

## Objection to the Narrabri Gas Project

We acknowledge the Gamilaroi land on which this NGP is imposed and support Gamilaroi elders past and present and all Traditional owners impacted by this project. The Maules Creek Branch of the CWA of NSW objection to the Narrabri Gas Project (NGP) and recommend a full Independent Planning Commission rejection of the project.

This unconventional gas project offers risk in our region.

We ask, risk to who?

It offers risk to our local indigenous people, businesses including recreation, farmers and gas industry suppliers, the community, environment and economy.

Our Branch since listening to the hearings, are left imagining what if.

What if the IPC approves the project and it ultimately fails down the track, due to climate concerns, bushfire or another unforeseen event- and small-town firms invest heavily- who will bear the cost? Not Santos, they employ contractors.

And to farmers Santos have said, we are not sure, there is a risk of aquifer contamination and drawdown. We will monitor. Santos in their assessment have told the Commission this, they have told the community. Many thousands who believe the risk should not be externalised have taken the opportunity to say no- over and over again. This project is not environmentally precautionary in planning or execution and offers unacceptable risks to every stakeholder but the proponent.

What does Santos actually own in this region? The Land? No, not even the land. This project will impact 950km<sup>2</sup>, 850 coal seam gas intrusions into our deep aquifer and take 35-37 billion litres of water, by fracturing the hard rock releasing methane including fugitive methane across the region. This is completely unacceptable for corporate gain and a small handful of others. An approval that sanctions the destruction to land, water, biodiversity and culture in these times, is very poor role-modelling by our government.

Again we ask- who will bear the risk?

If world trade negotiations outlaw exports or refuse to trade with such a carbon intensive economy- will Santos be bailing out the local small operators that are reliant on it? Will the "make good," provisions for farmers really materialise in perpetuity? Will the Gamilaroi be respected by the desecration? Will the five-year 475ppm prediction of greenhouse gases in the atmosphere make such sustained heat above 40 degrees and lower long term rainfall that many residents won't be able to reside and work in the shire?

Heading into a climate emergency driven by fossil fuel, any expansion places a huge risk on local Narrabri businesses and the local council- who- it appears from many of their submissions- have not factored in the risk of a climate emergency and global action.

Promises of government or industry handouts can and do disappear overnight. The government is not in a financial position to promise anything. It is clear from the arts-funding support, Aged Care and Ruby Princess issues that this is true.

Approving this project will encourage individuals to invest more deeply in the future of fossil fuels to underpin the local and state economy. Despite the support for this project, we are concerned that the broader context with which this project sits will ensure this project will start, but will fail- and do much irreparable damage first.

It fails the public interest test for near residents and also for people across the state and internationally and fails to comply with the principles of ecological sustainable development. The costs including for intergenerational inequity and opportunity costs of this carbon-intensive project, are too high.

### **The risks cannot be managed satisfactorily**

Key Submission Objections from our branch during the verbal submission phase have been vindicated by expert scientific advice. Based on the hearing evidence- expert opinion and stakeholder experiences, produced from this seven day IPC hearings, we have witnessed and participated in a body of evidence detailing the lack of rigour in the EIS, the DPE assessment.

This contrasted with the concerns have highlighted the lack of transparency of environmental impacts. This renders the Planning Department conditions inadequate to fully condition the Project Approval and therefore makes it not reasonable or feasible that the NSW EPA can ensure compliance that will make this project safe.

There is no room in our atmosphere or environment for risk, error or fake arguments to be unwound and understood further down the track. Those days are over. The precautionary approach must be applied based on the scientific certainty of risk. We also say that scientific uncertainty- must not be used as a means to approve the Narrabri Gas project.

We note it is only the government who cannot find any risk- "*None of our assessment has identified any potential or irreversible harm that would result from the project and in our view, the project does not trigger the precautionary principle,*" Mr. D. Kitto (IPC presentation Day 1 transcript 13 July 2020).

We support the independent subject area experts that presented at this public IPC hearing and recognise their scientific opinion and depth of knowledge and research as providing the Commission with the scientific information it needs to reject this project as not being in the public interest.

The following areas where the risk is borne by the local and wider population are the reasons we reject this project and we ask the Commission to reject the project outright based on the following:

- Intergenerational equity
- Climate emergency
- Cultural impacts
- Water impacts
- Biodiversity impacts
- Health impacts
- Elevated bushfire risk
- Lack of Insurance for our businesses
- Inappropriate development for our region through further industrialisation when we need to be protecting and being prudent with water use, regenerating landscapes and drawing down carbon and switching to renewable energy.
- Negative economic impacts for our generation and our children
- Lowering the quality of our region and employment opportunities for our children
- Social stigma of expanding a globally unacceptable industry that will attach to our region
- Community division legacy that will arise from the stated Lack of Chamber of Commerce and Council comprehension, support and respect for the local and wider community's research and scientific basis that underpins
- Lack of scientific certainty- No data, no certainty, no approval- the information and Chief Scientist's recommendations must come first.
- Not ecological sustainable development
- Lack of social licence
- Fake arguments used to justify project- gas is a transition fuel, we have a gas supply shortage,
- External to this decision-making process- but the reason the NGP assessment has been "fast-tracked,"- so need to be mentioned and objected to is the community's perception of political pressure and interference by State and Federal politicians advocating for a gas-lead recovery to the Covid19 Crisis.
- Object to taxpayer money being used to subsidise this project – there are other priorities that need to occur that will actually stabilise our environment.
- Object to the lack of government investment into a gas reservation policy- but rather an over focus on rushing this project forward to destroy our region.
- This is a new industry we do not need. It is an over-servicing of fossil fuel economy for the benefit of a very few.

We believe this is a development, that if approved, will explicitly destabilise our region and this is against the wishes of all stakeholders. This project must be rejected.

### **Intergenerational equity:**

We are deeply concerned and support the rights of our current and future generations to a stable climate and economy with zero fossil fuel emissions. Our children demand the following: climate justice, no new coal and gas projects *and* jobs.

Our children including junior Branch members, reject the Narrabri Gas project and urge that the Commissioner's deny the project because it directly threatens the local environment, health and water and importantly that for a viable existence in our region and on earth more generally, there is no room for greenhouse gas emissions via this new un-conventional gas industry in NSW. They recognise that it is not a transitional fuel and that their future role in our society must not depend on fossil fuel emissions industries.

It is of deep distress and concern to our children that the government's leadership teams in their life-times have demonstrated nightly on the local, state and national news, their lack of competence in visioning any stability or future "jobs" for our region beyond fossil fuels.

Coming from Maules Creek, their lives have been directly impacted by three approved State Significant fossil fuel projects and the ongoing threat of the Narrabri Gas Project and its extensions. Their fears are based on firstly their understanding of climate science and the first hand witnessing of a dust, noise and nitrox-oxide pollution, water loss, species decline, biodiversity bulldozing and community upheaval and harassment by fossil fuel paid security guards. Your rejection of this project based on intergenerational equity and the lack of the NGP proponents to plan sustainably before it is approved in this region- and to internalise risks – after years of opportunity must be rejected.

This term in their minds has become a euphemism for joining an "in-crowd community" whose employment is reliant on dangerous, emissions intensive industries.

It is a source of great preoccupation and stress amongst engaged, rural youth and must be considered an important reason to reject these projects.

primarily on intensive carbon-based jobs and the adjunct of any other employment in the economy must be grateful for fossil fuel jobs – in order for the environment to be destroyed so money can flow to support the rest of the economy.

The changes made by the IPC rejection of this project give our children a better chance of attaining the climate and environment they need for survival.

This gas will not make gas cheaper, the jobs will not be for our children unless of course, this government so lacks the confidence that its future vision for our children is waste disposal for a multinational corporation during immense climate disaster.

We are aware that there is so much urgent action required to secure our children's future, that government initiative is out of time and date and the NGP approval will waste nature and climate positive opportunities and precious time that is destructive to our children's future.

## **The IPC's ability to make an independent of government decision is critical for restoring our children's faith in at least some of their elders in this time of immense change.**

We believe we must be positive role models for our children. Failure of our decision makers so far, to support the Chief Scientist and the expert science undermines our children's confidence in science itself and our decision makers. Critical thinking is required of our students from a young age, across the curriculum via the "Quality teaching and Learning Framework." For our young critical thinkers this fundamental failure of decision makers to follow the science has caused a loss of confidence in our "leaders." For the long-term viability of our people, reject this project before it starts.

