

## **75% OF UK shale not recoverable**

Three quarters of the UK's biggest shale gas deposit may be unrecoverable because there is not enough space for the wells, a new study has found. Maximising production and minimising environmental impacts will require drilling sites to be placed as far apart as possible and multiple wells to be operated from each location, researchers concluded. The "Research Fracking in Europe"(ReFINE) consortium, led by Durham University and Newcastle University, examined how obstacles such as buildings, road and rivers could hinder efforts to exploit the Bowland Shale. The majority of Britain's shale gas reserves are thought to be locked away within the rock formation, which stretches across large parts of northern England as well as parts of the Midlands, north Wales and the Isle of Man. Mapping well pads on to an area which has already been licensed for possible shale gas extraction led researchers to conclude that a typical 100 square kilometre licensing block would be able to accommodate just 26 wells – limiting potential extraction by 74 per cent. Sarah Clancy, lead author and postgraduate student at Durham University's Department of Earth Sciences, said: "For the first time, we have looked at the capacity of the land above the Bowland Shale and where potential shale gas wells could be located, and the impact this could have on the probable amount of gas that could be extracted. "Our findings suggest that the number of wells that could be developed could be limited by existing and immovable infrastructure, which in turn would reduce the amount of shale gas that could be extracted." Report co-author and professor of environmental chemistry at Durham University, Fred Worrall, added: "This highlights the need for a systematic approach to where shale gas well sites are located, with minimum impact." In May last year, North Yorkshire County Council gave Third Energy the all-clear to undertake hydraulic fracturing at an existing well near the village of Kirby Misperton. It was a landmark decision for Britain's fledgling shale gas industry, marking the first time a planning application had been approved since a ban on fracking was lifted in 2012. Fracking at the site

was due to kick-off in late 2016 but was delayed until this year after Friends of the Earth launched a legal challenge which was later rejected by a High Court judge.

Several other shale gas developments have also been given the thumbs up since last year's landmark decision. In October, communities and local government secretary Sajid Javid overruled Lancashire County Council to award Cuadrilla consent to frack an existing well at a site close to Blackpool. The following month Nottinghamshire County Council granted permission to IGas to drill two exploratory well near the village of Mission, and in March it approved an application by IGas' subsidiary, Dart Energy, to drill an another exploratory well near the village of Barnby Moor. The aforementioned well sites all sit atop the Bowland Shale rock formation.

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