1000 publicly available pieces of sample data and concluded that the average CO2 content in gas across the
35 Narrabri project is 25 to 30 per cent, with some wells displaying 90 per cent CO2. The high CO2 and nitrogen content is a factor which has the potential to materially increase the greenhouse gas emissions from Narrabri and also the cost of the gas.

40 My conclusion is that the logic stream is broken. In the absence of proper vigilance by New South Wales Planning, we are forced to go to extremes to reveal the truth. The truth walk slowly and this week it is knocking on your door. Narrabri gas is purely a turn key political approval that they are seeking that will open the door to spreading gasfields across the north-west. The Commission must let the truth in and reject this project and stop coal seam gas in New South Wales.

45 MR BEASLEY: Johanna, can I just ask you a question? You were talking about the CO2 content of the gas and mention that there was a claim that that was

commercial in confidence information. Have you ever seen an explanation as to why it's confidential?

5 MS EVANS: No, to be honest. The data has been requested. There is thousands of publicly available well completion reports that have gas composition data that can be accessed and I can provide those to you. I - - -

10 MR BEASLEY: No, what - I'm sure - what I was asking whether you'd seen any explanation that provided a basis for a claim that it was commercial in confidence information.

MS EVANS: No. Only that phrase, commercial in confidence.

15 MR BEASLEY: Thank you. Thank you for your submission, Johanna.

MS EVANS: Thank you.

MR BEASLEY: Next speaker, please.

20 MR O'CONNOR: Our next speaker is Nicola Chirlian from the Upper Mooki Landcare. Please go ahead, if you can hear me.

25 MS CHIRLIAN: Yes, thank you. It's Nicola Chirlian and Upper Mooki Landcare. Good afternoon, Commissioners.

MR O'CONNOR: I apologise for getting your name and your organisation wrong in terms of how I pronounce them.

30 MS CHIRLIAN: That's okay. No problems. I'm the chair of Upper Mooki Landcare and we are member of the North West Alliance. I'm speaking from the grounds of the Gomerai People and I acknowledge their elders last and present and those that are emerging. We are in PELs 1 and 52 down in the south-eastern corner of the Liverpool Plains and we have shared 10 years of concern, fear, commitment and action to ward off this project. We object strongly to the Narrabri Gas Project and we ask that you take a wider view of its implications. We have limited ourselves to three grounds of objection. Number one is the ongoing threat of CSG on the
35 Liverpool Plains.

40 Kevin Gallagher has stated that Santos has no plans to drill on the Liverpool Plains. We doubt this. Santos has mapped seven gasfields. We are in the Murrurundi gasfield. There is a current farming agreement in relation to ongoing CSG operations in PELs 1 and 12 between Santos and Carbon Minerals Limited. Carbon Minerals recently informed the ASX that they intend to pursue a works program in
45 2020 in these PELs.

Carbon Minerals was contacted for details and a time frame and the inquirer was directed to Santos. We suggest that Santos is waiting for the outcome of the Narrabri

Gas Project approval process before announcing its intentions for the Liverpool Plains via Carbon Minerals. Our concerns are that in the event of a mishap, that Santos could walk away, claiming that the head contractor was Coalbed Methane Pty Limited, a wholly owned subsidiary of Carbon Minerals. Coalbed Methane is guaranteed to a limit of \$75,000 by Carbon Minerals. This guarantee would be totally inadequate to rectify any mishap or landowner claim. It is, in essence, a man of straw and it needs to be recognised as such. Why would we not think that we continue to be in their sights?

Number two, the risk of contamination of water supplies and the implication of CSG on livestock production. Our members are livestock producers and do not believe that CSG will not risk contamination of our land, ground or surface water and likely to also impact on our products. If we have a CSG operation on or within our ground water system, we cannot legally sign the required National Vendor Declaration as we cannot categorically say what chemicals or contaminants animals may ingest if land or water is impacted.

For Meat & Livestock Australia, the MLA's integrity system on farm risk assessment for persistent chemicals and physical contaminants require that we guarantee the animals that we sell do not have unacceptable residues of CSG production chemicals. We could not do this. If MLA, and export licensing standards prohibit export of animal products contaminated by chemicals, the producer must be compensated for the present value of land and all production.

The MLA is aware of contamination concerns. In 2014, the Cattle Council of Australia requested that the MLA engage a legal firm to provide advice on liability for any CSG related – any CSG industry related contamination of cattle. The work was done, but then the Cattle Council was advised that the report should not be released as it advised liability. However, the MLA's information sheet, CSG operations on livestock and property, identifies major concerns as the potential impact on ground water quantity and quality and contamination of soil and pasture. It notes contamination could breach Australian food standards or importing country's requirements.

It notes the landowner may still have primary responsibility. My legal adviser agrees, noting that the producer must be compensated for loss of land value and the present value of lost, current and all future production. It's a no brainer. If the government is not prepared to indemnify stakeholders affected by CSG, the application must be rejected.

Our last grounds relates to community, land and business risk and this need for indemnification. Recommendation 9 of the chief scientist's independent review of the CSG 2014 states that the government should examine potential adoption of a three-layered policy of security deposits, enhanced insurance coverage and an environmental rehabilitation fund. In 2019 a parliamentary inquiry into the implementation of these recommendations found the enhanced insurance coverage is

not available, the risks are uninsurable and the land holders are left to bear the risks of CSG. Investigation - - -

5 MR O'CONNOR: If you could please wrap up, now, Nicola.

MS CHIRLIAN: Yes, sir. Investigation by our insurance broker reveals the same risk for our business and I have supplied the full quote in my submission but essentially it relates to AF 1319 mining liability exclusion. We will not be liable. So the inability for land holders to get insurance against damage caused by CSG is untenable. It is grounds alone for the IPC to reject Santos's application. In summary, why should we, as food producers, be liable for the socialisation of the risks and the privatisation of the profits that the Narrabri Gas Project presents? Please, apply the precautionary principle in your deliberations and do not approve this project. Thank you.

15 MR O'CONNOR: Thank you, Nicola.

PROF BARLOW: Could I just ask a quick question?

20 MR O'CONNOR: Yes. Sorry, Nicola, if you could stay there for a moment. Go ahead, Snow.

PROF BARLOW: Nicole, I just wanted to know in your submission or is there a - what are the specific contaminant chemicals you were referring to and will they be a link to the nature of those chemicals be included in your submission?

MS CHIRLIAN: Most certainly there will be, Mr Barlow.

30 MR O'CONNOR: Thank you.

MS CHIRLIAN: Yes.

PROF BARLOW: Thank you.

35 MS CHIRLIAN: Thank you.

MR O'CONNOR: Our next speaker, please.

40 MR BEASLEY: Our next speaker is Janet Robertson from No CSG Gilgandra District. Ms Robertson.

MS ROBERTSON: Hello and thank you for the opportunity to present to the IPC today. I am 98.09 per cent of the Gilgandra Shire of residents over - shire residents over 16 strongly object to the Narrabri Gas Project. I've just got to settle in. I am representing No Coal Seam Gas Gilgandra District Incorporated, a group established in June 2013. It has 136 financial members, a mailing list of approximately 320 plus over 1100 Facebook followers.

The Gilgandra Shire is a productive mixed farming area. It's just to the south of the Narrabri Gas Project. With four PELs covering the shire, in figure 1, which I'm hoping will be put up today, the residents are aware that the shire is potentially a part of a greater Santos plan. Three core holes were drilled in the shire and seismic
5 testing was conducted, most recently in 2010, and it was then that the shire residents were alerted to a potential new industry in the region. You can see the 4 PELs on that map.

Our group began with a clear aim of researching the industry and then setting about
10 engaging our shire so that each person in the shire could have a considered opinion about coal seam gas. Apart from managing and surviving the recent drought, many are also negotiating with the inland rail. So life is very, very busy and all still consider coal seam gas development important enough to be members of our group and to stay engaged with what we say.

15 We volunteer innumerable hours and incur financial expenses while neglecting our families and businesses while doing all of this. It has been a trying 10 years of researching, navigating spin and enduring moving goal posts, which has resulted in an acute mistrust of the CSG industry for our community.

20 The group undertook surveying the entire shire. Colleen Fraser will present details which will give the IPC a clear understanding about the group's commitment to good data and thorough surveying. She's on following me. In figure 2, Gilgandra Shire is clearly positioned in Santos's and its shareholders minds as one of the next steps after
25 the establishment of the Narrabri Gas Project.

The proposed Truawena gasfield shows clearly in this figure. We know how this industry develops and expands to optimise infrastructure investment. Requests have been ignored to nullify the four sleeping licences that exist over the Gilgandra Shire.
30 One request was made directly in person to our local member, Kevin Humphries, in 2017, but to no avail. This causes investment uncertainty in agriculture.

35 And so the uncertainty continues for many years. Therefore our community wants this industry stopped now before it takes hold in Narrabri. CSG has been deemed unacceptable in Camden, the Hunter Valley, the Northern Rivers and Gloucester. Why should the northwest of New South Wales be sacrificed? And that is how we perceive the intent of the current government fossil fuel juggernaut. The pressure for the gas development has increased even more by activities in the heavily rated
40 National COVID-19 Coordination Commission. We are therefore grateful that this is an independent Commission.

The Department of Planning, Industry and Environment's report to the IPC, which I will address more in my personal submission because this one's about the Gilgandra Shire, is long on words but often remains vague, full of generalities, like unlikely
45 mineral manageable generally and full of repetition. I highlighted more than half of the conclusions in the executive summary on page IV in complete incredulity.

For instance, DPI, and then it went on and concluded - has concluded that the project, and one of the points was would comply with the relevant requirements and standard in government legislation policies and guidelines. However, I fail to see how this is even possible when there are 20 - over 20 outstanding operational
5 management plans. The term best practice is used extensively in the proponent's and department's documents. Best practice is admirable and preferred for any development, but overusing it is to lull the public into some sense of confidence and it's disingenuous and misleading. Best practice is only so at a point in history.

10 To think we have all the answers is right - right now is folly and it is why the precautionary principle is so important when the risks being taken is with the only permanent water supply in north-west New South Wales. There's a definition of the precautionary principle, it's quite long. But at the end it states:

15 *In this context the proponent of the activity rather than the public should bear the burden of proof.*

And as you have heard already and will hear over this week, there is much yet to be proven. The chief scientist report has not been addressed. On the fly, adaptive
20 management is a chosen method to prove absolution's post approval. This is a valuable tool to improve performance as industries progress but it is unacceptable to begin production when so much is still in doubt. Serious knowledge gaps should be filled
pre-approval. It is overwhelmingly apparent that many important questions are still
25 not answered.

Our group finds it impossible to have confidence in the industry, its self-management and its oversight by the EPA when many modes of operation have yet to be defined or scrutinised and we see the trail of woe in already established gasfields. Gilgandra
30 residents have many concerns but by far and away the most important to them is the safeguarding of the current water sources. Simply without clean water, towns people and primary producers alike cannot remain.

The CSG industry uses a great deal of water to drill a well, withdraws large amounts of water from the coal seams to create gas flow, creating drawdown from the aquifers
35 above. Creates large amount of stored produced toxic water, must dispose of large amounts of water, clean and contaminated, and toxic sludge and solids from the produced water. It risks polluting surface water and creates potential for
interconnectivity between
40 sub-surface strata.

Each one of these processes has myriad associated problems to be managed, even fresh water in a flood, it's very hard to get rid of it. Our group does not think this will or can be reliably done and fears for the ensuing damage. Water modelling is
45 left wanting. Santos should have had the ground water modelling updated prior to IPC assessment and approval - or approval.

The assurance by the DPIE that Santos has used conservative estimates in its modelling to deal with the admittedly incomplete data is cold comfort to those whose lives and livelihoods dependent completely on underground water. For farmers, the recent drought broke - brought the absolute value of water into very, very stark relief.

5 It is impossible to understand this without experiencing it. All models rely on the accuracy of the data and the computational skills of the model's creator. Everyone here will be aware of how often outcomes deviate wildly from model predictions. Add to these variables the risk-taking behaviour of those using the model, if they're perception of water is not in line with the people they may be affecting. Two

10 different value systems are relying on unrefined models and it's unacceptable. Water is sacrosanct. Its security is to be preserved.

Also of huge importance to them is the chemically contaminated salt by-product by the produced water. The official repeated disposal solution of the non-beneficially used salt is to send it to a licensed waste facility which is glib, superficial statements that hides a yet unresolved set of problems. The question of the disposal of the waste contaminated salt has been front and centre of every project development step. It has never been adequately answered and it still isn't, despite the answer that came up on to the IPC website yesterday about Queensland.

20 It is still a major problem in the Queensland gasfield - established gasfields of over 20 years of operation. In north-west New South Wales, it has a really simple solution. Leave it where it is a hundred thousand metres below the surface and more, with the water and the gas. This is a reasonable solution because we have cleaner,

25 alternative energy solutions already in existence.

The economics of this large export of - we are the largest exporter of gas in the world, as of early this year, so - so the supply of gas is not an issue. Resource management with a view to the welfare of business in Australia is what needs rectifying. Good governance - sorry. The wealth - the view - oh, dear. Good

30 governance and long-term energy policy are urgently required.

According to many commentators such as Bruce Robertson and others whom you'll hear this week, the NGP is not economically sound. So if the project is not viable,

35 then any risks, including the water, are completely unwarranted. You are the independent Commission and have the invidious task of deciding, with reasons, whether the Narrabri Gas Project is finally approvable or not. There are multitude factors and admitted unknowns all contributing to the riskiness of the project.

40 Current best practice, engineering solutions are not perfect. Human error happens. This is so for all development, but none have the huge footprint or the same potential for long-term calamity to water and the environment as unconventional gas. In this case coal seam gas. There are alternative ways to create energy. No other energy producing infrastructure is as pervasive an area as CSG, nor remain post production

45 insidiously rotting away into perpetuity. Narrabri Gas Project - - -

MR O'CONNOR: Could you please wrap up, now, Janet?

MS ROBERTSON: Yes. Thank you. We ask that the IPC deny the approval.
Thank you.

MR O'CONNOR: Thank you. We'll now hear from your colleague.

5

MR BEASLEY: So this is Colleen Fraser, also from No CSG Gilgandra District.
Go ahead, Ms Fraser.

10 MS FRASER: Thank you. Hello. My name is Colleen Fraser and I represent the
survey community of Gilgandra for No CSG Gilgandra District. It should be first
said that I do not consider myself an activist and nor do I represent activists. Our
group is simply compiled of residents seeking the facts who are deeply concerned
about their families, livelihoods and futures.

15 It has been said by Santos and other organisations that communities in - are in favour
of this project to go ahead. I am here as one of the two survey coordinators to stand
for the community of Gilgandra who have, since I have been involved in 2013, no
open community consultation from the department or Santos. The information the
Gilgandra residents have they have sourced on their own or from resources supplied
20 by our group. The group's intention was to have a survey with unbiased, truthful
information so the community could make their own straightforward decisions.
They were not coerced by anyone from our survey process and were given the
chance to have their say.

25 The survey was carried out in many months between the end of 2013 and early 2016.
Many members of the Gilgandra community worked together to successfully survey
4,836 square kilometres, the entire Gilgandra Shire. We carried out thorough
independent letterbox drops, had 15 information nights, followed by surveying each
area, and then
30 15 declarations as we covered the shire.

All our council - all our local councillors were invited to each of these ceremonies
and with every declaration there were a number of councillors showing their
community support, objecting to the Narrabri Gas Project. Every standing councillor
35 attended multiple declarations. A declaration certificate for each area was presented
to our mayor who then would forward it on to our local member, Kevin Humphries.

At the information nights, a total of 120 volunteers came forward to ask if they could
survey their areas and take part in the process. There were neighbours surveying
40 neighbours - surveying their neighbours, and local roads, to make sure no one was
missed and everyone over the age of 16 had the opportunity to answer the survey.

The surveyors were instructed to give everyone the opportunity to have their say, to
explain the survey question and to make sure their decision to say yes, no, or not sure
45 and not influence their decision at all. We supplied unbiased information and if there
were - if they were not sure at the time and needed more information, we told them
to read the paperwork and then Google coal seam gas for their own opinion. Those

people were given more time to get that information and then contacted by either the surveyor or myself.

5 Asking the question, do you want your roads and land gasfield free? We surveyed 483,600 hectares over two years and five months. 2,937 adults over 16 years of age, 251 roads, with the results were 2,881 answered yes, they want their roads and land gasfield free.

10 45 answered not sure. 11 answered no. 65 people declined to participate. In 2016, the population of Gilgandra was 4,234. There were approximately 1750 occupied homes in the shire. Our result was 98.09 per cent who were against the project. We proudly displayed the result on signs on the five entries to the shire. Gilgandra Shire's community declared gasfield free. Council fully supported the signage.

15 Within past years, seismic testing and test hole drills in various places in the shire, the community has reason to be concerned. Major concerns were raised by the community were contamination and drawdown of ground water. Gilgandra is totally dependent on bore water, including farms and town water. How the community survey - how the community survives if the water is contaminated, who is going to employ the thousands of farmers and their farm - family members if they can no longer use water for stock and to do their farming - farming of their land which in many cases has been held by multiple generations.

25 If their stock - if their stock drinking water - no. If their stock was drinking water that is contaminated, are they liable when filling out their National Vendor Declarations? Are their farms covered by various insurances? How does their biodiversity plan work if gas people have access to their properties? Where Santos intends - where Santos intends to dispose all the chemical contaminated products? If the PELs have expired, why are they still available for use?

30 As you can see, this survey process was conducted thoroughly. During the time we were surveying our shire, many other communities were also being surveyed using the same or a similar process and covering more than 3.2 million hectares of north western New South Wales. The overall results of asking the communities to have their say during this various processes are EIS public submission, 22,949, 98 per cent objected, two support. EIS submissions, Narrabri postcodes only, only local PC - only local people were determined from the Department of Planning. 64 per cent object, 36 support.

40 Lock the Gate community surveys over five years, 96 per cent object, four per cent support. Barwon for their Barwon electorate, 87 per cent object, 13 per cent support. Tamworth, Tamworth electorate, 87 per cent object, 13 per cent support. Fairfax online survey, which was the land online readers, 76 per cent object, 24 per cent support. GISERA, Narrabri gas residents, 57 per cent object, 14 per cent abstain, 30 per cent support. North West Alliance Narrabri town survey, 45 that's just town residents, 52 per cent object, 20 per cent abstain, 28 per cent support.

These research results show very definitely that social acceptability is clearly contrary to the opinion of Santos and supportive representatives. Much controversy has surrounded this - has surrounded and continues to surround the project. These surveys were all carried out in areas like - were also carried out in areas like
5 Gloucester, Northern Rivers and other Australian states which were under the threat of CSG. It is clear to see that the Narrabri project does not have a social licence. Thank you for allowing me to speak and to proudly represent my community. Thank you.

10 MR O'CONNOR: Thank you, Colleen, for the information relating to those surveys. We will now take a lunch break and be back at 2 pm. Thank you.

15 **RECORDING SUSPENDED** [1.32 pm]

RECORDING RESUMED [2.00 pm]

20 MR O'CONNOR: I think we have Pat Schultz, from the Armidale Action on CSG and Mining. Are you there, Ms Schultz? Can you hear me, Pat? Clearly not. Can you hear me, Ms Schultz? Are you there? Ms Schultz, can you hear me? We can't hear her either because she's clearly talking.

25 MR HANN: Yes.

MR O'CONNOR: I can lip read. I know what she's saying. I think she's opposed to the mine. Tell me when I should have another go. Okay. Ms Schultz, can you hear me? Not likely. Is she speaking?

30 MR HANN: No.

MR O'CONNOR: Ms Schultz, can you hear me? There's a limited number of times I'm going to be prepared to put that on the transcript. Well, we seem to have a
35 problem. We'll be back in a few moments.

RECORDING SUSPENDED [2.02 pm]

40 **RECORDING RESUMED** [2.03 pm]

MR O'CONNOR: Welcome back. Ms Schultz, can you hear us now?