## **We object to the NGP contribution to climate change.**

A climate bomb- the impacts of excessive greenhouse gases in the environment cannot be overstated. We are directly concerned by the NGPs contribution to

1. Methane gas emissions
2. Fugitive emissions that are not calculated
3. Migratory emissions

Our members and children are genuinely frightened by our governments leaders apparent lack of genuine understanding and public education and planning. We are also alarmed at the government's demonstrated lack of understanding of the action and urgency required in our region.

Further, Penny Sackett's presentation is reason enough to reject this project.

Her considered conclusion that "New fossil fuel development is not required." Is clear and necessary. We will not be able to live let alone produce food in this environment with increased trapping of fossil fuels in the atmosphere. We must change away from fossil fuels in order to survive.

And that "...approving the Narrabri Gas Project is inconsistent with the Paris Agreement." **pg. 3.**

We recognise that it is our obligation to our children to demand that you reject this development based on its inability to provide a safe environment for today's generation and the future generations. It is very hot already in our region over summer, each of the years since 2013 have been among Australia's ten warmest on record and rainfall has declined by 20% in the southern states since 1970.

We refer you also to Professor Will Steffen Emeritus Professor, The Australian National University Senior Fellow, Stockholm Resilience Centre evidence to the Vickery Hearing in providing supplementary information to the panel in response to questions asked by the Commissioners.

Panel question no. 4.

*"4. What are the environmental (and other) impacts that are likely to arise under a temperature increase of 3.2 degrees C?"*

I stated to the Commissioners my opinion that we are currently on track for temperature rises in the vicinity of 3.2°C. Here are a number of projected impacts on Australia of a 3°C temperature rise (both for the environment and more generally). Note that at these high rises in global average temperature, there is not a large difference in the projected impacts for a 3°C or a 3.2°C temperature rise:

The majority (70-90%) of tropical coral reefs are projected to die at a temperature rise of 1.5°C and over 99% will be dead at a 2°C temperature rise (IPCC 2018). At a temperature rise of 3°C, it is virtually certain that the Great Barrier Reef will be dead.

It is highly likely that there will be substantial losses in the ocean's biotic productivity, a significant increase in ocean acidity, and the deterioration of coastal ecosystems such as mangroves and seagrasses (Hoegh-Guldberg et al. 2014).

Kakadu National Park (a World Heritage site) has an average relief above sea level of about 0.5 metres. At 3°C of heating, sea level is projected to rise by about 0.8 metres by 2100, substantially changing these iconic wetlands. These impacts may occur well before 2100 as sea levels along the Northern Territory coast are currently rising at about twice the global average (Pettit et al. 2018).

Impacts on terrestrial ecosystems include: (i) increasing desertification; (ii) loss of rainforests; (iii) woody shrub encroachment into alpine herb fields and savannas; (iv) increasing frequency, extent and intensity of bushfires; (v) forest dieback, especially in areas affected by clearing and drought (Hughes 2014).

Freshwater systems will suffer from higher air and water temperatures, reductions in flows in drought-affected areas, declining water quality and disruption to hydrodynamics. The Murray-Darling Basin will continue to decline (Kingsford et al. 2017).

Observed decreases in cool season rainfall in southeast and southwest Australia are projected to intensify at 3°C of heating (Feng et al. 2019), presenting a formidable challenge to broad-acre cropping (Howden et al. 2014). At the current 1.1°C of heating, the profitability of broad-acre cropping has already been reduced by 22% (Hughes et al. 2019).

A 3 degrees C temperature rise would significantly increase heat stress and reduce the productivity of pasture-based dairy cattle in temperate zones (Lees et al. 2019) and beef cattle in northern Australia. Declining forage production due to declining or more variable rainfall would likely reduce numbers and productivity of domestic livestock (sheep and cattle) (McKeon et al. 2009).

Rural and regional communities are particularly vulnerable to increasing droughts, bushfires and heatwaves. At a 3°C temperature rise, impacts on profits and business viability are likely to cause increasing unemployment and possibly higher suicide rates (Hanigan et al. 2012).

Longer and more intense heatwaves will increase human mortality and morbidity in our cities and towns, especially among the most vulnerable - homeless, poor, outdoor workers, elderly and those with pre-existing conditions (Cowan et al. 2014; Toloo et al. 2015). There will be knock-on impacts on social and health services (Sun et al. 2019).

More than 85% of Australia's population lives along the coast. A sea-level rise of 1.1 metre (an upper level projection for 2100 under a high emissions scenario) would place about \$226 billion (in 2008 \$) at risk of inundation (DCCEE 2011).

The list could go on, but the point is that the high-probability impacts are severe, presenting very large challenges to our health, well-being, economy, livelihoods, and natural ecosystems.

Australia at a 3°C temperature rise would be largely unrecognizable compared to 20<sup>th</sup> century Australia, and would be one of the toughest continents on the planet for humans to thrive upon.”

## **Climate change and farming**

As can be noted above, by Dr. Steffan, the outlook for our region is grim. Farmers are already suffering from the effects of climate change, for example, more frequent and longer, extreme weather events such as drought and high temperatures. There is concern that high levels and underestimated potency of fugitive methane emissions during drilling, production and transportation add to climate change and its health consequences. (The Climate Institute 2011) Haswell and Bethmont (2016) also warn that continuing unconventional gas development will accelerate the health impacts of climate change through major incidents (such as a well blow out in California in 2016, which released more than 100,000 tonnes of methane into the atmosphere), fugitive emissions and competition with renewable energies.

**Near enough is not good enough.** In a time of accelerated anthropogenic climate change, pollution, biodiversity and water depletion there is no margin for error, or “generally” in accordance with the EIS, or simply to the Secretaries Satisfaction, or minimise harm where “reasonable and feasible,” (Administrative Condition NGP Schedule 2 Part A2, A23, A1 ) getting the project right.

<https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/referral-from-the-department-of-planning-industry-and-environment/narrabri-gas-project-recommended-conditions.pdf>

Further, the project application is based on incomplete information and draft conditions that only need to be implemented “generally,” to be acceptable to the State Planning regulators. This provides nothing for community. Our Branch have close knowledge of this outcome.

## **Modification Approvals will undermine the good work of the IPC**

Indeed, upfront this is not ecological sustainable development, and even if it was somehow promising to be, the nature of Major Project culture in NSW will allow modifications that will ensure any protections the IPC satisfies itself will provide this will be removed via Modification to the Project Approval. This is how the Planning system’s “stringent,” method works- to allow the cheapest destruction. We have had at least 24 modifications to three mining projects in the Leard state forest. In fact, a new Modification will be proposed on this Wednesday the 12- and no matter what the feedback it will be approved to make it cheaper for the proponent.

Some of them are huge departures from the original project and all undermine the EIS- making it a worse outcome for the environment and families.

While Santos will publicly state that

Our prime objections to the Narrabri Gas Project is any IPC approval given when so many unknowns exist in the application and government assessment and draft conditions. We recommend the IPC seek every avenue to avoid any green light- even providing a

conditional greenlight is not sufficiently precautionary to avoid irreversible harm. Somethings just can't be mitigated.

From our perspectives increased fire risk and temperatures and drought from the burning of the fossil fuels will adversely impacts our lives and businesses, environment, individually and cumulatively. Our local records show a dramatic increase in temperatures.

The Project is not in the public interest. The risk shift has clearly put locals, our children and future generations bearing the costs.

According to the government, this shifting of responsibility is unavoidable. If it is unavoidable, then logic follows that it is therefore an unacceptable project for our region.

### **The NGP Project poses unacceptable human health impacts**

From our perspective, we object to a major project that will impact our environment including our health, the powerlessness of rural men and increase the likelihood of male suicide <https://thenewdaily.com.au/news/national/2015/10/25/farmer-took-life-csg-battle-broke-heart/> .

A review of the research literature was published in 2016 by Jake Hays and Seth B. C. Shonkoff. The review concluded that "the weight of the findings in the scientific literature indicates hazards and elevated risks to human health as well as possible adverse health outcomes."

All of these health concerns are very real to us. We have a very good understanding of the stress placed on men by major projects impacting ground water. This is prime concern from our group. It is a key harm we seek to avoid for our local communities. We appeal to the IPC to avoid the health impacts by rejection of this project. Do not transfers this burden and responsibility for managing health and the problem onto our children.

