Is gas “fracking” coming to North Oxfordshire and Buckinghamshire?

The Government is consulting on licensing a 900 square-kilometre block of North Oxfordshire/Buckinghamshire for gas exploration, to be extracted using the controversial “fracking” technology used in the USA

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Britain has a serious energy crisis; we use too much energy, and we've almost exhausted the supplies of energy produced from within the UK that have sustained us since the Industrial Revolution. Rather than face up to the reality of this situation and make difficult lifestyle changes, the Government has opted to ignore the growing body of evidence about our ecological future and extract every last drop of fossil fuels from within our borders – *but it's nowhere near enough to sustain our economy*. What's worse, the technologies being applied have the potential to create a long-lasting toxic legacy – quite apart from the additional carbon emissions. **And now this search for hydrocarbons may be coming to North Oxfordshire and Buckinghamshire.**

The Government releases oil and gas exploration licences in “rounds”. In part spurred on by the energy and financial crisis, the Government are reviewing an even larger area to licence to oil and gas companies in 2011/2012 – and is actively promoting[1] the sell-off of our remaining energy resources as quickly as possible.

This isn't “conventional” natural gas; it's gas trapped in shale and clay. Until recently this wasn't economic to produce, but with high prices this gas might be viable to produce. For the first time a large part of the area being considered will utilise the technology known as hydraulic fracturing[2] or “fracking” – where high pressures, explosives and special chemicals are used to fracture rocks and release the oil or gas that they contain.

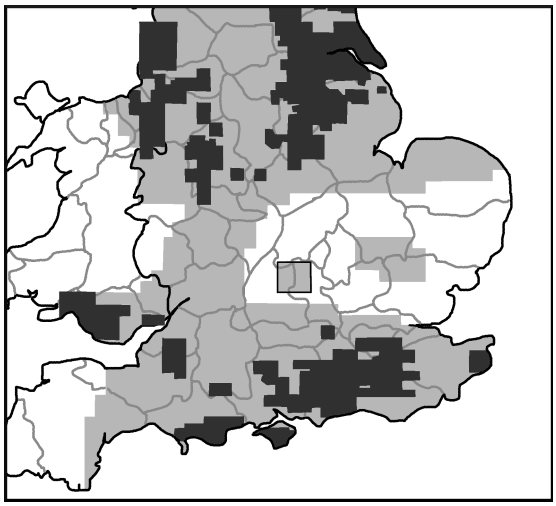
Licences are awarded for 10 kilometre square blocks, based on the UK national grid. For the 14th round[3], 9 blocks covering North Oxfordshire, North Buckinghamshire and South Northamptonshire are being investigated. In the 1950s an exploratory borehole was sunk by Anglo-Persian Oil (now BP) near Twyford in Buckinghamshire (black dot near middle of the square in lower map) – although as long ago as 1911 gas had been found in other wells sunk nearby at Calvert[4].

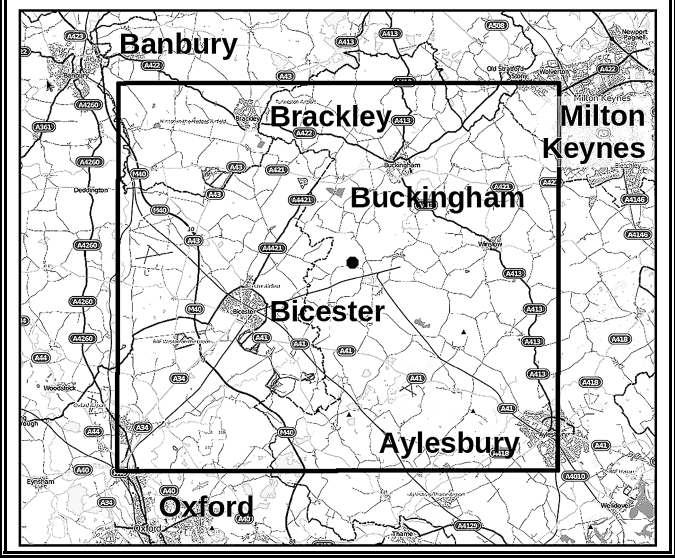
In previous rounds, licences were awarded for experimental fracking operations in Lancashire, South Wales and the Mendips – and those facilities are now being developed. In Lancashire, the development there has led to concerns about the

14th Onshore Oil and Gas Licensing Round

The Department of Energy and Climate Change have been examining future oil and gas extraction in Britain[3] – and as part of that process they have disclosed the areas likely to be developed. The top map shows the existing licences (in black) and the areas currently being assessed for future development (in grey). You can see the 30 kilometre square marked in the middle, covering North Oxfordshire and Buckinghamshire. The map below shows the area superimposed on a local road map.

