

I am writing to state my support of Wrexham Council's decision to refuse planning permission for an exploratory drill in Wrexham. As one of thousands of Wrexham residents against the use of an exploratory drill in this area, I find that the Wrexham council have legitimate concerns, concerns which indicate that this application by Dart Energy is not worth the risk, especially considering the temporary and unnecessary nature of this exploration.

Dart Energy do assert the right to impact on traffic, noise, potential pollution, disruption and change of land because the actions are 'temporary'. There are too arguments against this, namely, even the temporary nature of some parts of the system used still have the impacts that the appeal was refused on. Therefore whether the actions are 'temporary' or longer term, it still stands that:

The proposed development is environmentally unsustainable, contrary to Minerals Planning Policy Wales which states that oil and gas should only be extracted in sustainable locations. The site lies in a rural location and is served by an inadequate highway network. To allow this form of industrial use into a rural area would result in a significant increase in HGV traffic movements, increased noise levels and an adverse impact upon the landscape and would be contrary to Policy GDP1 of the Wrexham Unitary Development Plan (2005). The proposed development involves an industrial form of development outside recognised settlement limits within open countryside. To allow the development would therefore be contrary to Policies PS1 and PS2 of the Wrexham Unitary Development Plan (2005), which seeks to direct new development to within settlement limits and ensure that it does not materially detrimentally affect the countryside or the quality of the natural environment. The submitted geophysical survey does not provide sufficient information in respect of the impact of drilling upon the vertical and lateral movement of gas. To allow this development without sufficient information could result in geological instability, potential subsidence and pollution as a result of the release of gas and would be contrary to Policy GDP1 (f) and (i) of the Wrexham Unitary Development Plan (2005).

In addition to that, not all of the impacts are entirely temporary. The main permanent fixture would be the bore hole. The appellants say that on completion, 'the borehole will be plugged and abandoned'. The 'abandoned' borehole could leak at any point in the future and because it won't be properly monitored, this could continue without anyone being aware of it. All boreholes will eventually fail. The cost of dealing with such a failure will fall on tax payers.

The impacts include increased traffic (also a main basis for West Council refusing exploratory drills in this area). The exploratory drill will increase traffic significantly. While reference is made to this, the area is not suitable for such a volume of heavy vehicle traffic. The test drilling at Farndon (which was a relatively easy access compared to this site, down a straight stretch of road) resulted in damage to kerbs and verges. Similar, if not greater damage would be expected on the route to the test drill site at Borrass Commonwood, which is further from the main road and accessed via narrow country lanes. Noise pollution is clearly a concern. G P Energy's supporting document acknowledges that their other test drilling operations have been the subject of noise complaints (para 1.11).

In addition to this, Dart Energies assurance that pollution will not occur are fallible. In addition to human error, the geology of the land, and other factors do mean that pollution is a risk. In fact it has been reported that Dart Energy has previous history of polluting through exploration (namely benzene) at the Firth of Forth, with levels on their website reporting levels of benzene 12 times the UK's drinking water standards. In addition to this, each rock type presents its own set of challenges. Subsurface pressures may range from a few hundred at the surface to 5000, 10,000 or even 20,000 pounds per square inch ("psi") at deeper depths. In some wells it is not always easy to predict the expected pressure level.

Temperatures may likewise range from near-surface conditions to 400 ° F [200 ° C] or more. And there is often a good chance of encountering toxic or corrosive gases.

(<http://www.petroleumonline.com/content/overview.asp?mod=4>). Dart Energy is responsible for environmental violations in Australia and in the UK, therefore Dart Energy's promises to protect the environment and comply with planning conditions cannot be trusted. Dart Energy is developing operations in the UK precisely because Australia has tightened up regulation of the industry in the wake of environmental destruction, pollution and adverse health impacts caused by drilling for coal bed methane there. All coal bed methane activity within 2km of residential areas has now been banned in New South Wales, where Dart previously operated.

Even exploratory wells have a great deal of risk. Exploratory wellbores may provide a path for surface contaminants to come into contact with groundwater or for waters from subsurface formations to commingle. They may also decrease pressure in water wells and affect their quality. Air quality could be affected, including emissions and dust from earth-moving equipment, vehicles, well completion and testing, and drill rig exhaust. Pollutants could include particulates, oxides of nitrogen, carbon monoxide, sulfur dioxide, and volatile organic compounds (VOCs). Nitrogen oxides and VOCs may combine to form ground-level ozone. Impacts would depend upon the amount, duration, location, and characteristics of the emissions and the meteorological conditions (e.g., wind speed and direction, precipitation, and relative humidity. Exploratory well crews may generate waste (plastic, paper, containers, fuel leaks/spills, food and human waste). Wastes produced by exploratory drilling would include drilling fluid and muds, used oil and filters, spilled fuel, drill cuttings, spent and unused solvents, scrap metal, solid waste, and garbage.

There are a number of other incorrect, fallible and out of context statements that appear to attempt to mislead the board. In some cases it borders on patronising, and insulting the intelligence of council, welsh assembly members and public alike. This is a known tactic of the industry which can in just one interview state that there is no risk of contamination yet admit to supplying and offer to supply replacement water to households whose waters have been contaminated long term (reference industry professionals in 'Gasland' documentary). In this document this includes:

Paragraph 1.19: stating that CBM is a clean burning gas. This ignores that health and environmental consequences of extracting the gas itself^{1,2,3}.