We want a stable local economy for our children.

We say our gov'ts have been lacked in alternate investment certainty- in an imagining of a world beyond coal and gas. It is this which is preventing our young from a viable environment in which to thrive and limiting the employment opportunities. The NGP will make this environment even more marginal and this must be cause to reject this project and not let it commence.

Our children deserve the opportunity to create their future through the current generation leaving behind a better, not worse climate for them to thrive. Our young show leadership beyond their years.

We are confident that given a stable environment, our current and future generations will be able to take charge of their own futures - i.e. a stable environment. It is the role of our generation to deliver the opportunity for them.

Our children need support, not a burden



**Produced water contamination:** Almost 70% of original research studies on shale gas operations found “potential, positive association, or actual incidence” of water contamination (Hays and Shonkoff, 2016). In 2011-12 APPEA received 61 reports of environmental accidents and spills in CSG operations (Haswell, 2014, Letter to Planning and Assessment Commissioners). In spite of the limited number of wells CSG operations in the Pilliga have resulted in multiple contamination incidents (Haswell, 2014, Letter to Planning and Assessment Commissioners). US research shows that surface spills are an important route of potential and actual groundwater contamination (Haswell, 2014, Letter to Planning and Assessment Commissioners).

CSG operations pose significant risks to water and therefore the health of people and livestock exposed to impacted water. CSG involves “the use, generation or movement to the surface of many chemicals that can include toxic, allergenic, mutagenic and carcinogenic substances and methane.” (Haswell, 2014, letter to Planning and Assessment Commissioners).

This “welcoming of the industry” – despite a lack of scientific certainty around safety, persists with the Chamber, and it appears the local government, state government and federal government, despite the passing of time, and the failure of the State government itself to implement its own recommendations to fully implement the Chief Scientists’ recommendations to provide greater certainty- before proceeding with the IPC assessment process, does not sit comfortably with us.

## **Air pollution concerns**

### **CSG developments result in increases in air pollution:**

More than 85% of the studies considered by Hays and Shonkoff found that unconventional gas development increased levels of air pollution. McCarron’s research on Queensland’s Surat Basin (McCarron 2018) reported a dramatic increase in annual emissions of some particulates from 2006-07 to 2013-14 , including:

- nitrogen oxides (489% to 10,048 tonnes),
- carbon monoxide (800% to 6800 tonnes),
- PM10 (6000% to 1926 tonnes),
- volatile organic compounds (337% to 670 tonnes) and
- formaldehyde (12 kg to over 160 tonnes).

Formaldehyde is a known carcinogen. Methane concentrations around the Tara gasfields in Qld significantly higher than in surrounding areas which didn't have CSG infrastructure. (McCarron 2014).

### **CSG-related air pollution has serious consequences for human health:**

In the USA the following have been correlated with the presence of the unconventional gas industry: increased rate and severity of asthma attacks, increased hospitalisation for asthma, cardiac, neurological and skin conditions, increased incidence of congenital heart defects, childhood leukaemia, low birth weight, and early infant death (references cited in McCarron 2018). Residents of the Surat basin have reported health impacts including

headaches, sore eyes, nosebleeds, rashes, respiratory symptoms, paraesthesia, though it must be noted that the evidence is of a correlation rather than causation (McCarron 2018). Comparing 2007 data with 2014 data, there was a significant increase in hospitalisations for acute respiratory conditions (increase of 142%, an extra 1794 admissions) and acute circulatory conditions (increase of 133%, an extra 2943 admissions) (McCarron, 2018).

### **3. Psychological and social wellbeing, land competition**

According to Morgan (2016), farmers are subject to a unique set of stressors which can contribute to 'adverse mental health states, such as depression and anxiety'. A study of 378 Australian farmers, most in Qld (~47%), and NSW (~41%), concluded that CSG development is a significant contributor to stress in farmers. It's worth noting that concerns about the impacts of CSG on public issues - health, the community and the environment - were more significant than concerns about farmers' private issues - farm operations and profitability (Morgan 2016).

Hossein et al. (2013) found that the rural communities of south-east Queensland were under sustained stress from the mining and coal seam gas industries, which has an impact on community mental health and well-being.

A study undertaken by Haswell et al. "Psychosocial experiences associated with preparations for CSG mining in a rural NSW community," [unpublished], yet - it is referred to in a presentation at [https://www.racp.edu.au/docs/default-source/default-document-library/understanding-and-responding-to-the-potential-health-and-wellbeing-risks-associated-with-unconventional-gas-mining-in-australia-professor-melissa-haswell.pdf?sfvrsn=5ae5341a\\_2](https://www.racp.edu.au/docs/default-source/default-document-library/understanding-and-responding-to-the-potential-health-and-wellbeing-risks-associated-with-unconventional-gas-mining-in-australia-professor-melissa-haswell.pdf?sfvrsn=5ae5341a_2)].

People who had consented to have gas development on their land had fairly positive experiences. However, families who had not consented had very different experiences. Some quotes from these families:

- The impact is becoming aware of the reality of what's going on around you. That takes a huge emotional and physical toll because you suddenly realise that, you know you don't just have to go to work and earn a dollar to feed your family. You've actually got a fight on your hands as well, this other really big fight that's threatening the way you live, an asset that you've worked all your life to save up for, and it's a direct attack on your, sometimes it's your values but it's certainly your lifestyle.
- In lots of ways it's torn the community into two camps.
- You keep telling people, it's a great community, but it no longer is... everybody knows you, everybody talks to you, smiles, you know? And it's no longer like that.
- I hate to see [the community] go through what it's going through. I moved here because initially just before coal got here it was a wonderful place to raise your kids and now it's being divided, it's been split, it's got anger and it's got abuse and all sorts of things going on that's scaring a lot of people.
- I think it's a really significant issue that's impacting on lots of people's lives. It's not tearing us in half. It's just a really significant thing we've got to deal with and some people have been more affected than others and it's not going to rip [the community] in half, but it's certainly having an impact and a major impact on some people's lives more than others.

## **Lack of scientific certainty by government, industry and academia**

The DPIE Assessment report states that cumulative impacts will not occur in our region due to the Leard Forest Mines.

“There are several coal mines in the region. However, apart from the Narrabri underground coal mine which is located on the eastern boundary of the project area, these mines are long way from the project area in and around the Leard State Forest or to the south of Gunnedah, and are unlikely to generate any cumulative impacts with the project.” Pg 29, <https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/referral-from-the-department-of-planning-industry-and-environment/dpie-final-assessment-report.pdf>

## **What is the basis of this confidence? What evidence is supplied? We are deeply concerned about the targeting of the Gunnedah Oxley Basin- to which our alluvial water is connected.**

Insufficient work has been done on Gunnedah Oxley Basin on the quantity of water available as we will document below. There is not sufficient understanding of cumulative impacts and for over a decade the community has pointed this out in formal submissions, to the government since at least 2011.

*“Cumulative Impacts: Cumulative impacts have not been assessed correctly. The Namoi Cumulative Risk Assessment Tool (NCRAT) should have been employed for assessing the cumulative risks of the proposed Narrabri Gas Project in combination with other existing and proposed mining activities in relation to the Namoi Catchment’s Natural Resource Assets. The expansion of extractive industries has been identified as a key driver of change for the Namoi Catchment. The NCRAT framework provides a way to develop a spatially interactive cumulative risk assessment tool that could be used to explore the potential cumulative impacts and unmitigated risk of mining scenarios on key natural resource management assets in the Namoi Catchment. It is consistent with the Australian Standard for Risk Assessment and incorporates the critical thresholds identified in the Namoi Catchment Action Plan.*

*NCRAT was developed specifically to assess the cumulative impact of mining scenarios on bioregional assets in the Namoi Catchment, in which the NGP lies. It is housed in the North West Local Land Services office as well as the office of the Independent Expert Scientific Committee. The project should not receive further consideration until NCRAT is deployed to assess the cumulative risks of the development to the natural resources of the region.”*

(Supplementary Submission (2011) by the Mullaley gas and Pipeline Accord)

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6456%2120190320T011234.148%20GMT>

## **Failure to implement minimum Chief Scientist’s recommendations**

Below, we note that the WEP argue that it is “premature,” to implement the Chief Scientist’s recommendation 13 (4) around a comprehensive understanding of cumulative impacts for CSG development.

