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2018 Hydraulic Fracturing Inquiry Submission.

My family of three and I moved from the Kimberley in June 2011 to settle in the South West region. My husband and I rented a house in Dalyellup (Shire of Capel), while we built our new home in Dalyellup. My husband, daughter and I have been living in our new family home for the past five years and we have all settled into living in the South West.

My husband and I are both teachers and I am a member of the Capel Branch of the Country Women's Association and the current Chair of the South West Environment Centre Inc.

I first became involved in the anti-fracking movement in June of 2015 when I read in the local Bunbury newspaper that a company registered as *Unconventional Resources* was the most likely successful applicant for the tender (from the DMP) to explore for gas and petroleum in the South West. I was shocked that this would occur because of the risks hydraulic fracturing poses to the water, the environment and people's health.

In an effort to educate the public about the risks of hydraulic fracturing I created a Facebook Group called *No Fracking in SW WA* and a Community Action Group sprung from my social media community education endeavour. *The Conservation Council of Western Australia* and *Lock the Gate* became involved and supported the Frack Free movement that was snowballing in the South West.

As our campaign grew in strength and articles from concerned locals started hitting the papers *Unconventional Resources* changed their registered business name to *Bunbury Energy*. In early 2016 Wal Muir from *Bunbury Energy* started delivering presentations to Councillors of the local Councils and Shires that would be affected within the South West at closed to the public meetings.

Our Facebook group steadily grew in numbers and undertook a few name changes and is now called *Gasfield Free Southwest Alliance (WA)*. When *Lock the Gate* employed a South West Coordinator, many communities became involved in the push for a Gasfield Free South West and as a result many local groups of concerned residents in the South West formed new Action Groups and declared their communities Gasfield Free.

Since 2016 the Capel Branch of the Country Women's Association has been involved in a variety of Gasfield Free activities demonstrating their concerns about the negative impacts gasfields could have on the environment, our health, the health

of our children and on our overall quality of life. At the CWA 93rd State Conference at the Fremantle Sailing Club Tuesday 25th July 2017 I spoke to the Capel Branch motion and branch delegates voted for the following general motion with a resounding 99 votes for the motion and 6 against the motion.

“CWA of WA (Inc) request the Government of Western Australia to enact legislation to ban unconventional onshore gas mining and exploration processes to access gas trapped in tight sand and shale in Western Australia”

This motion now belongs to the State body of the CWA and was presented to the State Government.

Since mid 2015 I have spoken to and communicated with, many people who live in the South West region who have the same concerns about the impacts of gas mining on their current and future earnings in small family businesses, agriculture, wine and tourism industries.

I have met with state politicians, signed petitions, written letters for inclusion in local papers, letters to my Capel Shire Councillors expressing my concerns about the impact of fracking of the Shire of Capel. I arranged for Peirs Verstegen from the Conservation Council of Western Australia to do a presentation on the risks of hydraulic fracturing to the Councillors of the Capel Shire after Wal Muir had his closed to the public round table presentation.

This Gasfield Free issue is close to my heart because 57% of our Shire of Capel, where I live, is open for gas and petroleum exploration. I am deeply concerned about the impacts gasfields will have on the environment, our health, the health of our children and on our overall quality of life. Locals have genuine concerns about the impacts of gas mining on their incomes in small family businesses, agriculture, wine and tourism.

These concerns are justifiable, considering the wealth of physical and scientific data and anecdotal evidence available, demonstrating the dangers and risks to Communities and water security.

The Western Australian people spoke loudly on election day. The Gasfield Free campaign in Western Australia snowballed and had political impact, and the Mark McGowan Labor Government was elected in March 2017 committing to:

- a statewide moratorium on fracking until an inquiry can demonstrate the process will not compromise the environment, groundwater, public health or contribute to climate change;
- a permanent ban on fracking in the Southwest, Perth, Peel and Swan Valley;
- No fracking in the Kimberley without the approval of Traditional Owners.

The government completed the last inquiry in 2015 on fracking and it was deemed a

'profound disservice' to West Australian's.

Frack Free Future in their May 2017 Briefing cited the following three reasons for an independent inquiry.

' 1. The terms of reference of the inquiry were set and interpreted so narrowly as to omit vital considerations as to the impacts of the Industry. 2. Even within its terms of reference the inquiry consistently failed to properly consider academic literature and community experiences associated with fracking around the world. 3. The academic, political and economic picture is developing so rapidly that even a more robust and accurate report would have dated significantly since the WA Committee deadline for submissions in late 2013. '

The National Toxics Network stated 'The failure of this inquiry's terms of reference to investigate and report on the potential public health, social and environmental impact of hydraulic fracturing for unconventional gas, internationally recognised as major "implications" of the industry, renders the inquiry insufficient to meet its aims and is a profound disservice to the public interest and of all West Australians".

Frack Free WA May 2017 Briefing cited that Victoria had banned all unconventional gas activities, Tasmania and the NT both have moratoriums in place and five proposed gas projects in NSW were closed down and the South Australian Liberals announced if they were elected in 2018 they would have a ten-year regional ban on this unconventional gas mining industry.