45 MS SCHULTZ: Yes, I can.

MR O'CONNOR: That's fantastic. We can hear you, too. So please go ahead and make your submission.

MS SCHULTZ: Thank you very much and thanks for the opportunity to give this
5 presentation. I'm speaking on behalf of Armidale Action and Coal Seam Gas and
Mining and we object to the Narrabri gas project. On October 2011, our group was
invited to visit the Pilliga forest and look at the damage caused by Eastern Star Gas.
Our group were appalled by the damage to this beautiful forest. We discussed what
10 could be done to stop the destruction of the Pilliga and decided we must let people
know what was happening in this remote yet ecologically significant forest.

Under the banner of Armidale Action and Coal Seam Gas and Mining, I have led
regular free tours in the Pilliga since 2011. I do this on a voluntary basis which costs
me money for every trip. There were at least 20 areas where spills of produced water
15 had killed all vegetation. Beside every well there was one - a small produced water
pond at that time and many had dead animals and reptiles in them. Any plant or
animal in contact with produced water died. Despite spending \$17 million, Santos
have been unable to rehabilitate these dead areas. Santos have planted many trees
and shrubs native to the Pilliga and watered them throughout the drought. The
20 vegetation survives until the drought - till the roots make it down to the clay layer
where the produced water is trapped, then die.

Santos have had some success with species that are not native to the Pilliga and are
more salt tolerant. This does not accord with the rehabilitation requirements. Santos
25 bought out Eastern Star Gas in November 2011. Nine years later, they have not
succeeded in developing a plan to manage this toxic produced water. Management
of the produced water was not addressed in the 7,000-page EIS. Armidale Action
and Coal Seam Gas members believe that this project cannot be approved until
management of the produced water is addressed. In the exploratory phase, Santos
30 has already contaminated at least one aquifer. In the Sydney Morning Herald, March
8th, 2014:

*A coal seam gas project operated by the energy company Santos in north
western New South Wales has contaminated a nearby aquifer with uranium at
35 levels 20 times higher than safe drinking water guidelines and official
investigation has found. It is the first confirmation of an aquifer contamination
associated with coal seam gas activity in Australia, a blow to an industry
pushing State and federal governments for permission to expand.
Santos was fined \$1,500 by the New South Wales Environment Protection
40 Authority which posted the media release on its website on February the 18th
without identifying the nature of the contamination. Two days later, Deputy
Premier Andrew Stoner, signed a memorandum of understanding with Santos
to speed up the project in the Pilliga forest near Narrabri.*

45 The end of that quote from the paper. Santos cannot claim the aquifers are safe from
contamination. Ms Winters, from Santos, glossed over the management of produced
water in the Santos IPC meeting. She stated that Santos is looking at opportunities to

beneficially reuse or sell the salt commercially. If no option can be found, the salt will be sent to an EPA licensed landfill for disposal.

5 I'm surprised a sophisticated company wanting to proceed to production has not investigated these options prior to the IPC hearing and included a detailed management plan. How difficult would it have been to make 11 phone calls to the 11 landfill sites that are within the 200 kilometre - required 200 kilometres of the Narrabri project, as required by the EPA? Santos predict there will be 47.5 tons of salt every day for the next 25 years.

10 In a press release in the Northern Daily Leader on July the 7th, Santos announced that they had signed a memorandum of understanding with an American firm to convert the waste by-product into sodium bicarbonate, commonly known as baking soda. Kevin Gallagher, from Santos, said the company had been working with the 15 US firm, Natural Soda, for 12 months to create a commercially viable model for creating sodium bicarbonate industry for Narrabri.

20 I compared the 2015 Santos document water quality parameters for produced water and world health organised and the World Health Organisation's drinking water standards. Sorry, the recommendations. Sodium is 17 times higher than - in Santos's produced water than allowed under the World Health Organisation. Aluminium's five times higher, ammonia 80 times, arsenic three times, chromium four times, thenal six times and, most concerning, cadmium, a hundred times higher than WHO 25 drinking water guidelines. There's also carcinogenic total petroleum hydrocarbons present. There is no environmental impact statement for the management of produced water. I have not found any documents indicating that Santos have informed the public regarding the efficiency of the Leewood reverse osmosis plant, and removing contaminants from the produced water.

30 Will the water or the sodium be contaminated with these contaminants? What contaminants will be in the water for beneficial use? Assuming that the reverse osmosis is efficient and removes all contaminants, these contaminants are then in the brine. Does Santos have a method of removing heavy metals and hydrocarbons from 35 brine? I'm not keen to bake a cake with cadmium and other heavy metals and Natural Soda baking soda.

40 While completing a ceramic certificate at TAFE in glaze technology, students were not permitted to remove the lid from cadmium containers until using a dust mask with the correct filters, an apron and gloves. I learned to treat cadmium with great respect.

45 Santos used the Leewood water to irrigate a crop adjacent to Leewood in 2018. I viewed this crop in February '18 and would describe the crop as a failure. There was a lot of bare ground and a weak patchy crop of lucerne. Don McKenzie, a Coonamble farmer, stated that:

I would be disappointed in the way this crop is growing. I've seen better dry land crops of lucerne.

5 Santos have not complied with EPA's recommendations about site specific soil surveys, nor with ongoing monitoring when employing irrigation to dispose of their waste. Neither have they complied with the EPA's request for monitoring a trigger system to watch for toxicity in Bohena Creek as a result of treated water discharge.

10 For nine years I have had major concerns about the integrity of the Pilliga and the future of the surrounding farming. In 2015, I wrote the book 'The plundering of Pilliga and Leard forest and surrounding farmlands'. I'm grateful to the Armidale branch of NPA for contributing to the printing costs. I will include a copy of my book as part of my submission. Thank you.

15 MR O'CONNOR: Thank you, Pat, for that submission, and our apologies. We had a bit of a rocky start there.

MS SCHULTZ: Thank you.

20 MR O'CONNOR: Now, our next presenter, please.

MR HANN: The next speaker is Margaret Fleck from the CWA Tambar Springs branch. Ms Fleck.

25 MS FLECK: Hello, and thank you for the opportunity to present to the commission on behalf of the Tambar Springs branch of the Country Women's Association of New South Wales. I begin by acknowledging and paying my respects to the Gamilaraay people, the traditional owners of the country on which I stand today, recognising their continuing connection to land, waters and culture. I pay my respects to their
30 elders past, present and emerging.

Members of the Tambar Springs branch of the Country Women's Association strongly object to the proposed Narrabri Gas Project because it is inconsistent with the aims of our association. The CWA exists to amplify the voices of rural women,
35 to help improve health and educational facilities and to increase the viability of rural communities including for advocating for environmental reform.

The policy of CWA of New South Wales is to support a ban on unconventional gas exploration, extraction and production because we are concerned by the risk to the
40 health of our communities, potential damage to the environment and further exacerbation of the climate crisis. The CWA calls for this project to be rejected and for a ban on coal seam gas extraction in New South Wales.

45 The Narrabri Gas Project is extremely likely to have severe detrimental effects on the health of the people of north-west New South Wales who have effectively been made, so to speak, canaries in a gas mine. The New South Wales government has introduced exclusion zones around residential areas and industry clusters in the

Upper Hunter, banning new coal seam gas activity within a two-kilometre buffer. However, coal seam gas wells are permitted to be placed within 200 metres of rural residences. Clearly an isolated rural family would be as much affected by a gas development as particular members of the community. It is nonsensical to suggest
5 that 200 metres is adequate protection for a family while a two-kilometre buffer must be provided for a town or village. Farmers have been made an underclass of people whose health will be sacrificed if the Narrabri Gas Project is approved.

10 The absence of a safe solution to the toxic waste water management problems and a high risk of spills pose a serious health and environmental risk. Research has shown that surface spills are an important path to ground water contamination. Ground water is essential to the operation of agriculture in the north-west of New South Wales. Contamination of our ground water would destroy communities, livelihoods and food production.

15 Significant and dangerous air pollution is created by unconventional gas development as shown by research published in 2018, describing a dramatic increase in emissions between 2007 and 2014 in the Surat Basin in Queensland. This increase in emissions correlated with significant increase in hospitalisations for acute
20 respiratory conditions and acute circulatory conditions. This must be further investigated before further conventional gas development is considered.

CWA members oppose the Narrabri Gas Project because it will contribute to the climate crisis which is destroying our environment, our communities and our
25 livelihoods. Members of the CWA are part of our rural communities. Cattle farmers, cotton and grain growers, accountants, doctors, shopkeepers, and we see the damage caused by global warming at first hand. We live the rising temperatures. Farmers have to work fewer hours out of doors because of the increased risk of heat stroke. We live the increased severity and frequency of droughts, having just come
30 through the worst drought in living memory. The fear and expectation of another is always with us.

We see changes in pests and diseases as they move into new regions as a result of global warming. The climate crisis is a constant reality in our lives. Development of
35 unconventional gas reserves is marketed to rural communities as providing employment as though that compensated for destroying people's health, communities and livelihood. Renewable energy projects create more jobs than fossil fuel projects without risking our ground water, and food and fibre producing regions or the people in communities that live in them.

40 The New South Wales government has declared it is committed effective action on global warming so it must act urgently to stave off disaster, reverse the trends and avoid the worst possible outcomes of the climate crisis. The Commission's integral role in upholding the integrity of the New South Wales planning system must result
45 in the Narrabri Gas Project being rejected as drastic reductions in emissions are required if this State is to take effective action to halt climate change. Thank you.

MR O'CONNOR: Thank you, Margaret, for your presentation. We move on to our next speaker now.

5 MR HANN: Hello. Our next speaker is Faye Heywood, who's from the CWA Manilla Evening Branch. Ms Heywood.

10 MS HEYWOOD: I would like to acknowledge and pay my respects to the Gamilaraay people on whose land we are and to their elders past, present and emerging and acknowledge their care of country. I speak on behalf of the Manilla Evening CWA branch and the other 18 branches of the Namoi group CWA. We are directly impacted by Santos's planned gas production in the north-west of New South Wales. We have a wealth of familiarity with what is going on and we strongly support the policy of the CWA of New South Wales that there should be, quote, "A
15 a ban on unconventional gas exploration, extraction and production". This industry is a real threat to the water, health and livelihoods of vast numbers of people in this area.

20 In October 2019, six Santos employees took CWA members on a bus tour of the Narrabri coal seam gas facilities. We were concerned to learn that no expert environmental officer nor hydrogeologist reside locally but are flown in from Brisbane. We were encouraged to ask questions but not all our questions were answered. Some were answered unwillingly, under pressure and some answers were definitely questionable given the information that's available in the public arena.

25 Initially constant stress was made by the employees that New South Wales is so different from Queensland. Narrabri's just different. Eventually they admitted that this was because of the geology of this area and that the produced water from Narrabri is higher in bicarbonates. The grass project here was described as a boutique gasfield. It has the petroleum exploration licence PEL 238, and this is,
30 quote:

35 *The only PEL with onground, exploration activities that Santos have carried out since 2013. However, Santos has individually and in joint ventures, 12 PELs in New South Wales although only PEL 238 is currently working. There is ample evidence that NGP is just stage 1 of a succession of six more proposed gasfields in north-west New South Wales.*

40 The Narrabri project is just the tip of accessing some of the best farming country in this region. Viewing of the Bibblewindi spill site eight years into its regeneration rebuild, very little foliage away from the road and wattle species only in a scattered fashion. To quote, "Even though the Pilliga has been allowed to regrow", end of quote. No Cyprus pine regrowth was evident, just mostly bare compacted earth, not even weeds. Yet Ron Anderson, manager of all the rehab sites claims that, quote:

45 *To-date we have had a level of satisfaction with rehabilitation of the Bibblewindi spill site.*

End of quote. Santos had not applied to the EPA or resources department to have any regenerated spill site signed off and it was further claimed that there are not many spill sites in the Pilliga. Eastern Star Gas was blamed for all spills and none had occurred under Santos's management, over 20 are known.

5

Dave Gunnell, the hydrogeologist, admitted that sulphate reducing bacteria are typically a problem in water bores but only when, dot dot dot, his additional information contradicted scientific facts about where these bacteria live such as coal seams, and their corrosive effects. We were then told there are zero seismic activity as in this area. This was retracted when one member on the bus provided evidence of two earthquakes in 2019 and we were informed there was a zero per cent chance of disturbance in an earthquake as there are no faults, this despite the fact that GISERA has a research team looking at faults, one along the Bohena Creek and looking at whether there is any connectivity between the Great Artesian Basin and the Gunnedah Oxley Basin. Recent research is pointing to there being connectivity between the two.

It's not in the public interest that a company like Santos be allowed to proceed with a project that is already creating major waste problems, the contaminated water, the salt and the drill cuttings. They still have no possible solutions. Chemicals added to the treated water make the sodium content and pH higher than the soil it's put on and make it unsuitable for firefighting. Santos agreed, quote:

Bushfire risk is one we're aware of.

25

End of quote, and that flaring in very windy conditions went be a problem as the flare is, quote:

... way above the canopy of the trees.

30

This is a breathtaking fallacy as the tree canopy is not below flares. They have refused the rural fire services request for flares to be turned off during catastrophic and extreme fire rated days and think cameras are a substitute for fire prevention. This informative tour raised many doubts about the degree of trust the public can place in Santos's modes of operation. They're denying of scientific evidence and also the need for accepted and some independent monitoring practices in regard to soil surveys, fugitive gas emissions and water leakage will continue to exacerbate environmental problems, pollution, damage to endangered ecological communities and probably cause significant destruction to the 16 identified indigenous sites. Thank you for your time.

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MR O'CONNOR: Thank you, Faye, for your presentation. The next speaker is Elizabeth O'Hara from the Wando Conservation and Cultural Centre. Ms O'Hara, go ahead.

45

MS O'HARA: Thank you. We acknowledge elders past, present and emerging of the Gomeroi, the traditional custodians of this land with whom we are engaged and

struggle against this proposed gasfield with its 850 new coal seam gas valves across 1000 hectares in the north-eastern part of the Pilliga forest near Narrabri, covering much of the forest in devastated patches and interconnecting infrastructure, more than four times the size of either of the previously approved CSG projects in New South Wales.

Wando Conservation and Cultural Centre has been involved in the conservation and protection of the Pilliga forest since 2016. Wando has made presentations to Narrabri councillors, hosted stalls at the gypsy markets, instituted GIPAs, such as GIPA 553, concerning the transfer of prime permeate water or waste product from Leewood treatment facility to a third party mine and GIPAs 482 and 560 concerning Santos's annual returns and reports. Big tracts of development of infrastructure, usually associated with loss of public abscess, through our forest, sponsored a forum on the health impacts of CSG in Narrabri and hosted a tour of the Queensland gasfields. None of these activities suggest this project is in the public interest.

Wando participated in the Narrabri coal - door knock that established, when able to answer, without fear of reprisal, over two-thirds of residents in the town were opposed to Santos's project, a figure borne out by an analysis of the local submissions to the EIS in May 2017 when 63 per cent of Narrabri locals objected to the project.

In passionately opposing this project, Wando knows it speaks with the same voice as traditional custodians, landowners and the majority of towns folk. Wando will examine three concerns of the many raised by the project and the report. The potential for unlocking a virus-like spread of the CSG across the north-west, the department's assertion that the project is critical for energy security and reliability in New South Wales, and our contention that the project must not proceed until after the full implementation of all 16 of the chief scientist's recommendations.

Wando is based at Maules Creek in petroleum exploration lease PEL 1 which stands next in line for devastation should the IPC approve this, the first of seven gas projects across the north-west, over 4.5 million hectares for Murrurundi to the Queensland border, slide 1 I think shows that. This slide shows an artist's impression of the future of this area should this project initiate the cancerous creep of CSG across our region. It's based on the experience of the Dauby State Forest in Queensland from 1991 to 2016.

Maules Creek declared itself gas free in November 2019 following a survey of all landowner holders. 98 per cent of land holders near Narrabri oppose CSG and land holders across more than three million hectares have declared they will fight to stay CSG free. However, PEL 1 is under serious and imminent threat.

Slide 2 shows that Santos already refers to this land as theirs in communication with shareholders as shown in the slide, from a shareholders investment seminar in 2014. Two companies are involved in PEL 1 and PEL 12, Santos and Carbon Minerals. I refer now to an article posted by North West Protection Advocacy in April 2020:

5 *Carbon Minerals and recently informed shareholders and the ASX that they intend to pursue a works program in 2020 that includes bringing in a work over rig to attend to four coal seam gas wells within PEL 1 and PEL 12 and the installation of relevant infrastructure to enable production testing for up to six months and to do seismic work.*

10 The company has flagged for this work to occur throughout 2020 and the ongoing activity to commence in a quarter three 2020. Santos has a strong 65 per cent interest in the petroleum exploration licences and this recent communication from Carbon Minerals suggests that Santos is still very much interested in the Liverpool Plains, despite saying otherwise publicly, and I quote Mr Kevin Gallagher, Santos CEO:

15 *We have no plans to draw wells in the Liverpool Plains. The Narrabri Gas Project is contained. Our plans are simply not to drill in the Liverpool Plains.*

20 Carbon Minerals has stated it expects that New South Wales PEL titles it holds will be renewed by the end of quarter two 2020. We have a clear case here of two public companies involved in the same venture contradicting each other. At least one of them is not disclosing honestly to its shareholders.

25 Department's report is deeply disturbing, as we've heard a number of times already today. The assertion contained in the executive summary of the report that the Narrabri gasfield is critical for energy security and reliability in New South Wales as it would, among other things, provide essential gas supplies to the domestic market to address forecast shortfalls from 2024, and the implication that coal seam gas is a transition fuel is nothing short of an embarrassment.

30 As Cullen Foote reported on June 5th, 2020, the COVID commission and liberals and nationals in New South Wales are forging ahead with plans to open up Narrabri for coal seam gas. This is despite warnings only a day ago that the global glut could force natural gas prices into negative. The science telling us clearly that for the sake of the planet we need to move on from fossil fuels especially given that renewable energy can compete on cost with oil, coal and natural gas fired power plants.

35 Figures showing that fugitive emissions from natural gas production are driving massive increases in greenhouse gases and the fact that domestic gas users are massively price gouged because the east coast gas market is controlled by a cartel of three producers who starve the domestic market to force up prices and make super profits. Meanwhile overseas buyers of Australian gas pay far less than the domestic buyers do. Australia is the biggest expert of natural gas in the world but Santos, the oil lobby, APA, and media allies still claim the need to increase supply. As Bruce Robertson, from whom we'll hear more on Thursday, from the institute of energy economics and financial analysis has said in a paper earlier this year:

45 *The oil and gas industry slick public relations machine has entrenched in the Australian and global psyche the notion of gas as a bridge or transition fuel and the perfect accompaniment to renewables to provide power when the wind*

5 *doesn't blow and the sun doesn't shine. This refrain has been enthusiastically taken up by State and federal governments. Gas producers are particularly keen on reinforcing this with Santos claiming, in its 2019 results, natural gas has a key role to play in a lower carbon future as it produces 50 per cent less greenhouse gas emissions than coal when used to generate electricity, can significantly improve air quality and is perfect partner for renewable energy sources.*

10 Nothing could be further from the truth. The evidence that we must take greater account of methane, it's released in the atmosphere as a result of activities associated with CSG, and its impact on climate change is overwhelming. Today, we will draw just on one resource and draw that to the commission's attention. An ABC news report:

15 *FLIR camera reveals venting methane in the Queensland gasfields from the 28th of February 2017.*

The report begins with Tim Forcey's chilling comment:

20 *We could be looking at a potential climate disaster here. We just don't know. It's hidden, invisible, unmeasured.*

25 Forcey observes that methane is a powerful greenhouse gas, up to 80 times more powerful than CO₂ which causes most concern about climate change. The report follows Forcey as he uses an infrared camera to show large volumes of methane being vented directly to the atmosphere and raises the probability of gas being depressurised from coal seams, migrating large distances underground before breaking into the atmosphere.

