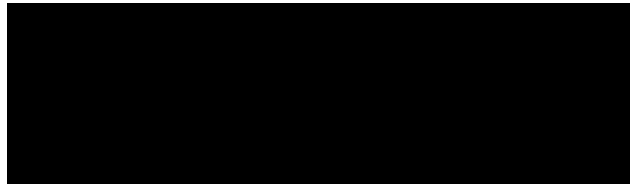


SUBMISSION TO WA SCIENTIFIC INQUIRY INTO HYDRAULIC FRACTURE STIMULATION IN WA 2017

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We are both ex-teachers with the Education Department of Western Australia. We were both involved with the education of both primary and secondary students, and also operated a home-based child care service for 12 years. We are parents to three children and grandparents to six.

IMPACT ON THE ENVIRONMENT – WATER AND LAND USAGE

We have been motivated to make this submission because we place huge importance on our State's natural environment and cultural heritage. We do not believe that gas fracking can be done anywhere in WA without significant and unacceptable damage. The development of new fossil fuels including gas will increase carbon pollution and is inconsistent with international agreements on climate change. We have plentiful renewable energy resources and more fossil fuels are not needed. (Summary about Australia's gas issues and the fact we don't actually need to develop our onshore gas. The Conversation 14 July 2017. <https://theconversation.com/memo-to-coag-australia-is-already-awash-with-gas-80960>)

We live in a semi-rural area in the hills east of Perth, and in one of the major water catchment areas for our Perth water supply. Unconventional gas production is highly invasive. Shale and tight gasfields involve the industrialisation of entire landscapes as hundreds or even thousands of closely spaced gas wells are required to extract commercially viable quantities of gas. Vast networks of access roads, gas pipelines, processing plants, compressor stations and wastewater holding dams and treatment plants are required. Native forests and wild life are impacted. Valuable agricultural and horticultural land is lost.

There are numerous examples of peer-reviewed literature showing serious unconventional gas impacts on groundwater in the USA, regardless of the industry's insistence that there are no impacts. This should provide a warning to Western Australia that impacts do occur and are usually found by third parties. (Vogwill, R., 2017. *Western Australia's Tight Gas Industry – A Review of groundwater and environmental risks.* Conservation Council of Western Australia)

The biggest impact on land is the transformation of entire regions of beautiful productive, forest or wilderness into an industrial landscape. This should be reason enough not to allow unconventional gas mining. Estimates suggest that the Kimberley might soon be home to over 100,000 shale gas wells and the MidWest to over 25,000 shale wells. (Lock the Gate Flyer: *Shale and Tight Gas Fracking* http://www.lockthegate.org.au/about_shale_and_tight_gas)

In WA we have numerous communities who have said they want to remain Gasfield Free. These include Brunswick, Stratham, Dandaragan, Greenough, Cervantes, North Boyanup, Moora, The Vines, Forest Grove, Stirling Estate, Quedjinup, Caversham East, Leeman, Greenhead, Exmouth, Irwin, Jurien, Carnamah and Chittering. Representing a large sector of the rural community, the

Country Women's Association of WA passed a motion at its 2017 Annual Conference calling for an end to fracking and unconventional gasfields in WA. (*Fracking bans in Australia overview.* <https://www.theguardian.com/australia-news/2017/oct/03/voters-back-fracking-bans-despite-pressure-on-states-to-drop-them>)

IMPACT ON HEALTH AND WELLBEING

Multiple potential hazards to human health from exposures to harmful air and water pollutants associated with unconventional gas mining have been identified. There are direct local health concerns associated with living and working near all phases on the unconventional gas mining process, not just the fracking component including exposure to air pollutants released during the process. Local communities may face stress from changes such as noise, lights, odours, dust, worries and fears about health, accidents, declining property values, increased traffic, industrialised landscapes, loss of community cohesion, post-construction job losses, local business loss and changes to the character of the community. At a global level there are grave concerns about this industry's contribution to climate change. (*Haswell (2017) Health Concerns associated with unconventional gas mining in Western Australia: A critical review* 1. What are the potential health concerns associated with the development of shale gas mining in WA? 2. Are these health concerns adequately addressed by two government reports that contributed to policy decisions on the topic?)

Public health problems associated with drilling and fracking, including occupational health and safety problems are well documented in the USA. Impacts include increased rates of hospitalization, respiratory problems and rashes, motor vehicle fatalities, trauma, drug abuse and low birth weight babies. (*Concerned Health Professionals of New York & Physicians for Social Responsibility. (2015, October 14). Compendium of scientific, medical, and media findings demonstrating risks and harms of fracking (unconventional gas and oil extraction) (3rd ed.)* <http://concernedhealthny.org/compendium/>)

The Physicians for Social Responsibility concluded that the science is increasingly clear. The health risks posed by fracking are real, significant and unacceptable. No regulatory framework has been shown to adequately protect public health or the environment. (*Chesapeake PSR (2016) The Health effects of fracking. Fracking harms human health. Chesapeake PSR Physicians for social responsibility. Health and Energy Brief. Author – Gina Angiola, MD*)

The British Medical Journal recently published a joint letter signed by 18 leading medical scientists, stating "The arguments against fracking on public health and ecological grounds are overwhelming. There are clear grounds for adopting the precautionary principle and prohibiting fracking". (*British Medical Journal 2014*)

Lock the Gate Alliance hears firsthand about the impact unconventional gas development is having on the livelihoods, health and well-being of Australian farming families living adjacent to and surrounded by gas activities. These include intimidation, coercion and bullying by UG companies, intolerable noise and light pollution from flaring, traffic and UG infrastructure, contamination and depletion of water in farm bores, rivers bubbling with methane, bores running dry, stock losses associated with pipeline construction and water contamination, costly and time consuming interruptions to farming operations, huge trucks and heavy machinery on small local roads affecting lifestyle, safety and road infrastructure, dust impacts on pasture, increases in weed infestation,

industry workers leaving mess from pipeline construction in farm paddocks, workers destroying fences and leaving gates open, properties not able to be sold, credit being denied, mental health impacts resulting from dealing with companies and the impacts on industry development and physical health symptoms including respiratory ailments, headaches, rashes, nausea and vomiting and nose, throat and eye irritations.

Therefore we call on the independent Scientific Panel of Inquiry to recommend a permanent, legislated ban on fracking and unconventional gas activities across WA, and to recommend the development of renewable energy resources to meet the state's energy needs.

