

To the Standing Committee on Environment and Planning enquiry into Unconventional Gas in Victoria

The Portland Field Naturalists Club wish to express their opposition to any proposed Unconventional Gas mining in our district. The PFNC was established 70 years ago, our members representing a diverse cross-section of our community. The Club has affiliations with the South East Australia Naturalists Association, Australian Naturalists' Network, Victorian National Parks Association, Wilderness Society and supports many other environmental organisations.

The aims of the PFNC are to enjoy and foster an interest in the natural world and encourage an understanding and appreciation of our natural environment. We are involved in the conservation of our local fauna and flora and participate in the gathering of survey data for like groups and Government departments to achieve these aims. The Club has been a strong and continual advocate for the protection and well-being of the flora and fauna of South West Victoria. Various National & Forest Parks and Reserves have resulted from this advocacy and which are now major eco-tourism drawcards.

The establishment of UCG mining would therefore be at odds with the purpose of our organisation and the preservation of the biodiversity and intrinsic values of our local environment. With the need to preserve the agricultural land for food production it is our concern that the focus of mining companies would turn to areas of public land not currently under national parks protection. Physical disturbance of the surface environment to establish well-pads, roads and other infrastructure such as waste water holding ponds would severely impact on wildlife and their habitat. Fauna and flora face constant threats from bushfires, climate change, land clearing and land degradation, habitat loss or modification. UCG mining would add to this load with the disturbances it creates – noise, light, traffic, 24/7 which would impact on the feeding, breeding, sleep patterns and movements of many animals, and cause confusion, disorientation and increased risk of collisions with vehicular traffic. Contaminants and pollutants from the mining and extraction processes have been shown in overseas countries to cause health issues in humans and livestock including genetic defects. The risk to our unique Australian wildlife is unacceptable. The area of SW Victoria and SE South Australia has been identified as a National Biodiversity 'hotspot' with a number of species listed as endangered. To increase survival pressure on these species would add considerably to the cost of preventing extinctions. Australia has the dubious distinction of having the highest extinction rate in the world of mammals in the past 200 years.

Of concern to our members is the enormous use of water involved in the mining process. As we do not have large surface water reserves, the exploitation of the aquifer would therefore be the same source that the region's population use, our main water supply!

Local geothermal water in its existing state is already under geological pressures. Will the extraction processes increase this pressure and create unforeseen geomorphology problems? From the research we have undertaken this is a very real possibility as upward pressure is

exerted long after the mining has ceased causing cracks in rock strata that cannot be predicted. The pressures are known to cause wells to leak. See attached paper from the Society of Petroleum Engineers.

Holding ponds containing the contaminated waste water from the mining process contain chemicals and salt products. Risks to local wildlife drinking this contaminated water are also an issue. Leaching from the ponds and rain affected levels in the ponds could create overflows and contaminate surrounding soil and ground water.

Various rivers arise in the areas identified a potential sites for UCG mining and some arise from drainage of the wet heathlands in the Cobboboonee & Lower Glenelg National Parks. All these rivers are rich in biodiversity and flow into the sea. Any polluted runoff would affect the water quality and have negative effects on local freshwater and marine biota.

Portland lies in the Kanawinka Geopark region. This Geopark forms Australia's most extensive volcanic province and has been recognised as one of the most significant and largest provinces in the world. Geotourism is a major feature for this area. Given the volcanic nature of this region do we have any idea as to the seismic side-effects generated with the type of extraction processes used by UCG mining? In other parts of the world records show large and rapid increases in the number of earthquakes following the commencement of hydraulic fracturing of the rock substrate. The volcanic activity in this region has been occurring over thousands of years at 5-10,000 year intervals. The most recent eruption occurred about 5,000 years ago. In geological terms this is recent and geologists describe the volcanoes as dormant rather extinct in this area. In our view it would be folly indeed to even consider interfering with the enormous pressures already evident in the earth's crust. Portland has access to geo-thermally heated water which has been harnessed to heat a number of buildings, this fact indicates to us that the earth's crust is not very thick at this point and geologist have noted that the earth's crust is thinner nearer the southern coast of the continent.

Lake Condah, to the north of Portland is an ancient Aboriginal settlement which included a sophisticated system of aquaculture. Situated on a volcanic lava flow The Budj Bim Heritage Landscape is likely to become Australia's latest UNESCO World Heritage site. Both of these valuable natural assets would be compromised were UCG mining to be established and expanded in these locations. The Gunditjimara People have a history dating back 8-10,000 years and there is much archaeological information still to be derived from the substrate. Any risk of disturbance to these sites either above ground or beneath the surface is unacceptable and not in-keeping with respecting the significant history of these remarkable people.

In conclusion, the establishment of UCG exploration and mining would have deleterious impacts on our environment. Stakeholder businesses that derive their livelihoods from the many aspects that our clean, green environment has to offer would suffer as a result.

Agriculture, ecotourism, fishing – both recreational and professional and all allied businesses would be adversely affected.

We have a number of alternative renewable energy sources at our disposal that are far less damaging on the environment and on human populations. All that is needed is the political will to develop them. Why jeopardise the futures of so many at the cost of developing such a questionable and unpopular energy source – namely Unconventional Gas and its possible method of extraction – hydraulic fracturing?

We are **not** reassured that safe-guards would protect the natural assets of this region. One of our members travelled to Pennsylvania on a fact-finding mission in June 2015 and has provided us with evidence that mining companies blatantly flaunt regulations and in many cases are exempt from some laws intended to protect the public and the environment, such as the Clean Air Act, the Clean Water Act, or the community Right-To-Know laws. Mining companies have become accustomed to this and will most likely stop at nothing to continue to operate in Australia in a similar manner.

It is our belief that the government of Pennsylvania has contravened its own constitution in allowing hydraulic fracturing processes to despoil the landscape, the environment, people's health as well as that of the livestock and no doubt the wildlife.

We share Article 1, Section 27, PA Constitution with you and ask the Victoria Government **not** to take the same path as Pennsylvania, but have the courage and foresight to follow the lead of other countries such as France as well as many other jurisdictions and legislate to prevent this dangerous and damaging industry becoming established. The principles outlined below in the PA Article 1 should also apply to Victoria.

*“The people have a right to clean air, pure water,
and to the preservation of the natural, scenic,
historic and esthetic values of the environment.
Pennsylvania's public natural resources
are the common property of all the people,
Including generations yet to come.
As trustees of these resources, the Commonwealth
shall conserve and maintain them for the
benefit of all the people.”*

On behalf of the members of Portland Field Naturalists' Club, I thank you for the opportunity to contribute this process of review.

Robyn Willington

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