30 The report raises many questions about Australia being able to meet even the modest targets we signed up to at the Paris Accord. Further, a team of scientists from Southern Cross University have reported spikes of up to 6.5 parts per billion inside gasfields when outside the fields a reading of 1.7 parts per billion is expected. It's deeply disturbing that the Department of Planning subscribes to the
35 misrepresentation that CSG is a transition fuel, in its report. This is the same Department of Planning that we read in its report has recommended a comprehensive suite of strict conditions.

40 Commissioner Hann has heard in detail Wando's experience with the department's strict conditions in our recent appearance at the Vickery extension hearing. Our experience means we can have no confidence that the department will in fact insist on strict conditions, that it will be able to enforce compliance or that it will not engage in the practice of retrospective approval and the observation must be made that as the department has shown it can't regulate sound and dust, how much more
45 rigorous must the baseline be for approval with something that can't be heard or seen but exacerbates climate change so drastically; methane gas emission.

Five years ago the New South Wales chief scientist report made 16 recommendations which the New South Wales government undertook to implement. To-date, only two of the recommendations have been fully implemented. Wando urges that the Independent Planning Commission requires one condition before permitting the New South Wales government of planning to contemplate this project go ahead and that is the full implementation of all 16 of the chief scientist's recommendations. Thank you.

10 MR O'CONNOR: Thank you for your presentation, Elizabeth.

MR HANN: The next speaker is Nicole Hunter from the Coonabarabran Swimming Club. Ms Hunter, go ahead.

15 MS HUNTER: Thank you. Thank you. My name is Nicole Hunter. I'm a mother of three young girls living in the foothills of the Warrumbungle National Park neighbouring the Pilliga. I'm speaking on behalf of Coonabarabran Swimming Club. The vision for our small club, with Swim Australia, is to present a fun, engaging, educational swimming experience that produces a nation of safer, smarter and stronger swimmers. But the thousands of volunteers who coach, attend, organise, 20 facilitate kids' sport, were unified with a goal; the health, education, engagement and well-being of our children. We inspire and support children to be the best version of themselves. Maybe they too will return and contribute to the community which nurtured their childhood.

25 Coonabarabran Swimming Club strongly objects to the Pilliga CSG project. With just five minutes, I'm talking to you from the hearts of a thousand mothers across our region desperately concerned for the future of the children we raise in our small rural communities. Pardon me.

30 In a world where we ask our children to reject, recycle and reuse, how is it possible this project has even become this far? In a world where climate change is on the many children's television programs and podcasts, in the school curriculum, a normal consideration, the daily decision-making, why on earth is the department of planning, infrastructure and environment considering approval for a gasfield to cover inland 35 New South Wales?

Prime agricultural land and emerging hope in tourism, endangered species, Aboriginal significant sites and ecosystems that feed river systems across states. Our children are excited by the invasion of renewable energy projects, environmental 40 science developments, participating in grass roots activist movements, conservation of habitat to protect flora and fauna, particularly post bushfire, and planting trees.

While our kids are taking more action now than ever before, you are considering a massive fossil fuel operation in the State's last ancient, temperate woodland and a 45 koala habitat. I ask of our government how they expect the youth of our nation to trust them and to trust in the process for such contradictory, mixed messaging. In the

uncertain time of COVID 19, health is a focus for us all. My husband and I are both health workers.

5 Impressed by the rapid response from our government and our colleagues, our capacity to pull together for the benefit of all is overwhelming. Together we can do many great things. I'm horrified our region is part of the national COVID commission gas fired economic recovery plan. Surfacing from the worst drought we experienced nationally, our town was one of the many who simply ran out of water. Our well ran dry.

10 Children missed school as they helped on the farm supporting their parents. With five emergency bores drilled to feed our town, how can we survive the next drought when the water table has been reduced to further .6 of a metre, as stated very conservatively by Santos and the department of planning, infrastructure and environment summary I quote:

The extraction of 1.5 gigalitres of saline water each year is predicted to result in the annual leakage of a maximum of 60 megalitres of water a year from the shallower aquifers, our aquifers, in about 200 to 250 years.

20 That's the future generation's aquifers, which is a low volume of water compared with the 165 gigalitres of water currently being extracted from its aquifers by other water users each year. Sixty megalitres of water lost to leakage could mean everything in 200 years with our changing climate. This is intergenerational inequality in its highest form. I'm outraged by the statement and attitude.

30 We are unable to trust in the process guiding this gasfield due to the very poor regulatory compliance over the past eight-year we have known of Santos's CSG activities in the Pilliga. The failure to meet the recommendations of the chief scientist to the officer. This is unacceptable risk to our land, water, health and grossly unfair betrayal of our children's trust and intelligence. There have been spills, reported leakages, implosion of high-pressure vents, hydrogen sulphate and core rehabilitation. We have seen them all.

35 I have door knocked and surveyed my valley. 93 per cent say no to CSG. Door knocking Narrabri, over 60 per cent say no to CSG. 97 per cent support renewable energy for Narrabri. 104 north-west gasfield free communities over 3.2 million hectares have declared themselves gasfield free. Santos does not and will not have the social licence they seek.

40 The renewable's report from Narrabri demonstrates that you can have abundant affordable energy just using 4 per cent of the proposed land for the CSG project, provide more long-term jobs that would not disappear in five years, use no water, no by-product, an entirely local workforce and lead the way for other communities in rural New South Wales to produce energy for New South Wales.

You are asking our children to accept and trust another fossil fuel project when they know fossil fuels is over. We ask you to reject this project and trust in new energy industries starting today with consideration and confidence in our future generations. Thank you very much.

5

MR O'CONNOR: Thank you, Nicole.

MR HANN: Our next speaker is Naomi Shine from the Lismore Environment Centre.

10

MS SHINE: Hello, Commissioners. I speak in support of the traditional custodians of this incredible place, the Gomaroi and Gamilaroi peoples and acknowledge their ancestors, their elders, their youth, their knowledge and their continuous connection to country through millennia. I speak in support of the North West Alliance, the Environmental Defender's Office and the experts, scientists, economists and medical

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doctors who are making a case against this project. These scientists and experts are numerous and they are correct. This project is dangerous to human health, to the climate and to the ecosystems we depend on.

20

The Pilliga forest is the largest, most intact remnant and the most important core habitat for threatened species in the region. It is a national biodiversity hot spot, it is also home to amazing cultural heritage sites. The recent review of the environmental protection and biodiversity act found that Australia's environment is in an unsustainable state of decline and laws set up to protect unique species and habitats are ineffective.

25

The assessment report indicates to me that this lack of custodianship will continue. Santos will be unable to find evidence of the biodiversity and cultural heritage within its operation. The community has lost trust that koalas and other species are looked for, accounted for and adjusted for by such companies.

30

Santos's business model is underwhelming. They are offering a very raw deal to locals, "Let us poison and desiccate your countryside and add to global heating and fire risk in exchange for 200 jobs for 20 years". This is not ecologically sustainable development. Tourism and agriculture are.

35

The business model is flawed and the tide of the market and the tide of the media and public opinion is turning. Destructive, toxic, extractive projects that require expensive infrastructure that also pollute the land, air and water are no longer good business. Fossil fuels are being divested from continuously all around the globe. Oil behemoths are selling off and changing direction. On shore unconventional gas is just too expensive to produce, as Bruce Robertson will tell you in a few days. Renewables are cheaper to produce. All the State energy ministers are on board with renewable generation goals and zero emissions targets, as they outlined at last week's Clean Energy Ministerial Forum put on by the Clean Energy Council. This is the way forward.

45

The aim of Santos in the assessment report to facilitate the extension of the existing gas pipeline network to northern New South Wales and bring it closer to strategic gas supplies. This aim goes against the aspirations of most people in New South Wales to take action on climate change, to transition to renewables, not gas, to planned or
5 increased natural disasters and all the other effects of increasingly rapid climate change. Farmers don't want pipelines, consumers don't want destructive gas and business investors are turning away from fossil fuels.

10 Land clearing and hydrology disruption from pipelines, water processing plants, holding ponds, well pads, well heads, compressor stations, cost us precious time. This is a turning point. We need to preserve existing native vegetation and proceed to restoration of forests, wetlands and landscapes in order to effectively ameliorate the climate change. This is the turning point.

15 We can generate jobs in preserving life on earth through foresting and working with the landscape and water cycles in new and clever ways or we can continue with extracting industry that would be life denying and potentially destructive of all life on this planet.
20 I'm listening to scientists, all the amazing research into the way our planet functions, a huge body of knowledge that is coming to increasingly alarming conclusions.

For example, the recent report shows that climate tipping points are happening much more quickly than anticipated. We might already have crossed the threshold for a cascade into related tipping points. The risks are now much more likely and much
25 more imminent. This is from a research report called 'Climate tipping points are too risky to bet against', with the subtitle 'The growing threat of abrupt and irreversible climate change must compel political and economic action on emissions'.

30 This is not a disproportionate concern. This is a difficult to face reality and is starting to exercise the minds and hearts of many. I urge you to consider the reality that the scientific community is really worried. There is consensus that the planetary system is under immense pressure and the future is uncertain and it is high risk to continue the way we are going. In the comprehensive Australia - - -

35 MR O'CONNOR: No. Could you please wrap up now, thank you?

MS SHINE: Okay. Climate change requires us to act it and can be done. We can do it. But we've got to say no to new fossil fuels. Thank you for your time.

40 MR O'CONNOR: Thanks for your submission. I think we now have Mr Brian Hannigan from the Benah Partnership. Mr Hannigan.

MR HANNIGAN: It's Brian Hannigan here. I would like to thank you for the opportunity to speak here today. I'm a 63-year-old farmer from Coonamble that is
45 involved in a family run business producing beef cattle and crops. I have lived in the area all of my life and I see this as a critical time to show my concern for the future

of the Great Artesian Basin which supplies our only permanent water. The DPIE's final assessment report concluded that the project, and I quote:

5 ... has been designed to minimise any impacts on the region's significant water resources, including the Great Artesian Basin.

End of quote. Throughout the report, words such as minimise, approved methods for the modelling, the risks of the project can be reduced further by, could be addressed, some uncertainties, world's best practices, adaptive management, these words, in my
10 mind, are careful language and, be very blunt, just wears the words that have been put together by a polished, well paid public relations outfit with a desired outcome in mind for the department. This report does not instil any confidence in me and the process reminds me of a school debate where the report is the affirmative argument. The submissions you are hearing and reading are the opposition in the debate and
15 come from people in unpaid positions that largely are unconnected with each other, only that they have a common concern, really a David and Goliath affair.

The DPIE's assessment report has taken advice from GISERA, which is an alliance between CSIRO, governments and five gas companies, including Santos. GISERA
20 is not an independent body at arm's length and has the disturbing conflict of interest. The CSIRO's integrity is now, unfortunately, permanently compromised by its relationship with the gas industry.

In our area, most of the farms and towns draw their water from bores and if the
25 proposed gas project was to depressurise our bores, we would be left in a real mess. Reports out of southern Queensland indicate that 522 bores have already been affected. I know of two bores in the gasfield regions of Queensland that have been depressurised with the onset of the industry. The bores are on properties owned by friends of mine and I've spoken with them about their problems. They confirm that
30 other bores around them have similar issues.

I trust that you guys have been into the gasfields of Queensland and spoken to those affected and not just taken what is commonly known as a Santos sanitised tour. I have heard lots of concerns from our friends and the wider community and have been
35 involved in a door to door survey to establish what support or opposition there was to having gasfields out our way and the result of 96.34 per cent against in the Coonamble district was an eye opener to us all. This survey was done six years ago, and I suspect if we revisited it here today, it would be a lot closer to a hundred per cent. The industry simply does not have a social licence to operate. That was
40 confirmed in the most recent State election where, in our electorate of Barwon, the National Party who support the project, lost the seat to the fishers, shooters and farmers for the first time in 69 years.

A real concern of many of the speakers yesterday was the fact that AIG, one of the
45 biggest insurance companies in Australia, have announced they no longer will provide public liability cover if CSG infrastructure is on the property. The APA group were proposing to put a gas pipeline approximately 8.3 kilometres diagonally

through the best of our cropping land, 500 metres from our home. Along with most of the other farmers on the proposed route, we will be giving no access. Our business simply needs public liability cover.

5 I put it to you that if people in a city suburb were asked whether they were happy about having a nuclear power plant near them, even with world's best practices and other assurances that may be given, they should still have the right to say no, just as we are here. We all know which way this decision would be going if those making the decision were held personally responsible for the outcome, much like the bad
10 decisions made in war time but as that is not the case, those that are impacted by this decision will have to rely on the decision-maker's conscience to play a part and, like Dr Garry Lyford said yesterday, we also have a grandson that is counting on you getting it right. Thank you.

15 MR O'CONNOR: Thank you, Brian, for your presentation. That's fine. Thank you. We have next speaker is Anna Christie from the Leard Forest Research Node. Please go ahead, Ms Christie.

MS CHRISTIE: Hello. Thank you. I acknowledge and honour the Gomerioi
20 traditional owners of this land and offer my respects to the Gomerioi elders. Yesterday, the Commission heard from Councillor John McKenzie of Newcastle City Council. Today I wish to build on the comments made by him, providing you with some pertinent information derived, in part, from the field work of our citizen science group, the Leard Forest Research Node.

25 I would just like to point out, though, unless I misheard, that Councillor McKenzie appeared to be referring to now superseded estimates of the solid waste that would be produced at Leard water treatment plant. The total salt volumes from Narrabri gas are now estimated to reach 840,000 tons over the life of the project, according to the
30 assessment report, whereas previous 2017 estimate was 430, 500,000 tons of salt over 25 years. That is a very large increase in predicted waste, nearly twice as much as stated in 2017. On the face of it, there is no evidence that supports the claim that crystallised brine from coal seam gas extraction should be treated as non-putrescible general solid waste as claimed by Santos and the Department of Planning, to be
35 disposed of at any old non pute landfill.

In our estimation, claims by Santos and the department that the crystallised brine would be acceptable, non-putrescible general solid waste are unsubstantiated. They're fanciful and they're not based on evidence. Based on the opinion of the
40 independent expert scientific committee who said that, quote:

Complicating storage and disposal is the likelihood of metals and radio nuclear tides in the waste.

45 This raises the possibility that the waste may have to be classified as hazardous waste yet the assessment report ignores the fact that concentration levels of some

compounds of interest in the produced water and their fate in the treatment process are not provided in the Narrabri Gas Project EIS.

5 The designated procedures relevant to Santos's crystallised brine, the New South
Wales waste classification guidelines, have not been undertaken. The secretary's
environmental assessment requirements for this project refers to the necessary
environmental planning instruments, guidelines and policies which should be
10 complied with as well as a general requirement of a waste management strategy
having regard to New South Wales environmental protection authority's
requirements. This is a strategy, not even a plan.

Details of the proposed disposal of the crystallised brine should be agreed ahead of
approval, not after approval. However, we have seen how the Department of
15 Planning constantly shifts this and other decisions into the future after approval and
that is not how you apply the precautionary principle. And just a brief word on the
precautionary principle which we understand the meaning from in New South Wales
from Telstra Corporation and Hornsby Shire Council, it has been enunciated in
various forms, but one thing is common to all those forms. It is based on risk
20 weighted decision-making. It's not based on opinions and general suppositions.

Our group, the Leard Forest Research Node, has extensive experience monitoring
coal and gas mining activities in the Namoi Valley and we assert with confidence
and can back this up with lengthy sources, that post approval regulation of these
25 developments is abysmally lacking due to uncertain, vague and subjective consent
conditions which we observe to be the case also in the Santos draft conditions, and
the ease of obtaining consent modifications, made easier subsequent to the
productivity commission report and the process of adaptive management, which is
endorsed by the Department of Planning and is a catch-all provision to allow
30 changes, responding to changing conditions. The EPA has stated it supports the
recommended conditions. According to the assessment report, quote:

35 *Following detailed investigations into waste, the EPA has no outstanding
concerns about the project and the project is predicted to comply with the
relevant standards and criteria and any residual issues can be addressed
through the recommended conditions.*

Thus the EPA appears to be predicting, without evidentiary basis, that would be the
result of a proper consideration under the Waste Classification Guidelines. The
assessment report does not mention the list of chemicals of particular concern, or
40 COPS, referred to by the water expert panel. The presence of these substances
should trigger a responsibility under the New South Wales Waste Classification
Guidelines to undertake chemical assessment in the form of specific contaminant
concentration testing of the crystal waste pursuant to step 5 of the guidelines. This
assessment should have been done for the IPC's assessment and not some time in the
45 future, post approval.

Under the Waste Classification Guidelines, if a waste has not been classified under steps 1 to 4, which the brine has not, then waste generators must chemically assess their waste in accordance with step 5 to determine the waste classification. That's at page 6 of the guideline, and I quote:

5

If the waste generator does not undertake chemical assessment of the waste, the waste must be classified as hazardous waste.

10 So we have a situation here where we would argue that the onus of proof is now reversed and it is for Santos, now, to demonstrate the safety of its waste rather than the contrary. The Waste Classification Guidelines also say that generators of waste must select the chemical contaminants that are known to be present or are likely to be present in the waste and this may be informed by the site activities, site history or the processes which produce the waste. I won't read the whole guideline out to you
15 but suffice to say that this industry, like all other industries, should be complying with the New South Wales Waste Classification Guidelines.

Now, despite the fact that none of these procedures appear to have been conducted, the DPIE assessment report at page, italics, 14, states that Santos proposes to send all salt recovered during the water process to a licensed waste facility and it can
20 routinely be disposed of at one of the 11 licensed waste facilities within 150 kilometres.

Just to make this a bit visual, I've prepared a small infographic, just showing some of the towns that are possibly the destination of this waste, and one, I don't know if you can see those slides now, but you might want to ask some of the people of some of those towns what they think about being the site of disposal places that are within a stone's throw. But I do hasten to add, and I'm off script at the moment, to say that in questions to Santos last October, I was told that they were looking at a facility near
30 Sydney to dispose of the salt which does seem really fanciful as well.

Now, under the secretary's environmental assessment requirements, under coal seam gas waste management, Santos was required to discuss in its EIS, the proposed storage, management and disposal of coal seam gas produced water and waste
35 products and that's not limited to but they talked about including beneficial reuse, reinjection into ground water aquifers, irrigation and disposal at a waste management facility.

Now, it seems that reinjection seems to have fallen off the agenda, but managed release into Bohena Creek, a magnificent, pristine, ephemeral sandy waterway is envisaged. Draft condition B35 requires the applicant must ensure the development complies with water management performance measures in table 6. But then when you look to table 6, you will see the words:

45

... as far as reasonable and feasible in relation to the beneficial reuse of produced salt.

These are words which we condemn, and we really urge the IPC to start to make a stand on the vague, uncertain and subjective conditions that have been habitually been placed into consent conditions of major projects by the department. So others have mentioned about the attempts to beneficially reuse this salt, but we do know
5 that there is a massive stockpile of unknown quantity currently being stored in Queensland. I just would like to suggest that, you know, if they can't deal with it in Queensland, are we heading for another stockpile here.

But I would just like to skip over talking about, you know, natural soda and the
10 MOU – which, by the way, happened to coincide with a tour of the gas project area by the IPC; people did notice that – I just wanted to have a word about the drill cuttings. Now, there is a proposal to leave the drill cuttings, which contain naturally occurring radioactive materials and chemicals of particular concern, in situ. And these will leak into the recharge zone of the Great Artesian Basin. This is deeply
15 worrying, and this is especially since the Narrabri Gas Project is only stage 1, and stage 1 alone will produce up to 1.1 million cubic metres of drill cuttings. We have – we know a bit about drill cuttings in our area because our group has studied the disposal of drill cuttings from the surface to seam to gassing activities from the nearby Narrabri underground mine. We have a slide which - this slide really has
20 been borrowed. It is a well-known image of the cross-section of the basin, and it was actually created to demonstrate the high CO2 levels so you might want to have a little look at that third further reason as well. But the reason I'm using it here is just to show the proximity of Narrabri Underground and where Santos is proposing to mine, and, well, we really ask are the drill – the composition of the drill cuttings
25 which are sent to Queensland, what makes the drill cuttings so different over in Santos.