“O’Kane (2014), in Recommendation 13(4), called for government-commissioned models to comprehensively examine cumulative impacts for CSG developments. As the EIS model predicts that the aquifers in the Namoi are connected when CSG production occurs, such a model should be considered. However, as Santos is the only proposed CSG operator in this region, a move to a comprehensive model now, would be premature.” pg 43. WEP Report <https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/referral-from-the-department-of-planning-industry-and-environment/dpie-final-assessment-report.pdf>

The Maules Creek Branch of the Country Women’s Association of NSW ask “Premature for who?”

Our community need certainty and have been respectfully asking for over a decade. Our involvement in the Gunnedah Oxley Basin Water Resource Plan in September 2019 highlighted the need for greater information and the lack of research completed across government, industry and academia. And this has not changed significantly to provide certainty of a low level of risk.

## **Cumulative Risk Assessment is incomplete**

Precautionary approach must proceed.

Cumulative Risk Assessment Tool (NCRAT) to report the cumulative risk of mining Scenarios could be used and possibly expand the tool to include how other sectors, particularly agriculture, contribute to cumulative risk over time- to provide a more balanced and complete picture.

Update the model to reflect predicted change to land cover (of a variety of different mining/development scenarios (using government ground cover data) in the catchment. NCRAT is structured so that asset classes other than water, land and biodiversity can be incorporated.

Therefore include socio-economic values for example, Aboriginal and European cultural heritage, farm size/value, tourism potential and visual amenity as impacts.

Source: Eco Logical Australia 2012. Assessing the cumulative risk of mining scenarios on bioregional assets in the Namoi Catchment: Development and trial of an interactive GIS tool. Prepared for Namoi Catchment Management Authority’.

In the Maules creek area it is considered that the GOB is close to the surface- known as outcrop area. Further, it is our understanding that the Maules Creek Coal Project overlies the Gunnedah Basin.

**The Gunnedah Oxley Basin is not well understood to date and it needs to be ahead of any approval.**

Mining in the Leard forest has exposed much about the Gunnedah Oxley Basin. Primarily it has exposed how much is not known about the interactions between the aquifers.

We are already concerned that fossil fuel mining planning and execution in our region may not comply with the objects of the Water Management Act 2000.

<https://www.legislation.nsw.gov.au/#/view/act/2000/92/id6>

The NGP is Layering a new level of uncertainty via unconventional gas - the Narrabri Gas Project's uncertainty on top of this without assessment is unacceptable.

We are aware that the proponent, DPE and WEP accept that the aquifer has faulting within the project area and that its presence has been ignored in the proponent's water Modelling to date and therefore the Department and the IPC's capacity to be confident in the community's safety from this project.

As the Lock The Gate verbal submission confirmed, from your questions, it is well known by many groups across our region.

Georgina Woods: "We're aware of seismic data that was collected by Santos's previous partner, Eastern Star Gas, which does show evidence of faulting in the area which wasn't used to inform Santos's model, so I – you know, we're not – we don't think that the hydrogeology has been adequately characterised, but it does also appear to us that what little is known hasn't necessarily informed the assessment." Pg 56,

[https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/public-hearing/transcripts/200720-day-1-narrabri-gas-project-public-hearing-transcript\\_redacted.pdf](https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/public-hearing/transcripts/200720-day-1-narrabri-gas-project-public-hearing-transcript_redacted.pdf)

We have become highly concerned about the variability and the ability of these shale areas that are said to stop the flow of water. We think with cumulative impacts, drilling or in our case, blasting, that it can have a really large impact on the certainty that impact will be severe for water users and the environment.

## **Impacts to the Gunnedah Oxley Basin water source raises red flags for our group despite a DPE assessment assumption that we are remote from the NGP.**

We are concerned about existing methane, and whether the faults, may create ways for the methane, and leakage of water downwards, which would depressurise our alluvial aquifers.

## **The undervaluing of the role of water in the Gunnedah Oxley Basin is disingenuous.**

It must be understood and respected for its role in the complex groundwater system. As stated in our verbal presentation- it is at the surface at Maules Creek and very likely connected to the alluvium.

Without proper understanding of the role this system plays across our region, it should not be interfered with by unconventional gas extraction in the Pilliga.

As the DPE Assessment's Mr. Kitto stated

"The gas field will target deep coal seams in the Maules – Maules Creek formation. Those coal seams are located about 800 to 1200 metres deep, and about 95 per cent of all the extraction would occur in those coal seams."

We have zero faith in the Department's responses to the questions the Commissioner's put when questioned from commissioners over water loss or depletion potentially at the hands of the Santos project Mr Kitto simply replied "the key mitigation measure would be to deepen the bore"

We see this as expedient and unsustainable for farm businesses and reckless for environmental sustainability. This is not stringent management. It is creating a lack of certainty for the environment. The NSW Government's is the regulator for this project and it appears as if this is a community-shifted risk response to aquifer water loss should it occur.

Mr Kitto went on to say - in regards to proving water loss "no one is expecting landowners to have to prove their water has been adversely affected by the project" and "it will not be up to the landowners to have to fight the case on their own. It really will be the responsibility of government to oversee that".

From Maules Creek, this is little comfort. A court case if it comes to this is based on self-reported data and is therefore difficult to prove. Yet, if possible to prove, it takes years and does not stop the proponent from continuing the activities that is causing water loss. For example- in relation to the NRAR case going to prosecution, five of the six dams to stop the surface water take that occurred in 2016- still have not been built to the community's knowledge. We fail to see how this protects the aquifer.

The case is going to prosecution yet business is continuing as usual- including modification after modification to the original approval to make it cheap to extract fossil fuels. This is not acceptable and will not protect community or environment from harm.

## **Draft conditions not fit for purpose**

The first Draft condition of the State Significant NGP approval conditions is the same if not possibly weaker than the first condition of the Maules creek mine. For example

### **NGP SCHEDULE 2 PART A ADMINISTRATIVE CONDITIONS**

#### **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

A1. In meeting the conditions of this consent, the Applicant must implement all reasonable and feasible measures to prevent and, if prevention is not reasonable and feasible, minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the development. (Narrabri Gas Project PA draft conditions-

<https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/referral-from-the-department-of-planning-industry-and-environment/narrabri-gas-project-recommended-conditions.pdf>)

Compares with-

## MCCM SCHEDULE 2 ADMINISTRATIVE CONDITIONS

### OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

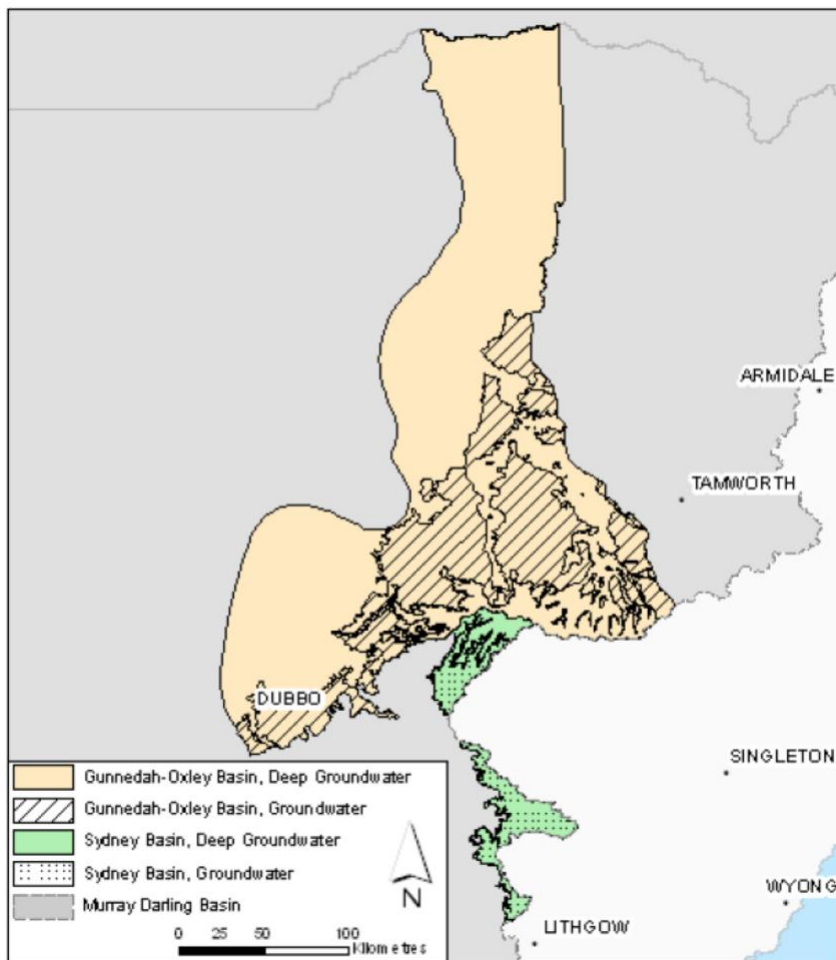
In addition to meeting the specific performance criteria established under this consent, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development. (Maules Creek Mine, PA 10\_0138  
[https://whitehavencoal.com.au/Documentations/Maules%20Creek%20Mine/Approvals/Consents%20and%20Approvals%20under%20the%20EP%20and%20A%20Act/MCC-Project%20Approval%20-%20PA%2010\\_0138%20consolidated.pdf](https://whitehavencoal.com.au/Documentations/Maules%20Creek%20Mine/Approvals/Consents%20and%20Approvals%20under%20the%20EP%20and%20A%20Act/MCC-Project%20Approval%20-%20PA%2010_0138%20consolidated.pdf)