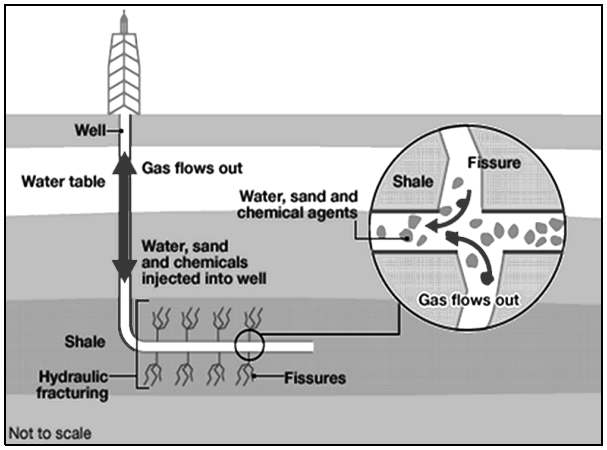
The final decisions on which areas to licence, and who will receive them, are likely to be made in the next six to eighteen months.





What is "fracking"?

In conventional oil and gas production the drilling rig locates an underground reservoir. The oil or gas flows through permeable rocks to collect in a large subsurface bubble, where it can be easily tapped by pumping. The gas held in shales and clays cannot move because the rocks are impermeable – they resist the movement of oil and gas. To free the gas/oil from the rock a drilling rigs makes a horizontal bore running along the rock strata[5]. Then high pressure fluids and small explosive charges fracture the rocks, and the chemicals in the fracking fluid dissolve the rocks further, widening the cracks and allowing more gas to migrate into the fluid.



Fracking is a very energy and resource intensive process: It has a direct physical impact from the installation of the plant and pipelines; the process creates a large demand for water; both drilling and gas production create sludge – mostly composed of water and rock, but laced with the chemicals used in the fracking fluid, and this requires disposal; all this activity also involves creating noise and smell, and the generation of traffic. And of course, all these additional local hazards will be generated at a time when the Government is reviewing/repealing legislation on environmental protection, and has committed itself to a minimal regulatory framework[6] to attract investment from the oil and gas industry.

Although Britain might be short of gas as North Sea production declines, fracking will not solve the problem. Fracking doesn't produce that much gas. Whilst the media recently trumpeted a "huge" shale gas discovery[7] in Lancashire, in fact it's only equivalent to a few years worth of our annual consumption. And as production will be spread out over a long period of time, in a single year it doesn't represent a large quantity of gas. It has been noted that the company was deliberately "talking-up" the discovery because of the financial difficulties of the project's backers[8]. Also, fracking doesn't help energy prices. Fracking is an expensive way to produce gas – it requires high energy prices to make it viable. Therefore expanding the use of fracking will not cause prices to fall. Fracking also exacerbates the climate problem[9] – not just because of the fossil carbon released, but also due to the inherent inefficiency/low energy return of the process.

potential for pollution and the creation of small earthquakes[10]. In South Wales[11] and the Mendips planning permission has not yet been granted – but there is concern that the hot springs in Bath might be affected by fracking operations[12].

Now a much larger amount of land is being released for exploration, and much of it will use fracking as the means to extract gas – *and rather than just another abstract environmental story in the news, this time it's local!* However, saying "no" doesn't solve the problem. Just as shale gas and gas fracking isn't the answer to our excessive energy consumption, and the economic problems that drive these trends, so not changing our own lifestyles and expecting our high-consumption lifestyles to remain unchanged – irrespective of the external restrictions – is not an option either.

Since 2007 Ideas for a Change has been running talks, walks and film screenings to raise awareness about peak energy and 'Limits to Growth'. The potential development of gas fracking in Oxfordshire/Buckinghamshire is a local illustration of these trends, and we hope that in raising awareness of the fracking issue people will also examine the factors which are driving it.

We'll be organising events around this issue over the coming months. If you're interested, would like to know more, or would like to contribute to a coalition against local fracking developments, please get in touch with us:

- **Via the web at `http://www.fraw.org.uk/ideas/`**
- **Via email – `ideas@fraw.org.uk`**

References and further reading

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