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22nd May 2017

Attn: Executive Director
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This is a submission to the Narrabri Gas EIS

Here are my reasons for wanting the proposed project to not be approved.

I'm a Sydney resident who accepts my personal responsibility to know something about the exploitation and destruction of our natural assets. I have seen disturbing news reports about leaking CSG wells and fugitive gas emissions and have watched Brendan Shoebridge's DVD, Fractured Country: An Unconventional Invasion as well as disturbing you tube videos concerning the industry generally and the proposed Narrabri Gas proposal.

The Narrabri proposal is an incremental takeover of the district, and nationwide 53% of the country is fair game for CSG companies. I heard a coal mine employee speak in favour of the Warkworth – Mt Thorley coal mine extension at a 2015 PAC hearing and say *This is Australia*. With more passion and for many more powerful reasons, on Fractured Country, Qld farmers and community leaders say of CSG mining, *It's like this is of a scale beyond comprehension. This is Australia! ... This is an invasion of Australia ... It seems that nothing is sacred and nowhere is safe ... 84% mining profits go overseas*. This doesn't have to be Australia!

In my youth I took on a combination of two aphorisms, one from the Bible, 'Vanity of vanities, all is vanity', and from a description of philosophies common to indigenous peoples, 'Walk lightly on the earth'. 'Vanity of vanities all is vanity, so walk softly on the earth' is a lifelong aspiration of mine and one that I believe should be a treasured value of mainstream Australian culture. I don't live up to the ideal and I don't expect Australians to either, but it needs to be a brake on foolhardy enterprises, among which CSG mining belongs. Why? My submission lists some reasons.

Assault on Kamilaroi values and connection with the land

The traditional custodians of the region remind us of those enduring values of respect for the native flora and fauna and of areas sacred to local indigenous communities. Biodiversity is a greater national asset than the minerals underneath because their benefits are for all time, not for a couple of decades as in the case of the Narrabri CSG.

Santos is expecting NSW Government to approve their bid to make their own arrangements with 95,000 hectares, as to where 850 wells will be drilled at 425 well pads. They would be suiting themselves as to the pipelines roads and buildings. It looks to me like Santos is taking NSW for granted, as if they can suit themselves and drive political agendas. The people of NSW and their politicians have to maintain the initiative and not be taken in by a scare campaign that we have an energy crisis because Santos and other CSG miners overcommitted themselves to exports. We must put the intrinsic worth of our land with its biodiversity and clean water and natural beauty above short term resource extraction.

Narrabri residents are opposed to the project.

The Liverpool Plains must remain free of CSG mining and coal mining. The farming industry there is too important to be damaged by short term ventures with long term negative impacts. Narrabri residents and all interested people were given sixty days to digest and respond to Santos' 7000 page EIS. The 8th May 2017 edition of the local Western Magazine quotes the local State member, Kevin Humphries *'There might be a little bit of grandstanding but at the end of the day the project will go ahead'*. I don't think Mr Humphries' grandstanding matches the levels of opposition to the project from his local constituents.

The CSG has adverse health effects

24/7 drilling with industrial lighting that ruins the beautiful dark night sky all round, noisy plant, high traffic levels with obvious noise effects, and continuous presence of security people throughout the district ruins the peace causing resentment anxiety and depression. Children of Tara Qld have developed unexplained seizures, metallic taste in their mouths that spoils appetite, constant headaches, nose bleeds that continue for days, and inexplicable limpness of limbs that might last for 20 minutes (Fractured Country).

Depletion and pollution of the Great Artesian Basin

The Pilliga is an important recharge area for the Great Artesian Basin (GAB) and the CSG wells would extract upwards of 2GL annually, drought regardless. This is extraordinary environmental vandalism.

Fragmentation and poisoning of the Pilliga Forest

Fragmentation is a major cause of plant and animal species loss. Road kill, exposure to predation, weed invasion along roads, and easier access for anyone with no interest in the health of the forest, e.g., arsonists, dumpers, shooters and feral animals. Ecosystems have developed over thousands of years and can be impaired and destroyed in a very short time. The incremental destruction of ecosystems blind people to the significance of each impairment of our biodiversity. Australia's unique ecosystems are major contributors to worldwide biodiversity. The infiltration of weeds and feral animals are causing disastrous losses.

Consider dry periods and times of drought when Santos would continue drawing from the GAB regardless and wildlife would be drawn by thirst to the toxic ponds. Cruel and tragic deaths.

This largest remaining temperate woodland in Eastern Australia has continuous forest as it's great virtue. It must remain continuous. To clear thousands of hectares and destroy topsoils which bear the seedbanks and abundant microbiology and small animals within it is incomprehensible. How can the proposal be taken seriously?

Poisoned soil and dead bushland from a leaking evaporation pond has already occurred.

There's no remedy for this, which affords further opportunity for invasive weeds to establish footholds. It has happened and will happen in the future and there'll be no closing down the operation despite the destruction.