In summary, we have little confidence the Draft conditions will assist in avoiding harm or protecting the environment or be stringent.

**We recognise that there is a high risk of harm because there is no long term observation data and it is unlikely that the Proponent or government have the long term understanding of the impacts to other aquifers at each of the 850 well sites during the life of the project.**

We have a great respect for the GOB and value the Objects of the Water Management Act 2000. We would like to see it protected by this. The Gunnedah-Oxley Basin is a part of the Porous Rock Water Resource Plan defined by the MDBA. The Eastern Porous Rock WRP area is located in N/W NSW. It extends between the Murray Darling Basin Boundary in the East, the Queensland border in the North and Dubbo in the South East. 4,262,200 ha.

It is described by NSW Office of Water: "The Gunnedah-Oxley Basin as defined is the Permian and Triassic rocks of the Gunnedah Basin and the overlaying younger Jurassic and Cretaceous rocks of the Oxley Basin." (pg 4, Eastern Porous Rock Water Resource Plan Area Review SYNTHESIS REPORT, MDBA February 2014)



**Context:**

The wider Porous Rock (GW17) is and has experienced lower than average seasonal rainfall with a high likelihood that this trend will continue. Mega-mining is new to the aquifer. Eight open cut mines in the region as opposed to the three small mines that occurred near Gunnedah last century is a significant change to the water source. It is not reasonable to construe that historical mining for local use is similar in water impacts to current coal mining for export dollars. The Narrabri Gas Project is also targeting the Gunnedah Oxley Basin (GOB). Gas production has increased to create 12MW to 16MW at Wilga Park (Pilliga) and the government would like it to expand rapidly and geographically across the water source. PELs and Mining licences have been issued across the majority of the north-west. Gas Projects and coal mining have huge footprints and target the Gunnedah Oxley Basin.

**Extractive industry impacts are unknown and different to irrigation as it operate 24 hours x 7 days x 365 days per year.** This is not like irrigation.

The govt decision to use this slow recharge water for mega-mining of a non-renewable fossil fuel without scientific certainty as to the volume of water in the aquifer, creates a zero level of confidence in the government’s ability to manage water as currently is.

It also calls into question water priority groupings during extreme events. It is our understanding that water is being made available from sources including the GOB for mining. Irrigation extraction is seasonal. Historically, (with rainfall), allowing for water



recovery. Department of Planning 2019 correspondence to our group says that there are no constraints on (the 300ML/year river surface water dependent business)- Whitehaven Coal from being able to import and use water from other sources provided it has the right to take and use the water under the Water legislation. We are not convinced of the transparency and whether the extractive industries do have approvals under the very complex Water legislation as implemented.

## **We object to any risk of further cumulative impact from the Narrabri Gas project to the aquifers.**

Recharge to the Porous Rock is very slow: at 1mm per 10mm of rain. This water is virtually non-replaceable if extracted within a lifetime. This lack of water renewal is a big deal and warrants cautious use of this source. Issues around connectivity between the GOB and the alluvium have resulted in the highly connected ground-surface water stream- Maules Creek running dry and alluvial drawdown. Despite government and industry bore monitoring the groundwater drawdown effects are occurring.

Historically, NSW Government has imposed restriction on individual water users (farmers) and they have complied with the temporary orders to protect the aquifer. But state significant projects seem to be outside these rules.

To date government has been unable to use the project approval or other compliance instrument or unwilling to use the extraction rules (or tools available under the WMA 2000) to impose restrictions on mining water users- in fact it has issued more allocations or paired licences with passive water takes to increase the take.

The GOB WSP was established in 2012 and was not reviewed or updated in 2019 and there was no stakeholder consultation- apart from the Water Resource Plan consultation. It was the only opportunity to speak about water use and the GOB. The GOB WSP is based on the triple bottom line. Water Resource Plan- consultation was said to be all about ticking a box so State can report to MDBA on its report and how it is going to meet its obligations under the MDBP- in essence there will be a merging of the State and Federal “sustainable extraction limits”. Water extraction will be halved in the GOB and Fractured rock.

Management of the SDL resource units of the Eastern Porous Rock WRP area groundwater resources is through the Water Sharing Plans for the NSW Murray-Darling Basin Porous Rock Groundwater Sources. The Sustainable Diversion Limits locked in a large portion of unallocated water. Why? We asked at the time, why and what is it to be used for? We have not been reassured that it will remain untouched by gas or coal.

An issue for us is that it will be allocated to facilitate a resource rush- before the GOB science is understood. This is against the goals of sustainability particularly intergenerational equity.

The Water Resource Plan (WRP)- is a high-level resource document said to be for “Water resource management- fair, sustainable and transparent water use for the community and the environment.”

## **Groundwater dependent Ecosystems**

These are a high priority and must be protected. Within the project area. We refer to the Expert witness- Peter Serov.

The GDE must be surveyed and offered additional protections. These high priority groundwater dependent ecosystem are the basis of the ecosystems.

## **Our experience**

In Maules Creek, a lack of water resources planning has created an environmental breakdown and a fundamental injustice creating water access and profit for some and an ongoing decline in access to community and environmental water along with an increase in air pollution, a lack of water and economic pain for our community.

Mining impacts

For over 12 months The Water Minister and the Department of Planning have both told community members they are seeking advice from DoI Water on managing groundwater extraction and monitoring under the Water Management Act 2000, in the Maules Creek Leard Forest mining Region. All the while, the resource is depleting.

Importantly, Mining Project Approval compliance has not work in real time to protect the local water resources. It is primarily designed for coal business not for water resource protection.

The WRP is designed to protect the water resource and must be used for this.

The use of Water Management zones for monitoring and actively managing local impact zones has a precedent in NSW and the Porous and Fractured Rock Water Resource Plan- i.e. Spring Ridge management zone.

Additional, from the WRP SDL proposal, it is clear that the new extraction limit/Basin Plan SDL figure will not manage the local issue created by extraction around Maules Creek and may not work overall to protect the water resource.

## **Lack of Data should not allow an approval**

Approving projects with poor and not up-to-date water modelling will lead to ongoing water issues.

**Our experience:** in the North West region, if an approval is granted with data gaps or poor science- water loss will be seen to impact local communities.

From observation at Maules Creek, we feel that the groundwater is connected to the coal seams and the coal seams are being fractured and dug up for the mining, and that along with climate induced temperature and rainfall pattern change we have and are experiencing groundwater drawdown since at least 2018 possibly impacted by 2016 surface water take.

But, four years later in the case of the “surface water prosecution”, despite ongoing drawdown and investigation, no prosecution has occurred despite the NSW Department of Industry Water assessment Whitehaven Coal's 2017 water analysis and modelling as "deficient in a number of areas" and further in 2018, the Department wrote that there was a "generally poor correlation between modelled and observed data".