So why we know quite a bit about it is that we discovered in some of our research that the drill cuttings from Narrabri Underground are going to Queensland. They are
30 then transported cross-border to a place called NewGrow, and that is a company that was subjected to a Queensland Government clean-up order in 2018 for accepting water laced with PFAS for beneficial reuse.

Now, I'm not trying to suggest that cuttings from Santos drilling are identical, but if
35 you have a look at them, you might want to question why it is that Whitehaven is sending these drill cuttings up to Queensland, and, well, anyway, I put that to you that there - - -

40 MR O'CONNOR: Anna, if you could please wrap up now, thank you.

MS CHRISTIE: Yes, indeed. So just to say in my conclusion, that the precautionary principle now calls on us to reverse the burden of proof. There is sufficient evidence there that this material, the crystallised brine, is not safe; it's not
45 general non-pure and should be treated as a hazardous waste or at least should go through the procedures in the New South Wales waste classification guidelines. Thank you very much.

MR O'CONNOR: Will you be making a submission for all of this?

MS CHRISTIE: Yes. I'll be making a written submission and provide references to some of this.

5

MR O'CONNOR: Yes. Thank you very much.

MS CHRISTIE: Thank you so much.

10 MR BEASLEY: Can I just ask you a question, Anna, before you leave?

MS CHRISTIE: Yes.

15 MR BEASLEY: You've mentioned, a few times in your submission, the precautionary principle, and you even mentioned *Telstra v Hornsby*.

MS CHRISTIE: Yes.

20 MR BEASLEY: I had a discussion with Mr Kitto from the department yesterday that – I may have been talking over the top of him, but he was explaining, I think, correctly, his view of *Telstra*; that is, that there's two limbs. The first of which, though, is there's got to be a threat of serious or irreversible environmental damage. And when we got to that part of the discussion with him – I'll have to check the transcript, but I understood his evidence to be, well, I don't – we don't think the
25 precautionary principle applies, because we don't see any threat of serious or irreversible environmental damage here on the basis of the expert evidence. Without giving you a legal test, I'm taking from your submission that you disagree with that first point; that there are threats of serious or irreversible environmental damage here that have to be considered in some way or another within the precautionary principle.

30

MS CHRISTIE: Definitely in relation to the drill cuttings. The idea of disposing the drill cuttings in situ in the recharge zone of the Great Artesian Basin definitely is – it's invoking. It definitely triggers the precautionary principle. And that's not just me talking. I've spoken to people who are expert in geology who have said, "We are
35 terrified at the thought that these drill cuttings containing norms would be deposited on site." So that's in relation to the drill cuttings. And then in relation to the precautionary principle in relation to the waste, well, I would say, given that the material is being stockpiled in Queensland, a place with lesser standards of environmental vigilance than New South Wales, I believe, and given that the IESC
40 has already stated that these chemicals – that these radioactive materials, and so on – are in there, this does warrant to go through a proper process, a transparent process, and the – you know, the precautionary principle, as I said, it has to be based on risk-weighted evidence, not - - -

45 MR BEASLEY: So if I was summarising what you want to put to the commissioners on the precautionary principle, it would be (1) there is a threat of serious damage; (2) there's scientific uncertainty about that; so (3) applying the

precautionary principle, you've got to put a precaution in place, and your submission would be to the commissioners, that precaution should be to not approve the project at the moment.

5 MS CHRISTIE: My – well, the first line of precaution should be that the proponent should have been required to undergo the step 5 of the Waste Classification Guidelines sometime about, sort of, six years ago, when they started doing this, because they've actually had many, many, years to do this. And they have failed to do it, and the department has not even required them to do it. And we are learning so
10 much about the department, which relies on – completely on the proponent's legal advice and now, it seems, also relies completely on their scientific advice in cases like this.

15 MR BEASLEY: All right. Thank you.

MS CHRISTIE: Thank you so much.

MR O'CONNOR: Thank you, Anna. I think we now have Ross Wiles. Mr Wiles, please go ahead and make your submission.

20 MR WILES: Thank you. My name is Ross Wiles. I am a resident and concerned citizen of Coonabarabran. I am also a founding of Pilliga Push and the NWPA. I acknowledge I stand on Gomeroi country. For over 10 years now, the people of this region have been nothing less than terrorised by the ongoing threat of coal seam gas mining in the area. I have watched many people's health, finances, their properties,
25 their mental stability, all erode over time. People have been researching, studying, educating themselves and others, and, not to mention, fighting CSG for so long, the impact is affecting the whole community in diverse ways.

30 From the Queensland model, most of us have witnessed the hardship farmers have been put through by overbearing gas representatives; names like Brian Monk, John Jenkyn, Joe Hill and, of course, George Bender, immediately come to mind. George, after many years of constant harassment and bullying from the gas industry took his own life. Unfortunately, if this project were to go ahead, I can foresee more poor lost
35 souls potentially taking similar action. Is the Commission prepared to sign off on more potential loss of life?

It has been said in previous submissions that the community will simply not allow this project to go ahead. For the last six years, we have seen many actions, protests,
40 blockades, etcetera, against the project. However, in my opinion, you ain't seen nothing yet. Former blockades and protest actions, projects have been cancelled on police reports of extreme ongoing violence and the potential for deaths to occur if the said projects were to proceed. This whole project has been built on lies, smoke and mirror tactics, deceit and corruption from the outset from all three tiers of
45 government, with names like Anderson, Humphries and Joyce associated, it really makes you wonder, doesn't it? If this project were to go ahead, you, Commissioners, will be signing off on the ongoing corruption and, therefore, considered complicit. I

seriously hope you consider these serious issues when you make your determination.
Thank you.

MR BEASLEY: Our next speaker is Peter Humpris. Mr Humpris, please go ahead.
5 Mr Humpris, can you hear me?

UNIDENTIFIED MALE: He's not here. He's not here.

MR BEASLEY: All right.
10

MR LANZINI: Sorry, guys. I'm Dan Lanzini.

MR BEASLEY: That's our fault. We're very sorry, Mr Lanzini.

15 MR LANZINI: That's all right. I

MR BEASLEY: I'm sure I pronounced Humpris correctly. It's just that you're not
him. Please go ahead and make your submission.

20 MR LANZINI: G'day, guys. I'm Dan Lanzini. I've been a frontline activist on
coal seam gas for seven or eight years. I've helped build every camp. The last camp
we built was Pilliga Push camp in Coonabarabran, where we had 450 stop work
actions on Santos and about 45 people arrested. That was in about a six or seven
month period, while they were building their water treatment facility at Leewood.
25 Now, the community has come together on this project to stop it in an immense way
that you've never even seen before. We've had generational farmers come out here
that have never even got a traffic ticket, and they've locked themselves to machinery,
trucks, and gone into the forest and spent the whole day locked to a drill rig. Now,
this has never happened anywhere in the world, guys. The next stage of this project,
30 if it goes ahead, is going to be mental. We're going to have more arrests, more of a
shit fight than you guys have ever seen, and you'll be complicit in that. Now, let's
talk about some of the ongoing - - -

MR BEASLEY: You're making some assumptions about what we've seen, but
35 keep going.

MR LANZINI: Yes. So let's talk about some of the – some of the ongoing
corruption that's going on out here with the Inland Rail and the Santos gasfield. So
Mr John Anderson, who's in charge of Inland Rail, he is the same bloke who sold
40 this project to Santos in the early-2000s for \$970 million. Now, he was working for
Eastern Star Gas. Eastern Star Gas was in charge of the project then. Eastern Star
Gas sold the project to Santos for \$970 million. Anderson was in charge of that
whole thing. Now, he's in charge of the inland rail. That inland rail's been diverted
through the whole forest. It cuts the forest in half, and it goes straight up the Newell
45 Highway to Santos's site called Leewood.

Now, this is the only thing that's making this project viable at the moment, which is a billion-dollar national infrastructure project that's going straight to – that's been diverted from its original route. It now goes straight through the forest. This is ridiculous, guys. This is just a National Party stooge, who's done over everyone out here for cotton, water, and now he's bringing in coal seam gas. That's just one issue. So where we go from here is, when you guys make your decision in the first or second week of September, we will be out here. We'll either have a celebration or a declaration, and that declaration will be a war declaration on this industry, and you will never see anything like that ever again. Cheers, guys.

MR O'CONNOR: Thanks. Okay. All right. Next speaker, please.

MR BEASLEY: I think the next speaker is Janet Watt. I hope that's correct.

MS WATT: I'm sorry.

MR BEASLEY: Ms Watt, can you hear me? Can you hear me, Ms Watt?

MS WATT: Yes, I can.

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

MS WATT: Okay. I'll read a verbal submission today from a good friend Sally Hunter. She was allocated only five minutes to speak during this hearing, despite dedicating a large portion of her life to this issue over the last six years, learning about the industry and its impacts, and sharing these learnings with others. These are her words.

Why would I want to spend my evenings at People for the Plains meetings? Why would I want to spend my Sundays at North West Alliance meetings? Why would I want to spend my free time writing hundreds of submissions? Why would I want to present yet another speech? Because I know this industry is trying to get its talons into the area and I haven't drunk the Santos Kool-Aid, and I still have faith in democracy.

I have sacrificed a lot in speaking out about gas. It has meant mine and my husband's prospects are reduced – job prospects are reduced. It has caused rifts with friends and extended family, and I have been publicly derided in the media, yelled at in the street, abused on the phone, ignored, spent many nights and weekends away from my children, and many a sleepless night. But all these sacrifices have been reduced to a five-minute timeslot. And yet the proponent, who has had many hours of one-on-one meetings with the IPC already, immediately has a dedicated 47-minute timeslot. But what is most galling about that is that Kevin will never have to live near his gas wells. He will take his \$11 million salary back to his clean watered, clean aired home in South Australia, and he will leave us to live with this mess. This doesn't feel like an equitable process.

My motivation every step of the way was simply that I wanted our region to improve, not regress. And I believe that the CSG industry reeks more havoc than the benefits it creates. I grew up on a property in Western Queensland near Roma. My parents' certified organic beef cattle property was under direct threat from gas wells that were popping up around us. There was no way they could maintain their organic certification with hundreds of vehicle movements a day during construction and the contamination risk during operation. They were approached a few times over the years by CSG companies, were threatened with tight timeframes to make decisions, had long legal documents to wade through, and implications for their business to research and consider. Finally, when they aired their wish to not sign an access agreement, they were told that that was fine because the neighbours already had, and they could directionally drill two kilometres under our farm anyway without our permission.

This compounded the stress that my parents were under to a point that they could not handle. My mum had an emotional breakdown, physically collapsing in the main street of Roma. When I picked her up, she was in a kind of walking comatose state. She couldn't handle crowds, bright lights, or loud noises, sleeping for days on end. My parents divorced and my dad sold our farm within weeks. CSG was the straw that broke the camel's back.

My husband, three sons, and I, have committed to this region for the long haul. We have a mortgage and we have our roots in the beautiful limey creek flats of Huntley. Even though we were pushed to the brink during the drought, having to sell down our cattle herd and leave the region to secure work, we still chose to come back and resume life here. We have personally committed to this region. Have you, Mr Gallagher?

Right now, our region is at a crossroads and I urge the IPC to consider this decision for what it is. The tick of a box for the Narrabri Gas Project is a tick for opening up gas fields across New South Wales. Santos has promoted seven gas fields, including one near us at Maules Creek. It will be a tick for industrialisation of a huge area of country. Dots on a grid map across creeks, up mountains, and through paddocks. Nowhere is protected once it begins. It will also be a tick for 64 kilograms per minute, every minute, during the entire project life, of toxic salts brought up to the earth's surface. No proper plan for its disposal, except a last-minute media release and a handshake with an American company. It will also be a tick for 2800 litres per minute, every minute, during the entire project life, of water pulled out of coal seam, causing depressurisation and a slow draw from the aquifers above. It will be a tick for desecration of bores across the region, just like the 574 bores predicted to be lost in Queensland over the next few years due to CSG. It will - - -

MR O'CONNOR: Janet, if you could please wrap up now.

MS WATT: So I'll just go to the end. In finishing, the team of volunteers spent their Sunday surveying more than 800 households in Narrabri town to ask if it was supported Narrabri gas fields. Only 24 per cent did. We also asked, "Do you

support a renewable future?" 98 per cent said they support a renewable future. A renewable energy industry for Narrabri Shire will create four times as many jobs as this gas field. And these jobs will be available when my kids are 40 years old and even when their kids are 40. This is the kind of future you can help us move towards
5 with your decision. I urge you to outright reject this project and free our region from division and damage. Thank you, Commissioners.

10 MR O'CONNOR: Thank you, Janet, for your presentation. That brings us to a short break. We will be back at 3.30. Thank you.

RECORDING SUSPENDED [3.19 pm]

15 **RECORDING RESUMED** [3.30 pm]

MR O'CONNOR: Welcome back. Our next speaker, please.

20 MR BEASLEY: Our next speaker is Laura Hartley. Are you there, Ms Hartley? We can't hear you, so - - -

MR O'CONNOR: It's not your fault.

25 MR BEASLEY: No.

MR O'CONNOR: Just hold there.

30 MS HARTLEY: Thank you, Commissioners. I'm privileged to speak - - -

MR BEASLEY: We can now.

35 MS HARTLEY: I'm privileged to speak on Gamileroi land and pay my respects to elders, past, present, and emerging. My name's Laura Hartley. I live in Coonabarabran, PEL462, and the Pilliga Forest is very much part of Coonabarabram's backyard. I want to point to the gaping hole in the assessment of social impact; that is, the physical, emotional, intellectual, and financial cost that has already been incurred by the coalition opposing the development, in some instances, for over a decade.

40 Farmers, environmentalists, Gamileroi community, teachers, engineers, tourism operators, health professionals, stock and station agents, young families, business owners, unemployed, part-employed, retired, chemists, astronomers, archaeologists, investing their intellectual capacities, their time and physical labour, making
45 sacrifices in their working and family lives, to extend their knowledge in depth and breadth across a multiplicity of issues, to ask and keep asking critical questions about coal seam gas.

- What was the total of early fracking done by Eastern Star, and what impact might that have had on the hydrogeology of the target area? What can we know about cement and steel eating bacteria, the biocides used to treat them, the history of well failures, the risk from abandoned wells? What's the relationship between the industry's debt load to three giant liquefaction plants, the global glut of gas, and the sudden willingness of Santos to supply 100 per cent of possibly the most expensive gas in Australia to the domestic market? Why is there still no serious plan for disposal of produced salts in brine?
- 5
- 10 How do we respond to the revolving door – how do we respond to the revolving door between extractive industry, politicians and bureaucrats? How reliable is Santos's estimate of future emissions, of the project's impact on night sky brightness? Where and from who will Santos acquire the necessary water licences to cover the water take over the possible 200 years of the project? How does the hyperbole around regulatory framework function to limit legitimate concerns, and how does that hyperbole match with the mystiques and emissions of the department's assessment? What's the of the proponent's prior behaviour? If you can't trust the proponent and the regulatory framework turns out not to have the superlative capacity to actually regulate meaningfully and convincingly over the lifetime of the project who and what suffers the consequences?
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- 20

Formulating these questions and many more, people have challenged themselves to become political lobbyists, researchers, community educators, to conduct surveys, a few trips to the Pilliga and to Queensland gas fields, to make films, host forums, petition and protest, address hearings and make submissions, all the time alert to the next polluting event. This, in addition to decades of citizen contribution to state-wide water, land, and biodiversity planning, including the large-scale studies and data sets referred by – referenced by the department.

25

I'm a average rural citizen, but, since 2000, I've been giving in such things as water sharing plans, a three long Brigalow South Bioregion Assessment, numerous catchment initiatives, ongoing land care stewardship and more. I'm tired. We're all tired. But I do believe that when there's a full quantitative and qualitative accounting, it will be as astonishing as the sight of methane leaking from almost every orifice of the Texas gas industry. Moreover, the phenomenon of this particular opposition is going to have implications for how we imagine and conduct future conversations between citizens, science, and the state.

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In conclusion, I refer to page 7 of the department's executive summary, where the department finds it difficult to reconcile the community concerns about the Narrabri Gas Project, with the technical advice from experts that the risk of any significant impacts occurring is generally low and can be controlled using standard engineering practice and imposing strict conditions on Santos. One of the reasons for this dichotomy may be the limited exposure the community has had to coal seam gas in New South Wales and its reliance on reports about the actual or perceived impacts of nonconventional gas development in other jurisdictions, without appreciating the important differences of these jurisdictions in the Narrabri Gas Project. I find these

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comments utterly disingenuous and unacceptably biased; an improper attempt to belittle both the community's concerns and capacity to make valid criticism.

5 It should be abundantly clear by the end of this hearing that the community is only too alert to the uncertainties, ambiguities, and risks, adhering specifically to the technology and science of the Narrabri Gas Project. It is more than capable of relating these to economic, environmental, financial, social and climate change issues at local, regional, state, national and global levels. In none of these contexts can the Narrabri Gas Project be justified. Thank you.

10 MR O'CONNOR: Thank you, Laura.

MR BEASLEY: I think we have Hugh Barrett next. Mr Barrett. Can you hear me, Mr Barrett?

15 MR BARRETT: Good afternoon, gentlemen.

MR BEASLEY: Thank you.

20 MR BARRETT: My name is Hugh Barratt. I was born and raised in Narrabri, and I spent all my professional career there. It's where my wife and I had expected to live out our life amongst our friends. However, we are refugees from climate change and from its handmaiden, the Narrabri Gas Project, both of which figured highly in our decision three years ago to move to the south coast. Others will be speaking to you about climate change and about the community division this project has already

25 caused in our hometown of which we were so much a part. So I'll move on, and I'll talk to you about the first thing that piqued my interest in this project, namely, salt, as salts occurrence in agriculture happened to be a part of my PhD research.

30 I was interested to know how Santos would get rid of the salt, and so I asked them. And what really intrigued me was the rubbish answers I got. For example, via a letter in the local paper stating that the NGP salt production would be less than that from uncapped bores in the Great Artesian Basin, completely ignoring the relative surface areas of NGP versus the GAB, and completely ignoring the fact that flowing

35 bores were known as a major environmental issue, which is why there was a cap and pipe scheme in place. So it was flabbergasting to see the department using the same trick in the assessment report, comparing the point source NGP to the extensive salt interception schemes on the lower Murray. This stuff is right out of the tobacco industry handbook. If you can't refute the science, then, confuse it.

40 So I kept going back to the Santos office to get it straight. What are you going to do with its salt – with the salt? I got all sorts of answers, including beneficial reuse – although they couldn't actually name one work – and, “we'll look at a range of options”, one of which was trucking it to Newcastle. Then, “we'll abide by the conditions set by the New South Wales government”, so it's their problem. And “it

45 will be transferred to a licenced waste disposal facility”, which is pretty much what is now in the assessment report, except for an 11th hour press release whereby they

have an MoU with a Colorado company to study the opportunities for turning some of it into baking soda.

5 And if that doesn't work out, they have a get-out-of-jail-feel clause in table 6 of the conditions, which refer to maximise the beneficial reuse of produced salt as far as reasonable and feasible, and dispose salt water not able to be beneficially reuses to an appropriately licenced waste facility. In fact, that licenced waste facility has to take the 850,000 tonnes of salt produced over the life of the project, plus 720,000 cubic metres of coal-based drill cuttings, which is equal to 10,000 40-foot shipping
10 containers.

According to the assessment report, the salt is likely to be classified as general solid waste – although you've seen that challenged – which can routinely be disposed of at one of 11 licenced waste facilities within 150 kilometres of the site. There are four
15 shire councils within 150 kilometres: Moree, Narrabri, Gunnedah and Warrumbungle. And if you would like to make a quick phone call to those councils, as I did, you will find that there are only four licenced waste disposal facilities, one in each of those shires. None have the capacity required; for example, Narrabri has a 20,000 tonne tip, of which there's only three and a-half thousand tonnes of space
20 left available. And they have policies, whereby, most will not take waste from outside their local government area.