Contamination of bushland from Santos' waste water treatment plant has already occurred

Wherever the 40,000+ tonnes of salt extracted from the GAB water would be dumped would be a permanent pollution problem that Santos would be walking away from. Die-back is a salt problem from ecosystem imbalance and clearing forests, and rising water tables. The Narrabri project would be an acceleration of that very problem. It's lunacy to invite this contamination into Santos' planned locations, but its impacts could extend further afield. The plastic liners in the massive ponds would deteriorate and leak, and the liners wouldn't be replaceable.

More than that, treated water of questionable quality is used for dust suppression on dirt roads and is discharged as surface water with unknown long term effects.

Pipeline leaks have occurred

Wherever gas or mining waste is stored or transported, there are leaks. If approved the operation would be beyond the control of the local community or government. In *Fractured Country*: a rueful Qld farmer says, *You only hear the good parts about it till they start, then you find out there are pipelines going north south east west and wherever they feel fit to go.*

Well heads already leak

Neither the steel casings nor the cement barriers round them can be maintained. The proposed 850 wells would be a massive time bomb. I spoke with a CSG mining engineer who blamed defective well shafts on shoddy work by contractors, as if mining companies can be absolved of blame. The vital fact is the well casings and barriers don't and won't meet required standards expected by NSW Government. Unfortunately the government doesn't make the legal safeguards sufficiently watertight for political reasons. If it did and actively enforced their stated standards, the mining proposal couldn't be allowed.

Fugitive emissions cannot be controlled, nor air pollution from evaporation ponds.

Bush fires occurring fewer than fifteen years apart are detrimental to the Pilliga's health. Fugitive emissions, access roads and industrial activity would increase the threat of untimely fires. What a place for gas extraction with these inevitable leaks!

Dr Damien Maher of Southern Cross University found consistently higher methane levels in the air round Qld CSG fields, up to three times the background levels (*Fractured Country*).

The financial viability of the Narrabri Gas Project is dubious

Think of Venezuela's roller-coaster ride into depression with the slump in oil prices. Venezuelans know all too well that resource extraction is not production, because they are shouting it in the street demonstrations. WA knows something of the effects of price drops in commodities. Currently CSG prices are buoyant, for now. Resource extraction isn't viable on the employment side but takes capital out of sustainable industries like farming manufacturing tourism and clean energy. Where the mining occurs, farm land and tourist attractions are ruined.

Poison soils mean inevitably that those poisons will infiltrate groundwater downstream. Water is Australia's most precious resource. Impair this and destroy farming viability, and the effects aren't immediately apparent. Decades must elapse for full effects to be understood. Anywhere CSG mining happens, farmland values fall, and not just those farms with wells and/or infrastructure.

Water movement doesn't respect farm boundaries. Farmers' superannuation is their farms. Please consider this.

If approved, Santos wouldn't have to prove their mining had nothing to do with fugitive emissions and adverse health phenomena, victims would. Weigh the short term cash flows from CSG mining against the opportunity costs of lost sustainable industries, deteriorated community health and spirit, chronic illnesses and environmental destruction.

Australia till now has enjoyed the great advantage of clean farm produce. There are good reasons to think above-mentioned poor health phenomena relate to CSG mining. Consider livestock and crops. Poisoned soils and water would be devastation to our export prices and Australia's clean green reputation.

The project has been resurrected from 'non-core asset' status with the EIS release this year, raising suspicions that approval of the project would make it a saleable asset. The high export prices for CSG are the great hope for the project's viability. The Prime Minister's demand that gas be made available for the domestic market is small comfort in the future, considering the downward trend in prices for clean energy and the upward pressures on gas prices. Export prices are vulnerable to future competition from America and Russia, meaning an approved Narrabri Gas project might come to a premature end with no ongoing maintenance commitment to abandoned wells. The cost of extracting the Narrabri gas would require high prices to make it sufficiently profitable. The short term employment benefit from setting up the wells is no justification and ongoing employment numbers would be 200.

Jobs and Growth

Investment in clean energy infrastructure and research instead of fossil fuel operations such as the Narrabri CSG Project would pay long term dividends and preserve the integrity of the Pilliga and so many other irreplaceable ecological treasures throughout Australia. Such investment has been discouraged by politics giving in to the excessive influence of the fossil fuel industry, and to Australia's long term detriment. Fractured Country features a once functioning Qld village with only one supporter of the CSG activities, the publican, courtesy of well paid and thirsty mine workers. It won't last, of course, but why should the publican care? He'll make his pile and luxuriate in his wealth far from any CSG well.

The Narrabri CSG proposal is counter to the Jobs and Growth aspiration. Australia must devote our human and financial resources to industries that sustain employment and quality lives for all of us. Industries such as farming, manufacturing, tourism, clean renewable energy, education and science will secure that future.

Yours sincerely

Jim Morris