The Department warned of "significant implications" for the mine's "licensing requirements and the water balance". <https://www.abc.net.au/news/2019-11-05/maules-creek-coal-mine-under-investigation-again-over-water-use/11658718>

It becomes a tedious, slow process, all the while water loss is occurring due to a variety of fossil fuel related factors. From our experience, of 14 years of mining in the Leard State Forest, at Maules Creek, the government is still unable to get the mining companies to produce a functioning Leard Forest Mining Precinct Water Strategy and is waiting for updated water models.

There have been a few industry attempts but nothing to protect the environment, just incomplete and outstanding water models NRAR is waiting to assess. At the same time we have had retrospectively approved water pipe-lines and take from farm bores and other, as water needs predicted before climate and hydrological drought has left mines short on water- some legally applied for others questionable. Despite the fact that the community perceived that “adjusting operations for available water supply,” would mean, reduced production being a condition of the Project Approval it hasn't.

There are two current cases- One for Surface Water and one for Groundwater that are either in the process of prosecution or working towards. Yet mining continues seemingly unhindered.

As was witnessed with the Maules Creek mine approval and the Boggabri Extension, approvals are granted and environmental safeguards either given extensions by government- e.g. finding “irreplaceable” EPBC biodiversity offsets in the case of Maules Creek, or Boggabri Coal Modification 5- for an entire new bore-field because the mine “under-estimated” its water needs to run the mine.

There is absolutely no chance of the any retrospective work occurring because there are no real penalties that we are aware that have been applied for not producing the data. Based on our experience, we are 100% confident that the state of NSW is incapable of managing a huge project like the Santos Gas Project. It is simply too large and too remote from compliance- even if the EPA have an office in Narrabri.

It is not possible without risk and is really expecting the community and environment to bear the risk and damage.

Over the last 18 months across the “Gunnedah Coal Basin,” minimal monitoring has commenced by DPI Water. But this monitoring is too recent to provide enough information to make a decision that suggests the impacts to the water will be minimal in the Gunnedah Oxley Basin. Just the short monitoring time frame is enough to understand that there are

too many knowledge gaps for confidence that extractive industries will operate to protect the water as the Water Management Act Objects requires.

**Existing government, academic and industry knowledge of the porous rock in our region is self-reported to be “poor or scarce overall”.**

The Gunnedah Oxley Basin reaches the surface at Maules Creek and the alluvium and GOB are connected.

We are just one small part of the GOB. Considering our water issues, a proper assessment of impacts of deep water extraction across the NGP project area and the GOB more generally must occur. The skeletal monitoring plan DoI are implementing is not enough in light of the number and scale of the projects the NSW government is assessing.

The approach to the aquifer Sustainable diversion limits (SDL) and aquifer protection is too simplistic. Porous Rock should not be considered a magic pudding for coal and gas but managed, protected and planned for over the long term considering its slow recharge.

The GOB is a resource that underpins current and future ecosystem (including human) survival- it cannot be left open and used up in the next 10 years before another plan is put in place. Rather than encouraging exploitation of this water resource it should be protected. There are too many knowledge gaps for confidence in the SDL being adjusted and left for 10 years or more.

This NSW Government Baseline Project presentation clearly depicts and describes the gaps. The collated groundwater data and information from various sources - government, industry itself and academia was targeted at the sedimentary basins within NSW that are of interest to the coal seam gas industry. The Baseline Project confirmed that not a lot is known about the porous rock water source. See below and the slide taken from the link to the video presentation below.

<https://www.industry.nsw.gov.au/water/science/groundwater/baselineproject/gunnedah-basin>

## Water quantity summary for the porous Gunnedah Basin and overlying water sources



Slide demonstrating the level of available knowledge of water quantity in the porous Gunnedah Basin and overlying water sources. <https://www.industry.nsw.gov.au/water/science/groundwater/baseline-project/gunnedah-basin>

### Interpreting the graph- Limited Data

The graph above government (DoI Water) acknowledges having limited data on the quantity or amount of water in the porous rock. This is very significant.

For example, available data is described to be “of marginal value, not available or of poor quality” in relation to

- metered use,
- regional models,
- regional level modelling.

Further known data is described to be of “moderate or in-progress” for both

- information of government nested monitoring and
- information of company nested monitoring.

This video (hyperlink above) consultation to coal and gas proponents, highlights that a rush to mine the coal and gas in the GOB is unjustified. A proper risk assessment must be conducted and until this time, the precautionary approach must be applied.

Our group currently has a low level of confidence in the management of the water resource due to a combination of our lived experience and the limited data and knowledge of the water resource.

**By the government’s own admission- the existing and proposed sustainable diversion limits are based on poor quality knowledge or as yet uncollected data.**

2018- NSW Department of Industry commenced installing 20 monitoring bores across the Gunnedah Coal Basin- that targets the Gunnedah Oxley Basin. This is said to be covering the Liverpool Shire, The Gunnedah Shire and the Narrabri shire. Time needs to elapse in order to collect data. Putting a bore in is not enough for certainty of impacts.

**Our experience:**

In Maules Creek this putting of monitors in and then going full steam ahead with passive and active extraction has occurred and we are living the impacts that were not meant to occur. The community called for baseline monitoring years ago. The objective is great, the REF process thorough. But not enough bore monitoring and the general nature of this make it weak in managing intensive extraction zones.

“Enabling DoI - Water to understand existing groundwater resources, as well as to understand the impact of present and future changes in regional groundwater resources influenced by mining and other natural resource extraction industries likely to occur in the Gunnedah Basin region.” Pg. 2

Water Monitoring Strategy for Coal Basins in NSW – New Groundwater Monitoring

Bores in the Gunnedah Basin Review of Environmental Factors (REF)

Our group has a low level of confidence that this good goal- will be effective given the limited number of sites (2) in an intense extraction zone.

Further, it is very late in the piece for aquifers. Extractive industries at Maules Creek and Werris Creek suggest unacceptable aquifer impacts under the current approach.

24x7 operations require heavy non-industry monitoring to ensure water resource protection.

Create a series of Local Management Zones

The Gunnedah Oxley Basin is said to be very shallow in the area of the Leard State Forest mines. This seems to be confirmed as there are only two DoI Monitoring bores planned and they are only going to 120 metres. (page 6)

6D Maules Creek Mine	Shallow, 120m	Shallow within basement adjacent to Maules Creek alluv	7003//DP1114719	150.11223	-30.54532	Narrabri	DoI - Water Managed by Rural Lands Protection Board
7A Boggabri Mine	Shallow, 120m	Shallow within basement adjacent to alluvium	164//DP754926	150.11694	-30.67542	Narrabri	DoI - Water Managed by Rural Lands Protection Board

Our group needs more detail as to how monitoring the coal basin- “shallow within basement adjacent to the Maules creek Alluvium” monitoring will monitor the GOB.

We are aware that industry Monitoring bore along Back Creek, establish to monitor groundwater were drilled dry and have always been dry according to the water consultant. This does not protect the water resource.

## **Rainfall is the main source of recharge to the Gunnedah Oxley Basin**

Recharge of the aquifer: The point made in the GOB WRP Gunnedah consultation meeting was that the main source of recharge to the Porous rock aquifer is rainfall.

Therefore this water assessment of very low inputs into the porous rock by the Maules Creek Coal Mine EIS Section M- Groundwater is relevant in relation to Inputs into the porous rock: The Maules Creek EIS with regard to rainfall recharge, AGE (2010) concluded that:

“groundwater recharge to the Permian formations is expected to be relatively low.”  
In summary- not a lot of water input. Coupled with this is the above approved surface water take that is the subject of a NRAR prosecution: (e.g. 2016 a 876ML take as opposed to a licenced 30ML take).

Importantly to a Water Resource Plan going forward is that now- with extraction being actively taken from the Gunnedah Oxley Basin in the Maules Creek area- and also indirectly from dewatering the coal seams, outputs from the porous rock are greater and possibly not transparently metered, and readable in real time with telemetry equipment.

Our group are not happy with experimenting with this very complex geology in such a high stakes way- drilling deep into and extracting large volumes and potentially changing flow directions. The risk is borne by the community and those interfering with the deep aquifers on a large scale are given more allocations further causing problems.

## **Where will the drilling occur?**

### **The Narrabri Gas project must be rejected**

The Narrabri Gas Project proponent has failed to provide the information up front as to where the drilling will actually take place and therefore the impacts. You cannot give a green light without the information up front because scientific uncertainty should not be used as a reason to approve a project. It must stack up as ecological sustainable development. Further, after ten years, it is not reasonable for an approval with such data gaps.