So whilst I've concentrated on only one issue, it is an awfully large issue to dispose of, and one that Santos continues to sweep under the carpet. And while I've spoken
25 to this – just this one issue – as the last speaker for People for the Plains, let me reiterate, in summary, the big picture. We don't want it at a local, regional, or state level, as shown by all the surveys. We don't need it, as the country is awash with gas. And we have alternatives; we have renewables and storage, and they're already here, and they provide jobs.
30

MR O'CONNOR: Thank you, Hugh, for your presentation. Next speaker, please.

MR BEASLEY: The next speaker is Maria Rickert. Can you hear me, Ms Rickert.

35 MS RICKERT: Yes, I can hear you.

MR BEASLEY: Please, go ahead and make your submission.

40 MS RICKERT: Good afternoon. Thank you very much, Commissioners, for hearing my story. My name is Maria Rickert. I'm the owner of Pilliga Pottery and Barkala Farmstay. One of the most popular tourist establishment, we welcome thousands of people each year. I speak to you, not only as a tourist operator today of 35 years experience, but also as a concerned mother, grandmother and proud community member who's loyal to the history and culture of our region, to the –
45 sorry – and the indigenous inhabitants of this land, who have so much to lose and so little – very little to gain.

Coonabarabran and the Warrumbungle Shire is a popular tourist destination, more so than ever, since the recent fires and, also, the arrival of COVID-19. We are blessed to have skies so clear and mountains so beautiful, that they attract people from all over Australia and all over the world, to discover, not only the wonders above, but
5 the wonders of our mountains and forest. Presently, in the moment, the whole Pilliga is waiting for spring; it's just ready.

The Narrabri Gas Project threatens that very air we breathe, the water we drink, the land we farm, and the food we produce. It threatens to drive people away from our
10 community, and its long-term impact, it will be lasting on our community and on tourism. The infrastructure that will litter the so far undisturbed forest will forever change the landscape of this region. COVID-19 and the closure of our international borders has the potential to continue, to bring thousands of more people to our region to discover the Warrumbungle region and the vastness of the Pilliga.

15 Our business has seen a dramatic increase of numbers in the last two months. I have spoken to hundreds of tourists, who were deeply impressed by the beauty and diversity of this region. These people are the greatest advocates for this region and under no circumstances do they want to see their newly discovered Pilliga sacrificed
20 to for gas exploration. Let us not allow this project, that has so many negative implications to our environment, proceed; but instead, promote and invest in the pure beauty of regional Australia in order to flourish. This is an irreplaceable beauty that exists nowhere else on earth.

25 Let us learn from past mistakes and not repeat past follies. We have a responsibility to consider future generations; therefore, let us make decisions for the long term, rather than the next few decades. Times are changing and young people are now choosing to leave metropolitan areas to settle and start their families in rural
30 Australia. To improve our tourism and economy, we need more people to settle in our community.

Our community has spoken. The people of New South Wales have spoken. They say “no” to this project, “no” to the destruction of our water, our landscape, our
35 community. Please listen to the people. Leave our land and our community intact. The government has listened to science throughout this pandemic. It is time to listen to science again. Say “no” to the Narrabri Gas Project. A young indigenous man told me once, the Pilliga is the beating heart of New South Wales. It is mine too. Thank you very much.

40 MR O'CONNOR: Thank you, Maria.

MR BEASLEY: Well, the next speaker is Anthony Brennan. Mr Brennan.

45 MR BRENNAN: Thank you very much. Anthony Brennan, Narrabri. Just a bit of history first. The New South Wales government, in June of 2009, signed a Conversation Agreement in accordance with the Brigalow and Nandewar Community Conversation Act of 2005. In implementing the land management axis

of the new agreement, southern parts of the Pilliga Forest were reserved for natural conservation and aboriginal cultural purposes and a northern section reserved for forestry, recreation and minerals extraction. Most of the last remaining timber mills associated with the Pilliga Forest were shut down, leading to job losses and an industry shut down. It's only the northern portion of the Pilliga able to be logged. It is also that northern portion where minerals extraction is allowed. It is this area that the proponent, now Santos, has sought approval to extract the coal seam gas, the very natural resource that was put aside some 11 years ago by the New South Wales government.

10 It is now a situation where the New South Wales government, through the TPIE, has finally made a recommendation. I support that recommendation. Having read the report, I conclude their findings are sensible and rational, while applying a comprehensive set of strict conditions to provide the safeguards expected by the community. Some of the points from this report that mess with my personal beliefs and findings are, New South Wales as a state needs to develop its own energy resources for its own energy security and not find itself beholden to other states for its energy needs, which is the case with gas.

20 An approval of this project will provide significant direct economic benefits to our region and the wider regional area of New South Wales through the attraction of new industry. The size of this project by the standards of other projects, with its 850 wells over a 25-year period, is actually small. With 65 per cent of the project within the Pilliga State Forest, the northern side put aside for this mineral extraction, the area that has been logged and still being logged, this puts the bulk of the project off private land.

30 Geology of the Pilliga allows for this gas to be extracted without hydraulic fracturing, and this is a plus. It is also one of the strict conditions. Also, the geology of the underlying structure, as the coal seams wells – sorry – as the coal seams are well below several impermeable aquitards, thus separating and protecting the high shallow aquifers from the strata below.

35 In establishing of the independent Water Expert Panel, this has helped to identify and answer concerns around water issues and put into context the volumes and timeframes around water volumes being extracted by the project, versus our current water extractive industries. An example being, comparing the 1500 megalitres of annual extraction from coal seams at 1000 metres, which will happen over 20 years, versus our actual of 165,000 megalitres of annual extraction from our shallow aquifers in perpetuity. The forecast result, annual leakage of some 60 megalitres, maximum, from the shallow aquifers, which take some 200 to 250 years to occur, is a number that is negligible compared to the 165,000 megalitres of extraction by our other industries.

45 Under the NSW Gas Plan, the Community Benefit Fund will ensure that local community gets a share of the royalties over the life of the project. We've injected

\$100 million-plus, which provide long-term direct economic benefits to our local community and help foster prosperity in our region.

5 The last point I would like to make is that if any new industry or business that can tick all the approvals and conditions to set up in our region should be made welcome. To provide jobs security and a future for our regional population is critical. While agriculture is our biggest industry by far, and it is a highly successful industry throughout Australia, the very drive of the industry to be highly productive and efficient has also meant that more farms are now being owned by and operated by a smaller number of people, and farms are now operating with a significantly less number of employees. Advancements in machinery and technology have created this trend that will continue into the future. So to summarise, we need economic diversity to survive into the future, and I believe this project fits.

15 MR O'CONNOR: Thank you, Anthony. Next speaker.

MR BEASLEY: Our next speaker Sonya Marshall. Please go ahead.

20 MS MARSHALL: Thank you, Commissioners, for this opportunity. There are some photos of a trip I did to Queensland in 2014. Some are Santos gas fields, and some are not. If this Narrabri Gas Project goes ahead, this will be an industrial gas field, not a few well pads. When you hear the noise, consider if you would like to listen to that on a cool clear night 200 metres from your home. You will have heard of all the scaremongering out-of-towners; I am one of them. I'm a fourth-generation farmer, and my family's been in the Wee Waa district for 151 years. I would like my descendants to have the opportunity to still be here in another 150 years, if they wish.

30 I married and moved further west to the Walgett Shire. Many dispute this does not make me a local to Narrabri. Those people need to do some research and determine what keeps – what helps keep the Narrabri economy moving. We buy the vast majority of our personal and farming inputs, chemicals, farm parts, etcetera, in the Narrabri Shire. 100 per cent of our grain goes through Narrabri, either via GrainCorp or the grain packers in town. Many farmers have workers that have families who also shop here, go to school, go to the local doctors, hairdressers, accountants, and other goods and services businesses. That is every farming family, their employees, and their families. Is that worth 150 jobs? Will FIFO people use all these services; pay rates? Yes, there's been a downturn due to the drought, but there is no reason to threaten a permanently sustainable industry for a quick buck. It is not only the 2390 postcode that sustains Narrabri.

40 I personally coordinated local surveys that asked the question, "Do you want your land gas field free?" Our survey totalled over 437,000 hectares, and 99.1 per cent of people want to live gas field free. Results like this should be taken into consideration. The wishes of the people over big companies must be considered.

45 I asked my insurance broker if they would cover us if we hosted, or didn't host, but had infrastructure or lateral directional drilled wells under our property. According

to Santos, they can go under us up to two and a-half Ks from the next door. Our reply was basically that it would be noted, and we would have our public liability and the CSG company would have theirs. I have since asked them to provide in writing that we would be covered in the short term for public liability crop insurance
5 when there is a flare going on a total fire ban day in 2000 acres of dry wheat crop; all our infrastructure, vehicles, and workers comp. What about contamination of livestock or grain? Also, that if there is a claim for anything, that I do not have to fight between insurance companies to determine who is liable. Then throw in liability in the long term. Ditto all the above when the CSG company has left, but
10 they still have infrastructure above or below the ground.

I believe that if you can't public liability insurance, you will not get any type of finance. If it turns out that we have our public liability insurance and they have theirs, will the bank be happy to leave it up to a court to decide who must accept
15 liability over what is essentially their multi-million dollar asset. I have letters out to the bank and, also, the Rural Assistance Authority and Regional Investment Corporation. The fact we have not yet received an answer shows that they cannot just provide an "it will be right". These will be in my submission, hopefully.

20 Is the burden of proof on Santos for drawdown of water. How do I prove they caused it when there is no baseline data before the NGP started? According to locals in Queensland, they bear the burden of proof. Lately, it has apparently been caused by the drought. How many wells with there be for all the PELs? We keep hearing
25 850, but the government can't afford to finish capping and piping now. Who will rework all those wells when they start to degrade, and the next time and the next time? I note that the department responses to questions on notice are still not on the IPC website, having been due back on July 10. Independent science, not science paid for by CSG companies and their mates, show that the CSG industry is not worth the risk to our only water source. It is not clean and green. It is not economically
30 viable. It will become a white elephant as renewables come online, and the awful legacy will be left on our hands in perpetuity.

I once asked an old bushie about the Pilliga. He said, "Why do you think there are no big rivers coming out of such a big area?" I realised that it is made to be a
35 sponge. It is a recharge area of the GAB, just as nature intended. All CSG mining and pipeline projects need to be considered cumulatively. They will all impact on each other and on our water, environment and health. Ag already has enough obstacles due to climate change. We need to be able to go back to doing what we do best and improving our productivity and sustainability and not fighting CSG. Ag and
40 CSG do not coexist, especially over the long term, but it will be ag that is left to pick up the pieces in 30-plus years.

I am fascinated with the improved water holding capacity of soil when we can store more carbon. This type of research can help offset climate change, but we don't
45 have time to implement it. We have been too busy fighting for our water for well over 10 years. Imagine what we could have achieved if we used the millions of

hours spent on fighting the NGP for researching innovation in agriculture and our local communities. Thank you.

MR O'CONNOR: Thank you, Sonya, for your presentation.

5

MR BEASLEY: The next speaker is Keelah Lam. Ms Lam.

MS LAM: Thank you. My name is Keelah Lam. I acknowledge all traditional owners, past, present, and future. I object to this Santos short-sighted, expensive, wasteful and risky toxic coal seam gas plan. You've heard the experts on danger to precious water sources, a lack of social licence, the economy not adding up, lack of respect for aboriginal cultural heritage, fears for biodiversity and what's left of the Pilliga Forest, greenhouse gas, fugitive methane and climate change, health risks, loss of dark skies for our world famous observatory, farmers' fears of loss of water, and poisoning the planets richest soils; deep black soils, the food bowl of our coastal cities.

My submission focuses on waste and the unacknowledged relationship between coal seam gas and consumer waste. I won't focus on tonnes of toxic salt sludge and failed plastic evaporation pond liners. I could talk all day about waste. This is so relevant to Santos and, indeed, all Australia. As a 30-year long waste Zero Waste campaigner, my conclusion is climate change is driven by our society's shameful practice of wasting everything. Nothing has a value. We dig damaging holes, mining for non-renewable resources, voraciously using up energy, water, and toxic chemicals, ship these long distances offshore, then manufacture using more energy, water, and chemicals, transport these back by air or ship, and more energy – wear and tear on vehicles and roads – sell at lowest possible price and soon discard all that embodied energy, water, and non-renewable resources. No way of extending the life of these planned obsolescent objects. No options for repair, refit, upgrade, refill, etcetera.

I experienced life before plastic, then it became the best thing since sliced bread. We all carefully washed out those bags, hung them on the line to dry for reuse. Only now is our community noticing plastic is everywhere, clogging the five ocean gyres, all beautiful beaches, bushland, microplastics in fish, plants and meat we ingest. The powerful plastics industry persuades our hospitals to use everything disposable, from surgical equipment to screens and bed sheets.

The other day I saw a new documentary 'The Story of Plastic'. To my horror, the gas company CEO boasted, explaining to his shareholders that while gas use for energy declined, there is a growing market out there for the chemicals in gas to be used in plastic manufacture. And guess what, Santos has just jumped on board and now has plans for their gas to be used for plastic manufacture in Narrabri. This is outrageous. Right now, there are five Sydney proposals for outdated, hugely expensive, toxic incinerators of waste energy. What a stupid waste, burning non-renewable resources for energy; a quick dirty fix.

The supporters of gas talk about jobs. Do you want jobs, ecologically sustainable jobs? Zero waste legislation is the answer. Products manufactured for long life will offer never ending trained and untrained jobs in Narrabri and every town in Australia in repair, refit, reuse, close loop, recycling, refilling, etcetera, etcetera. With this
5 understanding, Santos coal seam gas is neither wanted, nor needed. Please, refuse this madman plan. Thank you.

MR O'CONNOR: Thank you, Keelah, for that presentation.

10 MR BEASLEY: I think the next speaker is Elizabeth O'Hara. Please go ahead, Ms O'Hara.

MS O'HARA: What is happening in the Pilliga Forest is a crime, and the Department of Planning is complicit in facilitating the furthering of this crime in its
15 decision that the Narrabri coal seam gas project is in the public interest. I'm not being melodramatic. It's a crime against our environment, our communities, and all of us who are living with and will continue to live with the evermore devastating effects of climate change. It's even a crime against our best economic interests.

20 As a schoolteacher, I accompanied groups of students to this area for over 25 years from the late-1970s. We studied the Great Artesian Basin. We celebrated the diversity of the forest, the lungs of the earth. We saw koalas. We visited Siding Spring Observatory and spent time gazing the night sky and learning from Kamilaroi traditional custodians, whose elders, past, present, and emerging, I acknowledge.
25 The Great Artesian Basin, we learnt, is one of the largest underground water reservoirs in the world, and underlies approximately 22 per cent of Australia, occupying more than 1.7 million square kilometres beneath arid and semi-arid land.

It is unthinkable that Santos will remove 37.5 billion litres of water from deep below
30 the Pilliga and treat it in the Leewood Water Treatment Facility. This treatment will produce up to 840,000 tonnes of solid salt, laced with heavy metals, of which Santos still has no disposal plan. A very basic understanding of how things works would lead one to understand that removing this water will cause depressurisation and loss of water in the Pilliga sandstone, the southern recharge of the Great Artesian Basin.
35 You heard more about this earlier.

To see from the department's report that it is prepared to accept Santos's use of the most basic level of groundwater modelling is horrifying. The Pilliga Forest, we
40 learnt, is the largest temperate woodland in eastern Australia and once hosted one of the most important koala populations in New South Wales. CSG will industrialise 95,000 hectares of the forest, with well pads, infrastructure and gas line, and remove several endangered ecological communities. The department is prepared to say this vandalism is in the public interest, when, although only limited surveys were actually undertaken as part of the assessment of the gas field, even these found 10 threatened
45 plant and 35 threatened fauna species in the gas field area, including Pygmy Possums, koalas, and Pilliga Mouse.

As slide 1 shows, I hope, our school trips in back in Australia in 2016. How desperately sad it is to read on the “Please Protect Siding Spring Observatory from Gasfield Light Pollution”, the Facebook page, what appears adjacent to the slide 2. If you look at slide 2, you can see the change in light pollution over a number of
5 years. And the bottom line of the slide shows a very distinct flare. And this is the particular point I would draw your attention to.

If there was any doubt as to the damage coal seam gas flaring is doing to critical science at Siding Spring Observatory, here is the proof. That bright flare, seen on the
10 horizon, is only a five metre exploration flare. The gas company plan to build several, each at 50 metres tall, with flares – with flames up to 30 metres high. That sort of light pollution is completely unacceptable. Not only will it make scientific research almost impossible, the light will be so bright, it will cast shadows in the light protected telescope domes, making observations useless.

15 The traditional custodians would visit the campsite to share their knowledge, which included the teachings of the night sky and its changing message as the year unwound. The Pilliga is a hugely significant landscape for Gomeroi People. Santos’s aboriginal cultural heritage assessment had previously identified 90 known
20 aboriginal cultural heritage sites in the project area, including rock shelters, burials and historic camps and and they claim they will avoid these sites. However, no detailed new surveys for aboriginal cultural heritage have been undertaken. It is truly unthinkable that Santos’s proposal to undertake detailed surveys, after it receives approval, should be given any credence.

25 In my written submission, I will elaborate on the devastating consequences of those emissions that you can see in the slide 2 flare, on the role being up-played by the COVID-19 Commission and the Minerals Council of New South Wales as they drive this unconscionable project forward, and on the lessons we must surely learn from
30 the experiences of others, both in Australia and overseas. I urge, Commissioners, to help stop this crime, support us all, traditional custodians, landowners, and the wider community, by finding that the Narrabri Gas Project is not in the public interest. Thank you very much.

35 MR O'CONNOR: Thanks, Elizabeth.

MR BEASLEY: Mr Pickard, can you hear me?

40 MR PICKARD: Yes, I can.

MR BEASLEY: Please go ahead and make your submission.

45 MR PICKARD: Thank you. Commissioners, I’d like to also – to let you know that I’d like to record this, because this is adlib from dot points I’ve made. I trust that’s all right with you.

MR O'CONNOR: Yes, you can proceed.

MR PICKARD: Thank you. I've actually made two submissions to you today. One of them is what's happened to us as property owners, living right next door to the coal seam gas exploration pilot and right in the middle of a – this Narrabri Gas Project. The other is in response to some of the comments made by Mr Knox and
5 others, yesterday. And I only noticed them on TV. I haven't been watching the submissions at all.

I'd like to first start with our – my wife and I – problem that we've had with coal seam gas since we started looking into it in 2006, when I – when Eastern Star Gas
10 fracked the Bibblewindi mine spot with one of the biggest fracks in Australia. They fracked four wells in quick succession. As a result of the fracking, my first bore had what we found later on to be a gravel slip – gravel pack slip – which cut off one of our aquifers, if not two of them. We have three supplying, according to the original driller's logs. I reported this to Office of Water at Tamworth. I won't any
15 names, but they weren't interested. I reported it to the New South Wales Farmers; they weren't interested. I reported it to Eastern Star Gas; they weren't interested. We were left on our own. Our water stunk like a sewer, hydrogen sulfide, you wouldn't believe. And the output of it – well, let's look at it this way – well, there was virtually none.

20 I then went to, out of desperation, to the Office of Water here in Narrabri and spoke to a very knowledgeable gentleman there, who actually took the time to ask me what happened and ask me for everything else. I told him, and he's told me then that I had a gravel pack slip. And he asked me, "well, how did it" – and I asked him how it
25 happened. And he said, "Well, have you had any unusual events, any earthquakes lately?" And I said, "Well, the only thing I can recall was in September. One afternoon my dogs and sheep went berserk, but I thought nothing of it, and the next day there was no water." And he said, "Well, you've had a mini-earthquake." And I said, "Well, how can that happen?" And then it tweaked, Eastern Star Gas fracked in
30 the mine spot.