The issue about the risks and impacts to the water, land, and health from unconventional gas mining, commonly referred to as fracking is not a new one; it has been and is a global issue over 20 years and affects every living thing on this planet.

I acknowledge my CWA sisters of NSW who passed a motion to support a ban on unconventional; gas exploration, extraction and production. I also acknowledge and am grateful for the work of environmentally minded professionals, including scientists, environmental associations and the WA people.

On 7th August 2013, Anne Gething sent a letter to the Premiers Office requesting information about the process of hydraulic fracturing for natural gas in Western Australia. Mr Barnett response dated 28th August, focused on the need for gas for economic growth and energy security because of 'significant amounts of natural gas from shale gas and tight sources predicted to be available in Western Australia, we expect natural gas will continue to play a key role in the State's energy security.'

Barnett's letter acknowledges that hydraulic fracturing 'must be done in a way that protects our environment and meets community expectations'.

Climate change is a global issue and it's now time for transition from all fossil fuels to renewable safe and non-polluting energy sources like solar, wind and wave energy with the overall goal of living a sustainable lifestyle.

The South West Yarragadee is the largest body of fresh ground water in the South West, measuring 6, 000 square kilometres and containing 400 cubic kilometres of water. Drilling through the Yarragadee and local aquifers will put WA water security at risk, now and in the future. Without uncontaminated water, communities cannot thrive.

The Department of Mining and government ministers state that stringent government regularity frameworks, organisational and company policies are sufficient and onshore gas mining will be safe in WA. However, procedures fail, as demonstrated worldwide and in Australia. How will the water table be uncontaminated and rendered safe for human consumption, should gas or toxic fluids leak from the well casings or should the well casing fail?

Frack Free Future's July 2016 Briefing by Jules Kirby (frackfreefuture.org.au) states, the response to the open letter from the Department of Mines and Petroleum:

'Unconventional gas in the Southwest [states]...the risk of pollution to groundwater from shale or tight gas fracking and CSG is similar. Shale gas wells are...more likely to fail than CSG wells...[they] are harder to construct being much deeper and with added complexity comes greater chance of failure...research shows 6 to 7% of wells leak within their first year of operation and over 60% fail after 30 years. It's also much harder to cement the deviated wells used in modern fracking. A study of 340000 wells in USA reported that 70% of deviated wells leak...Professor Anthony Ingraffea describes well leakage as "a chronic ubiquitous documented problem...recent changes[with the development of horizontal drilling]...significantly increase the risk of leakage and other problems...gas wells must be drilled through the aquifer to get to the rocks...[with this there is]...a significant risk of leakage...because the non-porous nature of these rocks requires that gas companies drill tens, hundreds or even thousands of wells per gasfield'.

Which means many potentially leaking gas wells will be drilled through the Yarragadee Aquifer, which the South West and Perth Metro areas rely on for domestic and agricultural use. Industrialisation of the South West would mean a series of interconnecting gas pipelines covering the landscape with access tracks and other infrastructure. This would affect tourism and the agricultural income that families of Western Australia rely upon.

In addition, Professor Anthony Ingraffea states that structural integrity failure of one or more well barriers, can lead to direct emissions of methane into the atmosphere and sub surface migrations of fluids into surrounding ground water and surface water.

Research indicators also suggest the carbon footprint for Shale gas is at least 20% greater than coal, over a 20-year assessment period, conventional gas shows no benefits when comparing data to coal over a 20-year period.

In addition to these concerns land owners currently have no right to veto gas mining on their properties and are forced into a negotiation process, the outcome of which is

that gas companies are allowed access, even if the land holders don't want gas mining on their land. Property owners have no say over the use of their land when an onshore gas mining lease is approved. This is a threat to all in regional areas of Western Australia and our homes could be rendered unliveable if they are situated near gasfields.

This issue was of such importance that environment groups banded together and produced a document titled 'Protecting Western Australia's Environment Protecting Our Future' which outlines the environment group's policy priorities for the 2017 Election. This groundbreaking document, authorised by Piers Verstegen of the Conservation Council of Western Australia, was distributed to all State Government Representatives, political parties and candidates prior to the March 11 State Election. On page 10 of this document there is a call on political parties to:

'enact a moratorium on unconventional gas including fracking across the state which remains in place for a minimum of five years and until thorough community consultation...and a robust, independent scientific process demonstrates that the industry will not have adverse impacts on the environment or health... Permanently ban fracking in sensitive areas including National Parks and Conservation Reserves, National Heritage listed areas, drinking water catchments, groundwater areas, floodplains, high productivity farm land and tourism zones... Reject any unconventional gas proposals that do not have the consent of affected communities, and enact legally binding veto rights for landholders and Traditional Owners.'

WA's water security is the issue. I am a big believer in the Precautionary Principle, and It is important to note that legislation is a better safeguard when water security is the issue. It is more difficult to alter or change legislation than it is to change ministers and government in power; a ministerial decree only applies when that minister and party are in power. We need to have both feet in the present however we also need to have our eye on the future. Look after the land and water and it will look after you.

In good faith,

Christine Terrantroy

19th March 2018