## **There is a risk of serious or irreversible harm to aquifers from contamination from well leakage**

“Wells fail and all wells fail over time.” Anthony Ingraffea.  
<https://www.pnas.org/content/111/30/10955>

This is widely reported. This project cannot be in the public interest because the individual risks posed by each of the 850 wells sites are not known let alone able to be conditioned or managed.

Our concerns are supported by WEP in advice to the government via email to Stephen O'donoghue 5/6/20 :

*"Therefore, the primary strategy must be to ensure that the wells are plugged and abandoned using the best available technology and to the satisfaction of the Regulator. The NSW regulations (NSW 2012, page 13) provide the basis for doing just this and are designed to guarantee the safe and environmentally sound production of CSG by:*

*"preventing any interconnection between hydrocarbon-bearing formations and aquifers; ensuring that gas is contained within the well and associated pipework and equipment without leakage;*

*ensuring zonal isolation between different aquifers and water bearing zones is achieved; and not introducing substances that may cause environmental harm."*

*Bearing these regulations in mind, it could be deemed that the long-term risk of failure is so small, that the only strategy necessary, is to have a robust plan in place for dealing promptly and effectively with the rare case of failure as soon as it happens. The problem with such a strategy is that, as pointed out earlier, little is known about long-term durability of abandoned wells.*

*But it would be quite impractical to put the onus on a Project or Government to monitor all plugged and abandoned wells indefinitely.*

*The strategy cannot be to monitor every well for evermore. If a system is to be put in place, it needs to be graded temporally and perhaps spatially, so that as the risk of well failure is progressively quantified, the extent of monitoring can be adjusted to reflect that risk (an example of adaptive management.) This will require some practical means of assessing the likely performance of wells over time. One possible option might be for the Regulator to monitor a representative selection of wells for say 5-10 years after abandonment. At the end of that time a small number of sentinel wells could be selected for monitoring over a further 10-20 years. Provided no failures are encountered during that time and the risk of well failure is better understood, then monitoring could reasonably be terminated at that point. There is simply not the bore monitoring in place and the data collection over time that is required for the government to provide the guarantee the local government is relying upon contained in its 2012 regulation.*

It is clear from the correspondence from the Water Expert Panel in replied to an email from Mr Steven O'Donoghue, Director of Resources Assessment DoPIE, requesting that the WEP provide supplementary advice via a letter on the post production / decommissioning risks associated with long term well integrity related to the Narrabri Gas Project. (DoPIE's Assessment Report, pg 390) that the well failure will become the burden for future generations.

It is also clear, that wells fail. To contextualise as, Dr Conrad Volz of University of Pittsburgh in 2011 stated in a presentation to the Checks and Balances Project,

*I think we lose sight of the fact that there are 10s of thousands of leaking wells in North America. 10s of thousands! Not a few. It doesn't matter whether they are hydraulically*



*fractured or horizontal well, they leak! In fact, it is the way of all wells sooner or later that they are going to leak. They are going to leak because the cement shrinks. And when the cement shrinks it pulls away from the geological layer that it's sealed from. Then it serves a conduit straight up into the groundwater aquifers.*

[https://www.youtube.com/watch?v=m13KC\\_xaF3k&feature=player\\_embedded](https://www.youtube.com/watch?v=m13KC_xaF3k&feature=player_embedded)

There is no reasonable and feasible way to ensure well integrity. It doesn't exist. We say that there is there is a risk of serious or irreversible harm and these impacts may fall to us, our neighbours, our region and our region's long-term stability. This NGP must be rejected.

Therefore, it is not ecological sustainable development for the IPC to grant an approval to this project with the promise of "things to be worked out post approval." (Mike Young)

**Gas will not bring down prices.** Stakeholders listening to the media, and hoping for cheap gas have been mis-led. The Federal government's 2020 Covid19 taskforce misinformation undermines this project. This intervention with fake news is morally and ethically deplorable and supporting this premise is poor role modelling for our children.

<https://www.smh.com.au/business/companies/santos-cool-on-covid-19-taskforce-s-6b-gas-pipe-dream-20200528-p54xaf.html>

This fake assumption to underpin the existence of the Approval process as a Covid19 response was clearly revealed via questioning from the IPC and the fake fact uncovered by the NSW Planning Department's response;

Mr. Kitto: "you know, no one is saying in our – well, we're certainly not saying in our assessment that that – the Narrabri Gas Project will reduce gas prices." D.Kitto pg 13

[https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/public-hearing/transcripts/200720-day-1-narrabri-gas-project-public-hearing-transcript\\_redacted.pdf](https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/public-hearing/transcripts/200720-day-1-narrabri-gas-project-public-hearing-transcript_redacted.pdf)

## **Not acceptable to have no plan for the disposal of produced water/ salt/ brine/ toxic waste until after approval.**

Our Branch is not comfortable with this outcome. It is inexcusable and unacceptable to the community and the Principles of Ecological sustainable development.

Since at least December 2012, Santos have been going to work out how to deal with the "salt". The community consultative committee June 2013 records the following Narrabri Gas Field – Produced Water Management Plan where it discusses that it is evaluating the brine management.

- "Options for brine management are being evaluated. These options may include:
- Salt recovery. Treating brine and any salt residues to create useable/saleable products (this option also results in more treated produced water that needs to be managed);

- Inject brine into suitable underlying (basement) formations or preferably depleted coal seams. Hydrogeological modelling is to be undertaken to ensure that the geological unit is not regionally consistent and extensive and is isolated above and below by an aquitard or aquicludes within the hydraulic impact zone. Groundwater investigations including monitoring and modelling is also required to demonstrate this can be done with acceptably low risk of leakage in the long term.
  - Disposal of solid salt (not including brine) in a licensed waste facility.
  - The brine management approach and preferred and reserved options will be subject to detailed analysis, feasibility study and trialling. Energy and greenhouse gas emission implications of different brine management options will need to be considered as part of any feasibility study.
- [https://narrabrigasproject.com.au/uploads/2015/10/SantosCCC\\_Narrabri\\_18June2013\\_minutes\\_and\\_appendices.pdf](https://narrabrigasproject.com.au/uploads/2015/10/SantosCCC_Narrabri_18June2013_minutes_and_appendices.pdf)

Eight years is long enough to come up with a plan. It is unacceptable to waste any more of the community's time on this project. Continuing the Narrabri Gas project is not in the public interest.

We are aware that there is a new strategy for monitoring in the Gunnedah coal basin, it is very new and we haven't had much rain since 2018 and recharge is uncertain and minimal. We are concerned about this water source as there is currently not a lot known about the Gunnedah Oxley Basin water source- the target of the NGP wells.

We know that the 2014- NGP EPBC Referral wrote that ... an assessment of the Project indicates that the duration and wider geographic extent of depressurisation of groundwater head within the coal seams and adjacent strata will cause a significant impact to the groundwater resources of the Gunnedah-Oxley Basin. (pg 65 of 84)

<https://narrabrigasproject.com.au/uploads/2014/11/Narrabri-Gas-Project-EPBC-Referral-FINAL.pdf>

## **Opportunity cost**

In terms of development, the best way to ensure conservation of this State assets- the culture, forest, biodiversity, water and associated economies is to not have a gas field in it.

It is in the public interest to reject this project for this reason and for the economics- the glut of available gas is well known in the mainstream media and has been attributed to Covid19 downturn and the decline is said to be structural.

It is not in the public interest to approve and create an unequal balance of economic risks for our region. Creating greater economic risk in our region would be a burden. To look towards climate mitigating strategies including the State's net Zero Plan with 2400 jobs and \$11.6 billion of investment is an opportunity that must be considered at stake if the NGP is approved.

The evidence to support this is that the State government's planning has already left the Narrabri Local Government Area out of the planning for renewable energy zones.