Now, we were left on our own. We used the water then. Nobody was interested. We called out a local person from town here, who came out and told us, "Your casing is broken." But that's not the truth. He also told Eastern Star Gas that. And
35 Eastern Star Gas has the tenacity to put that into a report to the Federal Government on the Murray-Darling Basin. We have since pulled that bore up, so obviously the casing is not split or broken or cracked or blocked. We also used that bore as a test well for our monitoring that we had to do after our bore went belly-up in 2012.

40 2012, just before Easter, our bore started to stink of hydrogen sulfide. My family came up and we had to stop using it, because it was getting in our skin. Prior to that Santos had just come out to do a chemical test to the bore, which was part of their – and you must excuse me if I'm jumping around, because – Santos came out to do a chemical test. We'd asked at the Christmas time to do it, and they didn't get out
45 there till March. And they saw the smell, they heard the smell, and they – sorry – they saw the smell, they smelt the smell. Their water even smelt of it. They took a sample and went away.

They also put down there, sniffing gear. The sniffing gear made one noise and they pulled it up, and then they said, "It's broken. It's broken. It's broken." And they promised to come back again with new gear and to do a new test. They never did; never came back. However, one of their staff came back a few weeks later just – and
5 said to us – and mind you, we had to hassle them to get it, and handed us a bit of paper. And on that bit of paper, it said, "Your bore is unfit for domestic purposes." "Your bore is unfit for domestic purposes." We'd had no trouble with that bore ever since it went down, and we've had no trouble with our bloody water ever since it went down.

10 We also got a report back that said we had 2400 colony forming units of sulphate-reducing bacteria per 100 millilitres of water. And we also got a report that said we had a heterotrophic plate count, and Santos said again, "No troubles, we'll come and look after you. We'll look after you. We'll give you water until this problem's
15 solved. We'll come back and have a look." We're still waiting. From that date – from May of 2012 until October of 2012, I spent in excess of \$70,000 to find out what happened. At every turn, when we tried to get the water from next door, around their wells, from the dams next door, we were obstructed; not blocked, just obstructed. And it became impossible to do so. That hydrogen – that sulphate-reducing bacteria grew from 2400 to 1.6 million colony forming units in my bore.
20 The far bore, which was closest to Santos's operation, actually had more in it. This is all in my written submission. Santos completely wiped their hands of it.

Now, I believe, and I believe strongly – we took them to court – the EDO took them
25 court on behalf of the Mullaley Pipeline Accord – you're right. No, I've got it. I've got it. No – no – no, love, let me finish. We took them to court over it, and it was only when we had the preliminary discovery reports back from Santos that we found the true extent of what was going on. on the property, not only from overflowing events out of their ponds, but also from the produce water tank farm. They were
30 hiding these bloody documents. I'm sorry, but my wife's gone, and I don't blame her, and I've dropped my cameras, so that's life. We don't use that bore any more. We're completely reliant on rainwater from now on out, and we have been since then. Regarding Santos, Santos grooms people. They groomed me – they groomed me. In 2014 - - -

35 MR O'CONNOR: Okay. We might just take a break and see if we can improve that connection. Thank you. We'll come back to you, Tony.

40 **RECORDING SUSPENDED** [4.17 pm]

RECORDING RESUMED [4.23 pm]

45

MR O'CONNOR: Our apologies, Tony. We think we've rectified that issue. You were talking about some legal action that the EDO helped you with. You might want to start from that point, if you can, and move forward.

5 MR PICKARD: Okay. I apologise. Yes. With regard to bore failure and the fact that Santos wouldn't assist in any way, as I stated before, we did a number of tests from May of 2012 till October of 2013. Not only did we do water samples, we also did bacteria. It cost 70-odd thousand dollars. I can tell you, put a hole in our super. Santos had just completely written that off, ignored us, and we're left alone, so
10 people might call us amateur hydrologists and geologists and the rest of it, but I learned a lot out of that timeframe, because Dr Peter Serov came out during the time and did a study for stygofauna. In fact, we found stygofauna on my property and two other properties out there, and it's the first time it has been found in the Pilliga, and Peter will talk about this more tomorrow, I'm sure.

15 The hydrologist we had initially in the program, when it came – push came to shove and I asked him to write the first report in August of 2012, he pulled the plug. He said we got the buggers, but he pulled the plug. So that's when I had to take him to court. Anyway, the other point I was getting onto is how Santos grooms people. In
20 2014, Santos had a display night up here in the Crossing Theatre just across the way, in the gallery room. It was for landowners and others, and my wife and I attended, along with a small group of others. Santos had their usual army there, as well as EnergyAustralia representatives.

25 We were asked – we were listening to Santos' talk, and then we were asked to ask questions. And my wife asked questions about the security around our place regarding water and that, and she told them that we were ready to retire up here and this was part of our superannuation. And Peter Mitchley went on with his usual thing and did his thing. That evening, we had a Narrabri gas – in those days it was
30 called Santos Gas – CCC, of which I'm a member – was a member. Santos representatives sat next to me, and he said, "How much for your place?" Wasn't on the market. And I looked at him and I looked – I had the paper in front of him, and I thought, well, a decent price for what the improvements we had done was \$450,000. And I said, "Also you will have to carry on the CMA incentive area," which only had
35 a few more years to run. And that was fine.

The next day he came out to – rang us up and said, "I would like to come out and talk to you about it." And he came out and we welcomed him, and he sat at the table. And that's when the terms and conditions started. He said, "Look, we will buy it, but
40 you're not to protest. You're to drop the tours against us in the Pilliga. You're going to tell everybody we approached you. And if you do all this, there will be an extra \$25,000 in your bank account." Well, I can assure you – I'm going to use a term I use – I don't prostitute myself, and I very politely told this man where to go, and we ended the sale. Santos also was very clever at grooming sporting clubs and
45 organisations in Narrabri. They keep giving them money until such a stage, and they tell them, "Look, we can give you this. It's very hard for you to fundraise these days." Everybody knows it is.

So therefore the clubs get hooked on the golden goose of Santos' sponsorship. Through that sponsorship, Santos can control things. Santos can control who goes to the RSL club for meetings that aren't of the pro-gas side. They control who goes to the golf club, and they have. Santos has also placed Narrabri Shire Council in a very
5 difficult position. The general manager has signed a form, a conflict of interest form that he has a perceived conflict of interest because he has a friend who is a senior local Santos person. And he has excused himself from a couple of meetings. So you don't tell me Santos is not influencing what the council does, and you can't tell me that Santos didn't have a big hand in the very small contributions that are found on
10 the conditions of operation, especially that one of \$1.5 million to repair council roads over the life of the project.

MR O'CONNOR: Tony, if you could - - -

15 MR PICKARD: I can assure - - -

MR O'CONNOR: If you could wrap up now, that would be appreciated.

MR PICKARD: Well, I think you – I will wrap up. I think you can figure out the
20 mental and physical strain – or the mental strain this has placed upon both me and my wife for this project. I've looked at Eastern Star Gas and Santos all the way through, and I can tell you what you were told that they reported the incident of the spill at Bibblewindi is incorrect. I can tell you that for a fact, because I reported it. I saw it on the 30th and reported it to DPIE, Mr Greg Summerhayes, on the 2nd – sorry,
25 on the 4th. I took Santos on a tour on the 4th, and they didn't even know what was going on. Santos never reported it until 13 January. I can also tell you that from the – Mr Summerhayes' email back to us, the area of kill was only a small area between the reverse osmosis plant and turkey nest dam, and a small area outside of that to the
30 gas line.

There's nothing about behind a gas line. That happened later. But Santos is not going to admit to that. I was in a video on that. I've got over 500 gigabytes of photographs and video tape, and over 300 gigabytes of information. I suggest to the
35 commissioners that you actually read a very good report – or the number of reports to come out of the Bibblewindi gas exploration pilot expansion, especially the drilling risk fluid, (1), and the CH2M Hill one, because the drilling risk fluid disputes what Santos says about how far the stuff goes, disputes what Santos says about sulphate-reducing bacteria, because in there it says that sulphate-reducing bacteria where
40 eating the sulphates that they were testing with.

MR O'CONNOR: Tony, we're going to have to finish up there. Thank you. And I
- - -

MR PICKARD: I do apologise, and I thank you.
45

MR O'CONNOR: That's all right. We look forward to your submission.

MR PICKARD: Thank you very much.

MR BEASLEY: I think the next speaker is Nicky Kirkby. Are you there, Nicky?

5 MS KIRKBY: Yes.

MR BEASLEY: All right. Please go ahead and make your submissions.

10 MS KIRKBY: Good afternoon. Today I'm talking to you on behalf of my family of passionate and extremely knowledgeable dryland and broadacre farmers, who are very strongly opposed to this proposal and have been protesting it for six years now. Bruce Kenneth Kirkby, former driver for the New State movement, and I are parents to Georgia, 14 years, and Boston, 11 years. Both kids have knowledge and skills that you couldn't achieve in a lifetime without being bred into it. The farm
15 courses their veins. They are a serious resource for Australia's future, supplying food, problem-solving and leadership for the growing needs of the world.

I should say that we are not very far from celebrating 100 years of farming at
20 Koiwon, having commenced farming on the amazing and highly sought after rich black self-mulching soil plains in 1923. Essentially our farming system is based upon storing soil moisture from rain in our exceptionally deep self-mulching soil. We have a three-year rotation that includes summer cropping of dryland cotton, and winter cropping of bread wheat, durum pasta wheat, chickpeas, and lastly, fallow, no crop that manage for weed control to collect and store moisture. Our no tool
25 cropping system uses GPS guidance at two-centimetre tolerances on controlled traffic 12 metre wheel spacings. Rotation and support cover crop soil health and reduce disease, which is second to none worldwide.

30 John Deere International uses us to test protocol harvesting machines prior to worldwide commercial production. Italian castor produces who buy durum wheat from our region regard it as the best in the world due to its very high viscosity. Our farm of 8200 hectares has an average gross income of 23 million. As a contribution to the community, that is six million loaves of bread, 4.7 million packets of pasta, 75 million tubs of humus, 2.6 million pairs of jeans, endpoint production of a large 764
35 million. We employ up to 25 permanent and seasonal staff who live locally with their families as a part of our town. The broadacre farmers in our district are recognised as some of the most effective and productive growers in the world.

40 Our farm is totally dependent on rain that we store in our fallow soils. We have no other surface water. Last year our farm ran out of surface water, our dams dried up, our tanks were empty, and our soil moisture was totally depleted. Our stock survived on the artesian water that we've collectively capped and piped from the government initiative in 2001, which is fifty-fifty funded to reduce the use of this precious resource from open flowing bores. Like us, our towns are totally reliant on bore
45 water. To risk this in any way is simply preposterous. We are absolutely astounded that anyone could think it sound to approve a project with such short-term goals and

at the risk and cost of our water resource and extremely productive agriculture that has stood the test of time and still does in a sustainable long-term manner.

5 Our farm is in the area of one of the seven gas fields that Santos has proposed to its
shareholders as future expansion of the current Narrabri Project area. The nature of
Australian farming in our unique soils does not lend itself to the infrastructure
requirements of a gas field, and it is not possible to think it could coexist. Our
equipment is very wide, and we build – and built to cover vast expanses of
10 reasonably flat land – as I said, 12 metre wheel track spacings – to reduce
compaction. While the land is relatively flat, water moves across it, and
infrastructure causes changes to the flow and can cause major flooding and damage
and lack of storage of soil moisture, thus productivity.

15 Any further increase to climate change through further fossil fuel extraction will risk
a negative impact on farming. In 2014, 120,000 hectares of predominantly
productive family farms north of Narrabri and west of the highway were surveyed
and declared gas field-free, with a 93 per cent Based on our farm average
production of 2.8 million per hectare, that's 336 million total gross income for our
20 survey area. Narrabri and Moree Shires are unparalleled with any other shire in
Australia for agricultural returns, 2.5 times greater than their closest competitor.

As a former research liaison officer directly involved with the submissions of two
successful renewals of the cotton CRC, I'm very aware of the difficulty in
25 maintaining independent research for industry-funded science projects. The
reduction of federal and state budgets leave this wide open for abuse, as the nature of
research funded needs to support the industry paying. Needless to say, any research
from this measures no risk to water through this project is fraught with problems
in methodologies, inadequate cherry-picking sampling, poor extrapolation models
without adequate ground truthing, misrepresentation and manipulation of outcomes
30 by media.

Research that was undertaken during the term of the cotton CRC suggested there is
very much we don't know about how water tables interact with each other and
recharge areas. However, there are distinct relationships. Valuable ground truth
35 research is both time-consuming and costly. In this very short time, I have but
painted a picture for you of our farm and our biggest concerns with this project for
our district. I will leave you with this thought: Christina Lagarde, as chairperson for
the International Monetary Fund from 2011 to 2016, stated we needed a new way of
measuring gross domestic product internationally that included a value on the
40 externalities, clean air and water. If only we had this now to help balance this
argument and put it in perspective. I thank you for the time this afternoon.

MR O'CONNOR: Thank you, Nicky, for your presentation. Next speaker, please.

45 MR BEASLEY: Next speaker is Greg Griffiths. Mr Griffiths, please go ahead.

MR GRIFFITHS: Is that working?

MR O'CONNOR: Yes, it's working fine, Greg.

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

5 MR GRIFFITHS: Okay. I just want to get this off the screen I will just get rid
of that. Thank you very much. I'm just going to be reading from my notes and
talking from them. I want to talk about why I'm coming from – in this discussion or
this presentation. I was a previous applicant of the – Gomerioi native title applicant
10 elected by the Gomerioi Nation and in Tamworth, who work for registration and
determination in the Federal Court. And under that right to negotiate, Santos
triggered a section 29 under the Native Title Act. And through that right to negotiate
with Santos under section 29, we had many, many presentations on the coal seam gas
project of Santos.

15 We had – including that, we had about three to four site visits, which included two to
Leewood, the holding dams and the – the holding dams and the reverse osmosis
plant. The holding dams, we were – like, we pressed them on everything. We
pressed them on the risk management to those dams, the layers of protection and the
20 monitoring of the layers of protection to hold that water that's pumped from the
extraction of the gas, and the reverse osmosis plant that – the saltwater that comes
from the extraction, how it's treated and salt is extracted from the water and the
water is used as irrigation. And while I'm on that, we also pressed them on how we
as Gomerioi people under the negotiations could benefit from those by-products. The
salt has to have storage, the water has a value, and we pressed them on how we could
25 actually make benefits from those by-products.

We went to the well pads, the well heads and the pipes. We actually physically –
they brought the pipes into the presentation. Yes, we heard the words “well best
practices”. These pipes were fairly dense. These are the pipes that are going to go
30 down through the Great Artesian Basin into the coal seam that's going to extract the
gas out of them. Also played a role in some ground-truthing projects that – there's
about 250 aboriginal recorded sites inside of the project boundary. We ground-
truthed those and revisited them to make sure they were still there and existed. And
with the – with the pipes and the well heads, we pressed them on – and I know that
35 the current applicants pressed them on it too, about – and it has been asked about the
risk.

There's no such thing as 100 per cent saying that nothing can occur, but the risk
about how they can close the wells, plug them, and just try and do it in the most
40 effective manner. And for me, we went even to as far as the extent of an earthquake,
about their affecting those wells. But after all of those presentations on those
specific items, we had – plus we also had their presenters, but we've still gotten our
experts as well, independent people to advise us on what we should be doing. And
this is all coming from an applicant group representing the Gomerioi people. And we
45 virtually had presentations on every aspect of the project: culture, water, ecology,
just to name three. And I want to lead to culture now, because the culture, water,
ecology is all encompassing of our – of our laws and customs and traditions.

But under the management plans and under the discussions we've had with them, the major principle was avoidance. They were going to put in avoidance principles inside of the project to avoid any of our cultural objects or places in regards to the project. Now, that's a very, very strict and very aggressive process to – avoidance to
5 it, because this project has the capabilities to avoid places. You can move the well. You can move where they're going to decimate these areas. Also inside of the negotiations, you have benefits for aboriginal people under the section 29 right to negotiate. There's business development, agricultural site management, language, culture, and elderly and youth programs, economic and well-being development.
10 That's for our people. Contracts and opportunities for aboriginal businesses, employment ratios. They say 200 jobs. Well, the normal – normally this is about 10 to 15 per cent ratios. That's 10 to 30 jobs directly to aboriginal families, income directly onto aboriginal families' tables.

15 MR O'CONNOR: Greg, if you can wrap up now, please.

MR GRIFFITHS: Well, I want – just one last thing. The change to Gomeri families' lives and breaking the cycle of poverty through these businesses and this development economic opportunities, the balance between coal seam gas – coal seam
20 and coal, solar and wind, there's a 50 per cent ratio or less from solar – from gas to coal. But you can't turn these off today. These things have to be the balance for the future. And with the project and the agreement – and the agreement has to be signed off by the Gomeri people. That's the reality of the negotiations.

25 The effective cost of living, the MoU that Santos have signed with the state government affecting the cost of living for people in Gomeri country. And the cost of living is very high, as you know, for aboriginal families as well. So just how do we find the balance and to change aboriginal families' lives through economic and social wellbeing development inside of our communities? And through these
30 negotiations with Santos and then the signed agreement, provides that for aboriginal people. Thank you very much.

MR O'CONNOR: Thank you, Greg, for that presentation. Next speaker, please.

35 MR BEASLEY: We have Charles Tym. Mr Tym, please go ahead.

MR TYM: Okay, thank you. I would just like to pay my respects to the traditional owners of this land, the Gomeri people. I'm Charles Tym. I was born in Coonamble in 1961 and have maintained an ongoing with the Coonamble district.
40 My great-great-grandfather Alfred Crockson settled the township at Coonabarabran, which is in the project area, and my great-grandfather Thomas Tym settled in Coonamble in the late 1800s. My father and grandfather used to live on the Pilliga Road out of Coonamble. I just want to play a short video which has been given to your technical team from David Banks of Santos talking about the risk to
45 landholders, which I think really sums up the whole issue with this project.

VIDEO SHOWN

- 5 MR TYM: So Banks is the executive – am I back on? Yes. Banks is the executive vice president, and degree from Harvard. I just want to use this video as a lead-in to the issues engulfing this project, none of them which I'm sure will be unfamiliar with you after the two or three days we've already had. 98 per cent of the most effective communities oppose the project. You saw from Stuart Murray how GISERA tried to cook the books in Narrabri in terms of community support. The
- 10 only town-wide door-to-door survey in Narrabri showed significant majority opposition to the project. There is definitely no social licence for this project. There has been over 10 years of widespread community opposition to the project, and that will continue even if you say yes.
- 15 The Nationals lost the seat of Barwon after holding it for 69 years largely due to community concerns over CSG. Rowena Macrae from the video, who's married to my cousin, perfectly captures the concerns and the anger of the wider community with respect to the CSG project. Rowena and her husband simply want a future for their five young children. David Banks from Santos perfectly captures Santos'
- 20 attitude to the risks that have to be borne by the local community. Local communities are on their own with respect to the risk from CSG. There is no guarantee from Santos for any livestock contamination, loss of property value, or any loss of artesian water quantity or quality. There is still no plan for the disposal of toxic salts after 10 years, which is a joke.
- 25 There will be no impact on gas prices in New South Wales from any increased supply, which David Kitto from Santos outlined yesterday. The approved – the approved gas import terminals in New South Wales can supply all of New South Wales' gas requirements plus some. And there are totally unrealistic forecasts
- 30 around the royalties to be paid, and those royalties are only one-thirtieth of what are paid in other large gas-producing countries. The royalties are only paid after all the establishment of production expenses are paid for. Taxpayers are even subsidising 50 per cent of the community benefits fund. Why? Because this is a crap project, and people need to be bribed to accept it.
- 35 There's an inability of local landholders to get public liability insurance from the largest underwriters. There's a failure of government, New South Wales Government and Santos, to either enact or legislate the recommendation of the New South Wales Chief Scientist after, I think, four years. There's a failure to properly
- 40 consider the precautionary principle in regard to approval of this project. There's a failure of Santos to declare the constituent components of the chemicals that they use. And many aspects of GISERAs work, which have been widely used to justify aspects of this project, have been widely discredited.
- 45 Just summing up – sorry, I lost a page. Just want to touch on the IPC and climate change in general. Snow, Steve and John, I hope you as commissioners are all as concerned with the challenge of climate change as many of the presenters before

you. Any reasonable person can see the rising trend of temperatures, longer hotter summers, all leading us into a very troubling future. What are you as IPC commissioners doing from your very privileged position in our society to address the critical challenge of climate change? How many coal projects has the IPC waved
5 through in the last five or 10 years?