Paragraph 1.18: clearly implies that gas extracted from coal bed methane could become part of an 'indigenous' gas supply for the U.K., therefore playing a part in alleviating concerns around reliance on gas imports from the Middle East or Russia. This is deliberately disingenuous in failing to acknowledge that gas produced here will be sold onto the global energy market and will therefore be unable to play a part in securing an indigenous energy supply.

In any case, their Supporting Statement for the original application, G P Energy make a number of claims about what the company sees as the benefits of *extraction* of Coal Bed Methane (1.17, 1.18, 1.21, 1.19), as this application is solely with regard to exploration/ test drilling, there is little relevance, other than to provide a wider context with which to support their statement. If this is the case, then the long term environmental consequences of what they plan also needs to be taken into account. If not, more so, as there is no point putting the environment and our health at risk for something which would not be allowed anyway.

There appears also to be Insufficient information provided. G P Energy's supporting document does not provide information as to how waste water will be dealt with. Will this be tankered to a licenced treatment plant? What about waste water that remains underground?

Safe and clean sources of renewable energy, such as solar, wind and tidal power are, however, capable of playing a significant part in securing the U.K.'s indigenous supply. The claim that CBM is able to contribute to meeting our CO2 emissions should to be set against the need to drastically reduce our dependence on fossil fuels. Truly safe and clean renewable technologies are already well developed and planning decisions need to promote and encourage this deployment. Skills would be developed and more jobs created through this, just as G P Energy claims local jobs may be created through CB extraction at Borrás Commonwood (para 1.22).

Paragraph 1.21: states that the majority of the cost of the investment for the appraisal borehole (in the region of £250,000) will be spent within a 50 mile radius of the site. However, no further detail is provided as to what this investment would be. It is unclear how this could be the case. If the test drill application be considered without reference to any future hypothetical extraction activities for which planning permission has yet to be sought, the test drill cannot claim any financial benefits relating to the provision of energy/gas. Much of that money for drilling equipment, transport etc will be spent outside of Wrexham, or indeed outside of Wales and therefore of little local benefit. The effects of the test drill will include three months of air pollution, noise and significant inconvenience to local people.

There is DECC report entitled *The Unconventional Hydrocarbon Resources of Britain's Onshore Basins* which shows that the Borrass site is outside the area where coal bed methane extraction would potentially be successful due to the absence of an impermeable layer of rock that would allow the successful dewatering of the coal. CBM extraction technique relies on pumping the coal strata dry and hence it is essential that there is a complete and substantial impermeable layer on top of the target strata. Because we have water bearing aquifers on top of the coal, it would be impossible to pump the coal dry.

Attempting to pump it dry would be environmentally risky because it would probably establish water connections to the aquifer. Back in the old coal mining days, the mines of this area were considered to be particularly wet and required extensive and continuous pumping in order to stay open. The coal seams are thin and heavily fractured which makes extraction challenging. Test drilling and all its associated disruption and risks when the coal bed methane extraction it is testing for cannot work and therefore this damage and pollution is pointless in this case.

There are various other factors that could be included in the refusal, Wrexham council only chose three out of many. Others included: Records of coal mining do not cover the entire long history of coal mining in the area and there are therefore many unknowns about previous mining activity at the proposed drill site. The Gresford Mining disaster was caused by a huge gas explosion. Even a test drill runs the risk of hitting a gas pocket and leading to a large gas escape and possible explosion. There is also a risk of subsidence. In nearby Erddig some years ago, a whole area of land collapsed into old mine workings. Drilling activity will increase this risk.

Test drilling will go down through the Kinnerton Formation, a major aquifer, with a risk of polluting the groundwater and local water supply. Once the aquifer is breached, pollution could be an ongoing problem.

People who have enquired about insuring their homes in the vicinity of coal bed methane exploration sites have been told that they will not be able to get insurance against damage caused by CBM drilling. It is unacceptable to allow developments that will render people's homes uninsurable or unsaleable.

The support for the council in this decision in Wrexham is clear, as was seen in public meetings, council meetings, the hundreds/thousands signing the petition for the council to refuse permission. While this public support for the council's decision may not be able to be used as a reason to uphold the decision made by the council, it is a supporting factor to be considered.

In conclusion, surely it is important the Cymru takes a stand on this issue? Our sustainability policy is superb and to be proud of. Our resources for renewable energy (solar, wind, biogas, hydro etc) is great, and the state of our environment is not for sale in this way. These organisations from countries from abroad do not have to live with the consequences of their actions in our country. In fact, they have been banned from doing this in their own countries. We are Cymru, we do not need to bow to Cameron's England whims, pandering to their financial backers to the Tory party and the what is essentially bribery of councils. Our country is beautiful and we choose for it to stay this way. We can, as a country lead the way on this in Britain. There are legal reasons to refuse this application and so the decision of Wrexham council to not grant planning permission for this noisy, disruptive drill and its traffic on such beautiful land can be upheld. With all my

heart, I await your decision on this. I would be grateful if you would inform me of the decision.

K. Saxby

Additional references

¹ Finkel, M.L. and Hays, J. *The implications of unconventional drilling for natural gas: a global public health concern* Public Health 127 (2013) 889-893.

² Peduzzi, P. and Harding, R. *Can we safely squeeze the rocks?* Environmental Development 6 (2013) 86-99.

³ Kovats, S et al. *The health implications of fracking* The Lancet, Vol 383, March 1, 2014.