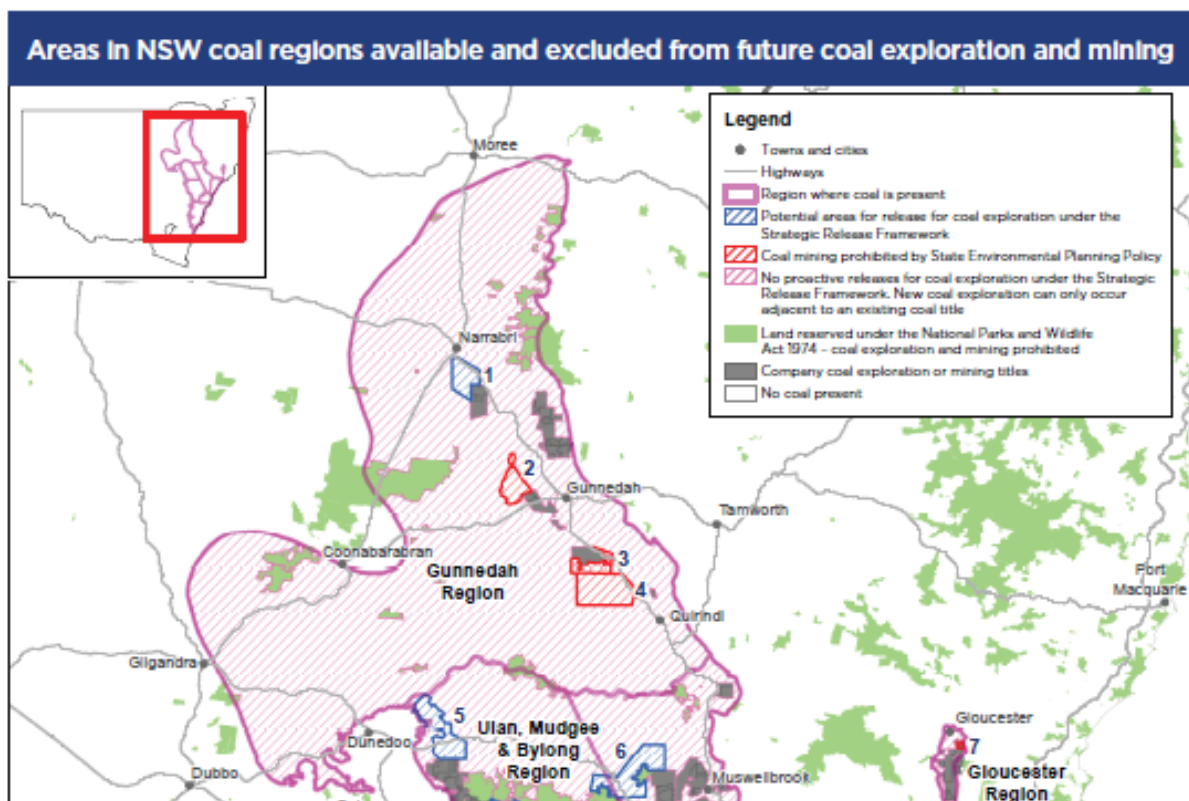
<https://www.abc.net.au/news/2020-06-23/renewable-energy-zone-near-dubbo-attracts-113-investors/12383308>

<https://ieefa.org/developers-express-overwhelming-interest-in-planned-renewable-energy-zone-in-australias-new-south-wales/>

Yet left our region open to coal mining- and therefore factored in additional cumulative impacts to the health of our society, environment and local economy.

There is a risk that the stigma will be felt by our children who will have little option but to accept and participate in a local economy, and supply chain that is (heavily subsidised by State and National governments) that is responsible for destroying the stability of the planet. In the same way that pushing cigarette smoking into third world communities and onto the young in those communities, (<https://www.theguardian.com/global-development/2015/dec/01/big-tobacco-industry-targets-young-people-poor-countries-smoking>) big gas advising the government in the Covid19 Commission to help our region by

This is an unacceptable and unaccounted for social impact. In fact, in this limiting factor is already present in the community. A school careers advisor in our region has stated, "I can't promote jobs that don't exist."



<https://www.abc.net.au/news/rural/2020-06-24/nsw-adjusts-coal-strategy/12387016>

## Protection through rejection

We ask that you do not approve this project with the strict conditions in the hope that data will come later. The Federal Environment Minister has signaled the Federal government's intent to influence Graeme Samuel Review. Environment Minister Sussan Ley has made

clear the intention of the Commonwealth Government pre-Covid-19 pandemic to influence, and even ignore the Samuel Review when she told The Guardian

Australia reform of the EPBC Act could take place before the Samuel Review is completed in the form of “early pieces of legislation”. We are concerned that a State approval will be followed by the federal Government cutting across whatever recommendations the Samuel Review might make. “Coalition is aiming to change Australia’s environment laws before a review is finished later this year” —Lisa Cox, 23 April 2020.

It follows business groups and the government emphasising the need to cut red tape as part of the economic recovery from the coronavirus crisis, and comes as the businessman Graeme Samuel chairs an independent statutory review of the Environment Protection and Biodiversity Conservation (EPBC) Act. ... A final report is due in October.”

<https://www.theguardian.com/australia-news/2020/apr/23/coalition-is-aiming-to-changeaustralias-environment-laws-before-review-is-finished>

We disagree that providing information after an approval is a robust regulatory framework.

Our experience of the Maules Creek Mine is that a bungled approval, based on the promise of detail to come after approval is really an approval that falls short of ecological sustainable development.

<https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22media%2Fpressrel%2F2251063%22;src1=sm1>

<https://www.theland.com.au/story/3595547/maules-creek-mine-approved/>

It is wise for decision makers to take the precautionary approach ahead of approving a development applications and expect all the detail up front.

**Through the Department of Planning’s assessment departure from the requirement for the Chief Scientist’s recommendations to be fully implemented our Branch feels that this project is not in the public interest.**

Public money is for public service provision- not private profit making. Investment in our people and self-sufficiency is the key to rural jobs. Subsidies and money earmarked for gas and pipelines must be used to build drought-stricken Council’s and community’s resilience- not by loading up and cost shift fossil fuel production risk onto these very same people who are struggling with water insecurity. We do not believe it is in the public interest to rush this development due to the Covid19 pandemic and do not think this is a credible reason to create a gas field.

Our region is predominantly agricultural and it is a myth that we need fossil fuels to gain benefit for our region. Further, new gas, is not in the interest of the state goals of the NSW government, or the needs of the global community who require affordable and sustainable solutions to address the needs of the vulnerable, such as access to nutritious food and safe

medicines and protection from heat in the transition to clean energy.

<https://www.seforall.org/cooling-for-all>

## **A Stable climate must come before a risky gas approval**

This project will benefit a few at the expense of or stable climate, region and society. Our submission asks the IPC Commissioners to consider the lack of scientific certainty and the impacts on future generations who will bear the costs. This outweighs a short term gas-led recovery and a Federal taxpayer funded system to subsidize a fossil fuel industry.

Establishing a precedent like this via approving an already unsustainable project is not in the public interest. We urge an out- right rejection of this project application. We want to work towards an alternative future – a long term, nature respectful future for all.

Thank you

Maules creek Branch of the Country Women’s Association of NSW

### **References:**

#### **Additional references**

Haswell, M.R. 2014, Letter to Planning and Assessment Commissioners.

Haswell, M.R., Bethmont, A., Robinson, S. and Ritchie, “Psychosocial experiences associated with preparations for CSG mining in a rural NSW community”

Haswell M.R. and Bethmont A. 2016. ‘Health concerns associated with unconventional gas mining in rural Australia’ *Rural and Remote Health* 16: 3825.

Hays J. and Shonkoff S.B.C. 2016. ‘Toward an Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas Development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 2009-2015’ *PLOS ONE* 11(4): e0154164.

Hossain, D., Gorman, D., Chapelle, B., Mann, W., Saal, R. and Penton, G. 2013. ‘Impact of the mining industry on the mental health of landholders and rural communities in southwest Queensland’ *Australasian Psychiatry* 21(1), 32-37.

McCarron, G and King, D. 2014. ‘Unconventional natural gas development: economic salvation or looming public health disaster?’ *Australian and New Zealand Journal of Public Health* 38:2, 108-109.

McCarron, G. 2018. Air Pollution and human health hazards: a compilation of air toxins acknowledged by the gas industry in Queensland's Darling Downs' *International Journal of Environmental Studies* 75:1, 171-185.

Morgan, M. 2016. 'Fracked: Coal seam gas extraction and farmers' mental health' *Journal of Environmental Psychology* 47, 22-32.

The Climate Institute. 2011. *A Climate of Suffering: the real cost of living with inaction on climate change*.