Tragically, we have a malign federal government that's not interested in addressing climate change through the rapid introduction of renewable energy. However, consumers, business-owners and states are voting with their wallets and moving
10 quickly to adopt renewable energy. Do any of you have children or grandchildren? I hope so. How in any measure of intergenerational fairness could you, Snow, you, Stephen, or you, John, approve this project? If you live around the project and had to live with the consequence of the decision, there's no chance in hell of any of you approving it. The people of northwest New South Wales have suffered long enough,
15 but they are not quitters and will fight this gas monstrosity until the bitter end.

Snow, Stephen and John, I hope that each of you have a mirror at home, because each of you need to take a long, hard look at yourselves and decide where you stand on climate change and what sort of a future you want to bequeath to your children
20 and your children's children. The project based on the specific issues associated with it, the overwhelming community opposition, and the issues around global warming, provide no possible justification for this approval by any of you. Do your job for the good of the people. Provide some hope for future generations. Knock this project back for the sake of kids like the five Macrae kids and all other kids.
25 Thank you.

MR O'CONNOR: Thank you, Charles. Our next speaker, please.

MR BEASLEY: Next speaker is Melissa Tym. Please go ahead, Mrs Tym.
30

MS TYM: Hello, commissioners. I would like to acknowledge the Gomeroi people on whose land I am on today. My name is Melissa Tym. I have friends and relatives in Coonamble. Sorry. I'm objecting to the Narrabri Gas Project because the DPIE
35 assessment report has not adequately counted for the impacts on climate change, nor properly covered insurance and residual risk. The New South Wales Government has had six years to establish adequate insurance solutions. However, it has shirked its duties, as residual, environmental and public liability risk is being transferred to landowners and taxpayers.

The DPIE recommended consent does not mention insurance. The assessment executive overview of the DPIE uses smoke and mirrors to cover a lack of detail and makes two erroneous statements: that its recommendations are consistent with those of the New South Wales Chief Scientist's review, and that their safeguards will ensure the project is unlikely to result in any adverse impacts on the region's
40 groundwater resources. This is a totally illogical statement, as insurance or financial securities cannot ensure a project does not affect groundwater. It shows a complete lack of understanding of insurance and does not pass a common sense test. The
45

DPIE assessment report acknowledges that the project would limit the ability of landholders to secure insurance and identified that Narrabri Council requires insurance against pollution.

5 DPIE, by listing three items, are pretending that they have covered off the three-layered policy recommendation by the Chief Scientist, but in fact the three-layered policy refers to the security deposit as well as the establishment of an environmental rehabilitation fund based on the Western Australian rehabilitation fund model and enhanced insurance coverage. The EPA have requested Santos provide insurance information, but it has not been forthcoming, and the EPA have concluded that Santos are preferring to self-insure. The POEO Act provides the ability for the EPA to require insurance. However, the EPA have not required this for the Narrabri Gas Project, so there is no evidence of insurance of any kind, let alone enhanced insurance coverage, and no assurance of Santos to hold any insurance.

15 The existing security deposit framework administered by the EPA under the POEO Act does not cover landholders, business of adjacent or downstream landholders during operations. It's not used to cover environmental liabilities that may arise after rehabilitation activities have been completed and the security deposit released. Any residual risk to business operations or adverse health impacts after decommissioning will be borne by landholders. The EPA is still working out what the remediation costs are likely to be based on the limited prior experience with CSG wells in New South Wales. This is expected to be in the low millions. If costs are over the security deposit, the EPA have to litigate.

25 This then begs a few questions: whether there is any available remediation for damage to the aquifer, and second, whether the cost of remediation would exceed Santos' balance sheet, in the same way as the value of deep-sea wells also wiped out petroleum companies. Even the EPA are recommending in its Safeguarding Future Environmental Liabilities from CSG document that further frameworks are established that are not covered by the POEO Act. The EPA is not taking up the recommendations of the Chief Scientist to establish an environmental rehabilitation fund, as they consider it not a feasible option and there are only two active gas projects in New South Wales. They are relying on the Legacy Mines Program.

35 The Legacy Mines Program is funded by the New South Wales taxpayers. It has an annual allocation in 2019/20 of only 2.8 million. The New South Wales Government states that the annual budget is lower than the amount required to completely remediate all 645 mine sites; it's on their database currently. So it has to prioritise works based on public land first, private land only if there is a public benefit. In the event of bankruptcy, the ultimate titleholder of the wells – which may not be Santos, they may on-sell – 2.8 million will be inadequate. For example, in Canada, 232 wells were abandoned in 2016/17, and they spent over 12 million Canadian to decommission.

45 There is a risk that if a major incident occurs, Santos will simply phoenix and reincorporate somewhere like the Netherlands, like James Hardie. There's no

legislation to prevent this. Landowners are left to individually negotiate with Santos for proper conduct and compensation agreements that will not cover any long-term environmental impacts. It's a simple contract and not protected by the usual regional regulations and common law that relate to insurance contracts, especially the
5 common law obligation on insurers to act with utmost good faith.

There would be little except bad press to prevent Santos from commercial breach. Where a dispute about the contract arises, the landholders will be at a disadvantage, because they will need to litigate to enforce their rights under the contract. There
10 will be no statutory protections or ombudsmen that will act for them. There will be a significant asymmetry of resources between the claimant and the corporation, which would disadvantage the landowner. It is unlikely the public liability insurance will be available in the short term, regardless of what Kevin Gallagher said yesterday, and less likely over the long term. Unless Santos can get IAG, the largest insurer, to
15 accept a waiver paragraph, the remainder of the industry will be left holding the bag, and this probably won't fly, as risk needs to be dispersed across the insurance industry. Thank you.

MR O'CONNOR: Thank you, Melissa. Next speaker.
20

MR BEASLEY: Next speaker is Don McKenzie. Mr McKenzie.

MR McKENZIE: Good afternoon.

25 MR BEASLEY: Please go ahead.

MR McKENZIE: I am a – sorry?

MR BEASLEY: Go ahead.
30

MR O'CONNOR: Please go ahead.

MR McKENZIE: Good afternoon. I am a 69-year-old third-generation farmer and grazer living on the southwest corner of the Pilliga. I would like to acknowledge the
35 Gomeri lands that I live on. My greatest concern is the threat to our water from the Narrabri Gas Project. As a member of the so-called ragtag farming lobby, how can I trust and believe the so-called expert scientific reports in the Santos EIS? How do I know that the impacts of this project are not going to affect myself and the future generations when the validity of these reports have to be called into question? When
40 the chief executive of the CSIRO Barry Marshall commented in an interview on the changes to the CSIRO in 2016, and I quote:

*When we get funded, whoever the funder is, they are funding us to do something, and they expect a deliverable result. So if we do not earn that, if we
45 do not deliver that result, they will cease funding us, and the CSIRO have experienced that many times in the past.*

More recently, the Royal Commission into the Murray-Darling Basin has heard how the CSIRO agreed to change a report on the water flows. CSIRO agreed to scientific censorship of a report into the impact of environmental flows in the Murray-Darling Basin amid fears that the organisation would not get paid. As the CSIRO have
5 admitted that their scientific reports are deliberately biased in favour of those who fund them, we now question not only the supposed scientific independence of both GISERA and the CSIRO, but all of the scientific research into water, pollution and waste from the coal seam gas industry.

10 The Santos EIS for the Narrabri Gas Project was criticised by scientists, including the Federal Government's independent scientific community, for not having sufficient information for the New South Wales Government to assess the project. The New South Wales Government consistently quotes from CSIRO and GISERA reports, referring to them as being independent and expert, but based on this
15 information they clearly are not. The once Commonwealth-funded reputable scientific research institute now has to have all research questioned as to its validity. With David Knox, an ex-CEO of Santos still on the board of the CSIRO as chair of the Energy Strategic Advisory Committee, all research looking into the coal seam gas industry would have to be questioned.

20 We in New South Wales have been fortunate to see and have learned about the destruction of water and land and communities in the Queensland coal seam gas areas, and do not want to have anything to do with this destructive industry. I ask you, gentlemen, is the questionable short-term gain of the coal seam gas industry
25 worth the risk of destroying a guaranteed sustainable long-term agricultural industry and a clean and liveable environment? In conclusion I ask, would you entrust with your livelihood the technical advice from these so-called scientific experts who have admitted that their findings are clearly biased in favour of those who fund them? At no time have these scientists nor Santos given an unconditional guarantee that no
30 harm will be done to the environment or water. Thank you.

MR O'CONNOR: Thank you very much, Don. Next speaker, please.

MR BEASLEY: Next speaker is – next speaker is Peter Wills. Mr Wills.
35

MR WILLS: G'day. How are you going?

MR BEASLEY: Good. Please go ahead.

40 MR WILLS: I speak strongly today against the Narrabri Santos Gas Project as a Liverpool Plains farmer and as an unfortunate landholding host of the Queensland-Hunter Gas Pipeline, the pipeline company that Santos is talking to as an option to evacuate their gas from site to market. Our family has had some relationship with coal seam gas explorers in the past when they approached my late father, the then-
45 landholder, and he had a very simple negotiation with them where he told them, not very politely, to go fornicate themselves. And I find as the next generation on the

land, with perhaps 40 years ahead of me still, I feel compelled to maintain that momentum in my approach to coal seam gas and the associated infrastructure.

5 The Queensland-Hunter Gas Pipeline was approved over our cattle property in 2009. I was not in the district then, and actually only discovered this approved route was on the family property in late 2019 when the recent modification to the project was pretty much approved for another five years, taking the build approval rights out to 2024. We were very lucky this did not hit two properties, the other being the family home and cropping property. Our neighbours, however, of over 50 years were not so
10 lucky. They have an approved route of seven kilometres of pipe weaving in and out of intensive black soil irrigation paddocks, and it hits every cropping paddock they own.

15 Some of the best agricultural land on the planet, and I've only copped it for 1.6 kilometres on cattle country. However, it is in my water table, zone 1, a little upstream of the flow of our Bramble Creek and our aquifer water systems. To us this is a completely dud route. The Hunter gas proponent has not contacted landholders – they had not contacted landholders direct since 2011. But just Wednesday last week, a letter dated 13 July 2020 was received by the family, the first contact in nine years.
20 Luckily, I and our community in Quirindi have been mobilised since October 2019, when we heard of this project's extension approval on the ABC Country Hour over lunch.

25 And let me assure Santos, Hunter Gas, and you, the commissioners, ever so politely: we're prepared to fight this pipeline build, and in turn Santos, with every legal option we as landholders hold. We will continue to tell Hunter Gas and the coal seam gas industry, in their advances into our agricultural precinct, to go fornicate themselves. This pipeline would be built in Quirindi, my hometown, waters – my hometown's water supplies, buried literally in the town water. The pipe is approved to be
30 surrounded by our actual drinking water. That does not sit well within anyone I know who is a direct stakeholder interest in that. The pipeline is approved to be built in black soil.

35 During the recent catastrophic drought, I had cracks in our dryland paddocks of 10 centimetres wide and at least 80 centimetres and more deep. Based on Hunter Gas-approved and anticipated plans, I will be able to inspect their high-pressure gas pipeline in the ground for them at the height of drought scenarios. This pipeline has a usage life of 40 years. They will be not taking the pipe out of the ground at the end of usage, and will leave this wanton waste of a structure in the ground to rot for,
40 what, a thousand, 3000 years, a legacy that any token coin chucked at our feet will be strongly turned down and our right to say no defended to the end. This is not a legacy anyone of the land, on the land and in their right mind will want to leave for the next generation for any payment.

45 Commissioners, your responsibility, in our eyes, isn't just to Santos' Narrabri Project approval; it's also to us. There are over a thousand landholders on the Queensland-Hunter Gas Pipeline route who, from my anecdotal evidence of talking to hundreds

now – literally hundreds of landholders – have literally an endless list of questions and query, concern and, I know, an ultimate desire not to have this infrastructure on their land for probably any amount of recompense, in consideration to the reality of what a proponent will pay. I don't want a white elephant project on my property.

5

I'm 40, and I don't want to deal with this for the next 40 years. I don't want the social impacts to affect me and my community's mental health, to have to think and worry about this pipeline and the known and real risks of this development on our land, water, homes and future. And I and most of my community don't want this gas battle that has gone on for over a decade and more to continue any longer, when it's apparent by global markets and world demand and direction that this is an industry in serious trouble, that will be surpassed by other energy solutions in time, and in fact are being surpassed right now. With the utmost respect to you, sirs, the independent commissioners, I strongly urge you to tell Santos, and, in turn, Hunter Gas Pipeline, in your own legalese way, to go fornicate themselves, and not with us.

15

MR O'CONNOR: Thank you, Peter.

MR WILLS: Cheers.

20

MR O'CONNOR: Next speaker.

MR BEASLEY: Philippa Murray. Mrs Murray, are you there?

25

MS MURRAY: Yes. Can you hear me?

MR BEASLEY: Yes, we can. Please go ahead.

MS MURRAY: Thank you. My name is Philippa Murray, and I thank you for the opportunity to speak about my concerns, which are more far-reaching than Narrabri should this project go ahead. My husband's family are landholders on Collygra Creek and have been for generations. The farm falls within the Banda Gas Field, which extends southwest of Gunnedah. We live approximately five kilometres from the Kahlua pilot gas wells, which are 22 Ks west of Gunnedah in petroleum exploration licence area 1, and as such it forms stage 2 of this project. We've heard a lot about the Narrabri Gas Project, but I believe you also need to consider stage 2 of this plan. We haven't heard how that will be managed.

30

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Those affected by stage 1 of this project are in fact the guinea pigs for stage 2. The cumulative effects are of critical importance to those of us in stage 2 and beyond. Our farm's proximity to the Kahlua wells has prompted me to take a closer look at the coal seam gas industry. I've undertaken a visit to the Bohena and Bibblewindi facilities operated by Santos in the Pilliga Forest. I saw the scouring of land from leakages and ponds full of salt brine. I also travelled to southern Queensland, to the towns of Chinchilla, Miles, Condamine and Roma, where I saw the industry up close.

40

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I talked to gas operators, farmers and businesspeople to learn of their experiences. After three days on the road, I felt I had gained an insight into the health, social and agricultural impacts of the CSG industry, and an idea of what can be expected if the industry expands into this region. There are many troubling factors of which you
5 have no doubt heard in the last two days. I listened to farmers who have been kept in a state of suspension for years with PELs hanging over them, of their ongoing angst as their land values plummeted and their water was depleted. I saw empty houses and businesses and towns that had anticipated mega-growth from the CSG industry that had failed to materialise. I saw many kilometres of pipeline and powerlines
10 where the land formation had been disturbed.

And then earlier this year, I learned that a company called Carbon Minerals, chaired by former planning assistant commissioner Marcus Lincoln-Smith, intends to start a works program later this year on the Liverpool Plains, and is likely to focus on the
15 Kahlua multi-well pilot and the Glasserton single pump test well near Coruna or Spring Ridge. The company is bringing a workover rig to attend to four coal seam gas wells within PEL 1 and PEL 12, and installing infrastructure to start production testing for up to six months and 2D seismic work. Santos has a strong 65 per cent interest in the PEL – in the petroleum export licences, and Carbon Mineral’s recent
20 communication with shareholders in the ASX suggests that Santos is still interested in the Liverpool Plains despite saying otherwise.

The company’s CEO, Mr Gallagher, has stated that Santos has no plans to drill wells in the Liverpool Plains, and Narrabri’s gas project is contained. “Our plans are
25 simply not to drill in the Liverpool Plains,” he has been quoted as saying. Carbon Minerals has said that it expected the New South Wales exploration licences it holds to be renewed this year. It would appear this is a clear case of two public companies involved in the same venture contradicting each other, or at least not disclosing to their shareholders. It would appear that Carbon Minerals is a passive partner to
30 Santos. Carbon Minerals has been listed on the ASX since 1980, concentrating on coal seam gas exploration mainly in New South Wales and in the Gunnedah Basin, and in particular via its wholly owned subsidiary Australian Coalbed Methane Proprietary Limited, known as ACM. Yes.

35 Another concern I have is phase 1 of the Queensland-Hunter Gas Pipeline, which the previous speaker touched on, which will presumably ensure the gas arrives in Newcastle from the Narrabri field, although details on this have been scarce. The project was resurrected last year after many landholders believed it had lapsed, and it will crisscross prime agricultural land on the Liverpool Plains. Santos has even
40 confirmed it has been in touch with Queensland-Hunter Gas Pipeline companies, so we know that a pipeline is being considered as a means of conveying the gas to port. Stage 2 of this ambitious project fills me with dread. I think we deserve more information. I am concerned that our creek and aquifer will be damaged or polluted if the Kahlua wells are brought into production. I’m also concerned about the impact
45 of well pads, interconnecting gas pipes, powerlines, interconnecting roads, compressor stations and high-pressure pipelines on our highly productive farming and grazing district. We need - - -

MR O'CONNOR: Philippa, if you could please wrap up now.

MS MURRAY: Yes, I have. I'm very close. We need clarification on how the brine in ponds will be treated. Will it be moved or disposed of? What of major rain
5 events on our undulating country, which could result in leakages into the river system? Will our stock be contaminant-free if the water and pasture are tainted? When we sign the obligatory National Vendors Declaration before stock is sold, will we be contravening the statement that guarantees their food safety status? I believe
10 the science on these matters is too risky, and I'm hearing only best-case scenarios. I care deeply for this land and wish to see my family farm it for another five generations. Thank you.

MR O'CONNOR: Thank you, Philippa. Our next speaker, please.

15 MR BEASLEY: I think we have James Adams on the phone.

MR ADAMS: Yes, here I am. Yes. Hello.

MR BEASLEY: Please go ahead, Mr Adams.
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MR ADAMS: No worries. Yes, hi. Thanks very much for the opportunity. I own and manage a 3000-acre property on the Liverpool Plains, where I live with my wife and three young daughters. I'm extremely passionate about my family, my farm, my community and the environment. The proposed Narrabri Gas Project puts all of
25 these things at risk. For this reason I strongly object to the Narrabri Gas Project. Our business, like most farming businesses in the region, is completely reliant upon underground water to meet our water requirements, which is primarily to water livestock. We're very fortunate to have this resource, and we treasure it. In this hot and variable environment, we simply cannot rely on rainfed surface water.
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The recent and ongoing drought has further emphasised the importance of having access to reliable clean water. Many farms that did not have access to this water were forced to sell livestock and have effectively been unable to operate as a result of the drought. It follows then that any threat to the supply of underground water will
35 put a lot of businesses and livelihoods at risk. We feel that the Narrabri Gas Project is one such threat. We have reservations concerning the integrity of the CSG wells, not just now but into the future, and especially once the project has finished and the project operators have moved on. Experiences in the US and in Queensland suggest that over time, failures in well integrity are inevitable, despite the best intentions of
40 the operators and the regulators. This fact is indisputable and the industry itself recognises it.

These failures in well integrity pose a threat to both water quantity and quality. As mentioned above, a reduction in underground water quantity would compromise the
45 ability for affected farms and communities to exist. With regard to water quality, the effects will be equally detrimental. First, implications on human health from consuming contaminated water and from exposure to broader environmental

pollution caused by gas fields are well-documented and alarming. Second, any consumption of contaminated water by livestock or access to contaminated land will not only have adverse implications directly on livestock health, but it will provide a pathway for such contamination to enter the human food chain.

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Should such contamination occur, not only would it have health implications for humans, but it could also threaten market access that Australian producers rely upon to access their products internationally. Such an outcome may see farms with gas wells on them being placed into quarantine and denied access to markets. The negative economic implications of this speak for themselves. Following on from this, my next point is something that I feel is vital, that is, what kind of insurance is being offered to compensate farms and communities to cover any future damage, especially given that many of the failures in well integrity are likely to occur once the gas field operators have packed up and gone. This is a point that cannot be ignored.

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Also, how will anyone be able to prove or disprove the causes of any future aquifer damage? I fear that a lack of scientific understanding of groundwater and its response to coal seam gas extraction will see the gas field operators be able to escape blame should any damage occur in the long-term future. Until such a time that we can comprehensively understand these underground systems and be able to accurately determinate the causation of any impacts, I argue that the Narrabri Gas Project should not be allowed to proceed. The risk is simply too great. In summary, I strongly urge the Commission to reject the Narrabri Gas Project. Given experience abroad and in Queensland, I take no comfort in the assurances being offered by Santos. It seems that damage will be inevitable. Such damage will be catastrophic to affected businesses and communities, and cannot be justified by the short-term economic outcomes from the project. Thank you very much.

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MR O'CONNOR: Thank you, James, for your presentation.

MR ADAMS: No worries. Bye.

MR O'CONNOR: Bye.

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MR BEASLEY: The next speaker is Louise Somerville. Can you hear me, Ms Somerville?

MS SOMERVILLE: Yes. Hello.

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MR BEASLEY: Please go ahead.

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MS SOMERVILLE: Thank you. Commissioners O'Connor, Barlow and Hann, thank you for the opportunity to present my submission against the Narrabri Gas Project to the IPC hearing at the Crossing Theatre in Narrabri today. I would like to acknowledge the traditional custodians of Gomerai country that we are all upon and pay my respects to the elders past, present and future. Commissioners, the referral of Santos' Narrabri Gas Project to the Independent Planning Commission was made just

three business days after a parliamentary inquiry found that six long years have passed since the Chief Scientist's report was conducted, and yet only two of the Chief Scientist's 16 recommendations on coal seam gas have to date been implemented.

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If taxpayers of Australia cannot trust the Government to act upon their own findings in a timely and a comprehensive manner before unleashing invasive industries upon vital farming and wilderness areas, it would seem that the integrity of the entire process is failing. Northwest farming communities provide much of the food and textiles of our nation. If multigenerational landholders are continually marginalised by bureaucrats approving industrial landscapes over food-growing landscapes, thousands of farming jobs and our food security will be lost.

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Last month, IAG Insurance declared that if landholders had operational CSG or shale gas activities or infrastructure on their property, such as a coal seam gas well, we will be unable to provide liability cover as part of their insurance policy. New South Wales producers, like any businesses, cannot operate without insurance. Agriculture and unconventional gas infrastructure cannot coexist when presumed strict regulations are repeatedly abused by the gas industry, and offer no protection to existing agribusinesses. I saw evidence of this in 2012 and over subsequent years when I visited gas field communities west of Brisbane in Queensland.

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I have witnessed swathes of dead and dying forest, unable to reach water as a result of lowered bore levels due to CSG mining. I have witnessed children with bleeding noses, neurological damage, painful rashes, breathing difficulties and other serious health impacts in people of all ages who are forced to live in those gas fields. I have seen kilometres of the Condamine River bubbling from gas leaks that can be lit with a match, something locals here would not want to see happen to the beautiful Namoi River. Their land values have plummeted, and residents near gas well infrastructure are unable to sell their properties except to the gas industry that offers remuneration well below the original property value.

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Noise, lights, workers, utes, machinery, compressor stations and pollution invades their daily lives 24 hours a day, seven days a week. Local farmers report that their paddock gates are often left open by industry workers, and much of their time is spent retrieving livestock. The New South Wales Planning Department should heed the experiences north of our border and steer New South Wales well away from gas and onto a plan of sustainable climate-friendly energy industries solidly backed by science.

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Just recently, Dubbo sheep grazier Tom Warren announced that the 55-hectare solar farm on his property collects nightly condensation, and during the worst of the drought, green grass grew below the panels and had provided feed for his Merino wethers. He was one of the only graziers in the area who barely had to handfeed his stock. Tom says that the solar panels give valuable shade to his livestock and provide a substantial dual income stream, with rent for the land he leases from to the

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Neoen solar company. This is an example of a healthy, water-wise and sustainable coexistence between two industries that the Namoi region really needs.

5 The CSIRO has forecast that climate change will cause decreased precipitation and exacerbate challenges in water availability and quality for agriculture. New South
Wales therefore cannot risk a water-wasting industry such as unconventional gas to
de-water precious aquifers in the parched northwest, where droughts have lingered
here for so many years and will continue to do so. As a proud foundation member of
Knitting Nannas Against Gas, member of the Country Women's Association of New
10 South Wales, daughter of a farming family, and a mother of four, I ask you,
commissioners, to please reject the Narrabri Gas Project, and instead recommend to
the New South Wales Planning Department that they preserve the vital Great
Artesian Basin recharge zone for future generations. The New South Wales Planning
Department states on their own website that the Department exists to make people's
15 lives better - - -

MR O'CONNOR: Louise, if you could please wrap up now, thank you.

MS SOMERVILLE: - - - by making New South Wales a – yes, I will. Thank you.
20 By making New South Wales a great place to live and work. We now need to see
proof of that. Commissioners, I strongly encourage you to visit families impacted by
gas infrastructure in Queensland, and hear and see for yourselves before you make
your final decision.

25 MR O'CONNOR: Thank you, Louise.

MS SOMERVILLE: Thank you very much.

MR BEASLEY: Next speaker is John Tough. Mr Tough, please go ahead.
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MR TOUGH: I give my respect to the Gamilaroi people, past and present. My
name is John Tough. I've raised a family in Narrabri of my three children, all
attending the local schools, and the two remaining and working in Narrabri are now
raising their own children. I've worked in the coal seam methane gas industry for a
35 period of five years for Eastern Star Gas. I've come across many wonders of nature.
Even the death adder snakes in the slide are attracted to the leaking wells, the noise.
Many other animals are reliant on the Pilliga Forest for their life. I know what I'm
talking about when I say Santos bought a lemon. The pressure and the percentage of
the clean gas is just not there. Santos made a mistake. Why should thousands of us
40 have to suffer?

I became an employee by the then-exploration company as a well maintenance
worker. My daily role was to take gas readings of the well heads that have been
established for production and the wells that have been worked over or fracked. This
45 included the perimeter of construction of ponds by laying one layer of plastic over
the Pilliga sands. Even though the plastic may keep some pollutants from seeping
into the Pilliga sands below, the majority of contamination spills came from the

overflow of these dams during large rainfall events or from the transfer of polluted – transfer of polluted water to different destinations. One the spill has occurred, the Pilliga sands act like a filter. They absorb the pollutants. These pollutants are again brought up to the surface during rainfall and spread further and further each time.

5 One pollutant spill can still be viewed in the Pilliga Forest which started in an area of 50 square metres when we were pumping a dam out which has now turned into two kilometres long by about half a kilometre wide, roughly.

10 I realise there's still rehabilitation of this site in progress but it's got larger in the past 12 years. At another contaminated site while working for Eastern Star Gas, we planted 1300 trees, bushes, shrubs. We tried to rehabilitate the soil as well. It all had a rehabilitation but none survived. As can be seen in the slide, rainfall in the forest will even cross the Newell Highway and carry any contaminants that it has with it. I was very interested in the engineering side of the work as this was new and exciting
15 experience. However, I was able to view firsthand the detriment a mistake like water overflow can do in the Pilliga Forest and its inhabitants.

As you can see the slide 4, this is a frack site at Bibblewindi to stimulate the nine spot of wells. A frack is created by jamming one truckload of fine sand along with
20 twelve truck's load of water down a ball casing and into the coal seam under pressure to try and crack it, split it, 250 metres to reach the next bore. The bores – the nine bores were all supposed to be fracked so that they could find the flows. This is then capped for a period of time and slowly bled off to release the water whilst leaving the sand in the coal seam fractures. Even though Santos have stated that they don't need
25 to frack at this stage, this method is the only viable way to extract enough gas commercially to be commercially viable for production. If you're going to be spending up to 100 – \$750,000 per well, I don't believe that Santos won't be fracking.

30 Slide 5 shows various releases of well water after the well has been stimulated and worked over for production gas. As you can see, it's not a pretty site with many contaminates released with the water. To you gentleman having to make this decision which will affect thousands of us in this area, some for the better, some for the worse, not everywhere in Australia has to be industrialised. We already have a
35 massive extractive industries in our shire that affect our river flows. I've been here since 1969 and only in this last drought have I seen the river stop flowing. Farmer, irrigators not allowed to take water. The coal mines are still allowed to take as much water as they want. If a coal mine can take whatever's available, there's nothing left.

40 If this coal bed methane gas project goes ahead and does indeed pollute our underground waters, what will be left for the farmers, stock, townspeople to survive on? This river flows all the way to Adelaide. When I was a counsellor in Narrabri Shire Council, I took two local kids to see Professor Mary O'Kane during her consultation with council. She asked the kids what they wanted. They said they
45 wanted a river with water to swim in and to fish in. These are the two local detective's kids independent from anyone else. If the pollutants to reach the Namoi river via the Bohena Creek, which they will over a period of time, it might take a

year, seven or 10, but it will reach the river, what happens to the downstream towns that live off that river? Walgett lives off the water. This river continues through the middle of Australia and reaches Adelaide. That's a lot of towns, villages, people and stats can be affected.

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The Narrabri mayor was wrong when she said it was 80 to 90 per cent of the people behind this as you can see today and in the street when you walk down and ask the shop people or anyone in the town. There's 80 to 90 people against it – per cent of the people against it. There has been some dirty tricks played. That's just a part of business, I suppose. It's caused a lot of stress in the town, fighting, families, shopkeepers next to each other. It's – it's put a lot of tenseness in the down. It's bad for the area. If Santos get the go ahead, I don't trust them to do it properly. I think they will be doing it slyly on the cheap and this will be a risk that we can't have. I would like for you to please reject this project for the future of all of us, our youth, our children, the grownups, even the elderly. They like the fresh air, the clean environment of the bush. There's a lot of other things I could say but five minutes doesn't give you a lot. Thank you very much and I hope you come up with a good decision.

20 MR O'CONNOR: Thank you, John. Our final presentation, now, I think is by telephone.

MR BOOBY: Yes. Russell Booby. Are you there, Mr Booby?

25 MR BOOBY: I am. Can you hear me?

MR BEASLEY: Yes. We can. Please go ahead.

30 MR BOOBY: Thank you. Commissioner, look, from the outset, I'd say this. This is a submission in favour of the project. I'm speaking to you on behalf of the Yarrie Lake Flora and Fauna Trust of which I'm the secretary and I've been on the Flora and Fauna Trust for about 25 years. To put you in the picture, the Yarrie Lake Flora and Fauna Reserve is located about 25 kilometres to the South West of Narrabri which puts it, by and large, on the doorstep of this project, somewhere between Santos' Leewood site and the Wilga Park sit where I understand Santos generates electricity from gas already produced in the Pilliga.

40 The Yarrie Lake Flora and Fauna Trust is – has seven volunteer trustees and I'm one of those and we oversee the management of the flora and fauna reserve. The president of the trust is someone called Bernie Smith. He, like me, is a lifetime resident in this district and he has been on the trust, in fact, for some 50 years. The other trustees come from a diverse background. There's some farmers, a school teacher, local home maker, there's a retiree. The thing that brings the group together, apart from the fact that they're on the trust, is that they're all long-term local residents with a long-term commitment to managing and enhancing the flora and fauna reserve. And this, commissioners, is a reserve that's well used. It has a small ephemeral lake which is used for summer recreation and it's a magnet for caravanners

and campers, grey nomads and bird watchers. There are some 70 different species of birds known to inhabit the reserve.

5 The water supply from the reserve comes from the bore on the reserve and the bore has been stable in terms of its supply – well, forever, really, and there has certainly been no issues have arisen in that bore supply since Santos commenced its operation virtually next door. The trust is required to balance the commercial and recreational use of the reserve with the conservation of flora and fauna and the trust has been doing that successfully now for some 70 years. The matter of the Santos gas projects
10 as well has been well discussed between the trustees over a lengthy period. Indeed, the Flora and Fauna Reserve Trust gave permission to Santos environmental consultants to undertake ecological surveys on the reserve. The trust has found Santos and its consultants to be highly – highly professional in every respect.

15 Initially a number of trust members expressed to me concerns as to the Santos project and I'm aware that a number of trustees, including myself, took the opportunity to visit the site on a number of occasions on the bus tours and we also attended presentations put on by the local chamber of commerce which we found very helpful. The trustees, as I understand it, have spoken to a large number of people both for an
20 against the projects in order that they could be well informed, especially being that the flora and fauna reserve was so close to – to Leewood.

After lengthy discussions and consideration of the various aspects, the Flora and Fauna Trust at one of its meetings voted on whether to support the project and that
25 vote, I have to say, as unanimous. I would say this, the Flora and Fauna Trust trustees – we do not possess any specific technical knowledge in relation to the project. In fact, none of the trustees even pretend that they have that knowledge, but they are all long-serving local volunteers managing the flora and fauna reserve virtually next door to the Santos project and they have a combined volunteer
30 commitment to the local environment which exceeds 100 years. And it should also be noted that the Yarrie Lake Flora and Fauna Trust has not been the recipient of any Santos community funding and the trust has never asked Santos for my funding. And I say that because - - -

35 MR BEASLEY: Why – why – could I just ask, Mr Booby, why is the trust – Flora and Fauna Trust for the lake in favour of the project? What does – what does the trust get out of a coal seam gas mine?

40 MR BOOBY: The – the trust in itself won't get anything out of it but the trustees - - -

MR BEASLEY: So why are you – why are you in favour of it, then?

45 MR BOOBY: Well, the trustees indicated that they were of the view that it brings advantage to the district.

MR BOOBY: I see. So it's not really on behalf of the Flora and Fauna Trust but just individually you think it brings something to the district.

5 MR BOOBY: Individually they thought that and they – they specifically voted at a meeting to express their support. The Flora and Fauna Trust is an active community group - - -

MR BEASLEY: Right.

10 MR BOOBY: - - - and they took the view they wanted to show their support.

MR BEASLEY: I see. Thank you.

15 MR BOOBY: And, look, finally, the Flora and Fauna Trust does look towards working with Santos in the preservation of flora and fauna within the Pilliga should that assistance be required. Thank you.

MR O'CONNOR: Thank you for your presentation, Russell.

20 MR BOOBY: Thank you.

MR O'CONNOR: Our final presenter.

25 MR BEASLEY: I think our last presenter for the day is Heather Ranclaud. Ms Ranclaud, I hope I've pronounced your name correctly.

MS RANCLAUD: It's close enough. Thanks very much.

30 MR BEASLEY: Thanks. I'm pleased. Please go ahead.

35 MS RANCLAUD: Thank you for allowing me to speak today. I would like to acknowledge the traditional owners of the country where I'm speaking from and that's the Kamilaroi people and I would like to pay my respects to elders past, present and emerging. So my name is Heather Ranclaud. I'm a farmer from the Liverpool Plains. Our family produce commercial beef cattle, free range eggs and cereal crops. We rely on conservative use of groundwater for our food production enterprises. I have a family including grandchildren living in Narrabri. I'm opposed to the Narrabri CSG proposal and will briefly outline my concerns.

40 Firstly, the impact on groundwater. We recently endured the worst drought in living memory across vast areas of Eastern Australia. The most precious resources for farmers during the drought was water. Anyone with access to precious groundwater values the resource. To think that this precious resource may be pumped out through gas wells is beyond belief. Risks of lateral drawdown and depressurising aquifers is a significant risk from any CSG development. Farmers in the Namoi catchment have been through a water reform process which involved the development of water sharing plans. Many farmers had water allocations reduced by up to 90 per cent to

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maintain sustainable yields and ensure long terms sustainable water use and conservation of that water resource.

5 In my view, it seems unthinkable that water can be pumped out of aquifers as pert of
CSG extraction. Please leave the gas in the ground for the sake of my grandchildren.
Leave the gas in the ground and don't proceed with the Narrabri project. This
project involves a large number of wells which have been – will have a detrimental
10 impact on ground water. The draft conditions of consent limit the number of wells.
My understanding is that there may be a maximum of gas production wells in the
project area and a maximum of 425 well pads including pilot wells and that – in
15 addition, there are up to 60 wells that are pre-existing infrastructure. This is a large
development with a potential to adversely impact on agriculture and valuable food
and fibre production in our region.

20 The second point I wanted to make is about health impacts. We've heard of
detrimental health impacts on people who live adjacent to CSG developments. And
those employed in construction and mining have the highest suicide rates which
makes these jobs the deadliest jobs in Australia. I also acknowledge that agriculture
and forestry are high on the list as well. But there have been calls for a regional
25 health impact assessment to benchmark population health and monitor health over
time and, sadly, the group of concerned residents advocating for a health impact
assessment in our region have been unsuccessful to date in engaging Hunter New
England Health in this project proposal. Some say if you can't measure it, you can't
manage it and we need benchmarking of our community's health if there is a
continued push to extract fossil fuel in our region.

I'd also like to raise my concerns about the proposed Queensland-Hunter Gas
Pipeline. Just as looking at social, environmental and economic factors as a triple
30 bottom line is well recognised, we need to take a holistic view of development.
Integrated catchment management involves consideration of all aspects of managing
soil, water and vegetation and looking at one project in isolation from other activities
can lead to mistakes. There are widespread community concerns that the Narrabri
CSG development will form part of a lager CSG development linking to the
proposed Queensland-Hunter Gas Pipeline which has a proposed route through our
35 irrigation farm west of Quirindi. We've invested in infrastructure which would be
impacted by the proposed pipeline. We also have petroleum exploration licences,
PELs, over both our properties at and at Warra Creek. Consideration for
cumulative impacts should be considered. There is potentially more to the project in
Narrabri and that can have significant impacts on landholders and food producers
40 right across the region. Precautionary principles should caution us to not proceed
with this project.

45 There are other impacts around climate change, around rising temperatures and the
impact that this project will have on climate change. There's a view that CSG may
be a transition fuel bridging a gap between coal and renewables and I feel we should
be not taking that approach, we should be taking a leap and moving straight to
renewables and leave the CSG in the ground. There's an impact on landholders

adjoining or near drilling where the pipes into the drilling shafts can go under your property because of lateral digging and the impact on property values and the ability of landholders to sell their properties will be impacted as well as issues securing insurance cover. Several years ago in our region, there was a widespread survey –
5 well, across the – the whole region. But in the upper Namoi, it was 97 per cent of people in our upper Namoi area said they did not want to live in a gas field and I think that is a very powerful and strong number. Ninety-seven per cent of our community say we do not want to live in a gas field. I hope the IPC will consider the concerns of so many landholders and residents and community members who do not
10 want this project approved. Thank you very much for your time.

MR O'CONNOR: Thank you, Heather, for your presentation. That brings us to the close of our public hearing today. Thank you everyone who's participated. I'd like to thank all the speakers for their engagement in this consultation process and remind
15 everyone that a transcript will be made available on the commission's website. The commission will be accepting comments from the public up until 5 pm on Monday the 10th of August 2020. These comments can be sent to the commission via post, email or through the Have Your Say portal on the commission's website. The panel now adjourns this public hearing until tomorrow at 9.30 am and also we will
20 commence at 9.30 am on Saturday the 1st of August 2020. Thank you all for your participation today.

RECORDING CONCLUDED

[5.43pm]