

SCRUTINY STUDY OF THE POTENTIAL FOR SHALE GAS EXPLORATION IN PENDLE

INTERIM REPORT OF THE SCRUTINY MANAGEMENT TEAM

Councillors –

A. Aziz	A. Mahmood
A. J. Beckett	N. McEvoy
S. Benson	G. Roach (Chairman)
K. Hartley	M. Sakib
M. Horsfield	D. Whalley
A. Kerrigan	S. Wicks



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SCRUTINY MANAGEMENT TEAM

Interim report of scrutiny study of the potential for Shale Gas Exploration in Pendle

1. INTRODUCTION

1.1 At its December meeting the Team agreed that, in anticipation of a motion to full Council, it would add to its current work programme a piece of work relating to the potential for and implications of hydraulic fracturing (fracking) in Pendle.

1.2 Council subsequently requested the Scrutiny Management Team “to gather evidence on the practicability, likelihood and desirability (or otherwise) of possible shale gas exploration and exploitation in this area.”

1.3 We agreed that this study should be carried out by the full Team rather than appointing a Panel.

1.4 We wanted to establish what potential exists in Pendle for the exploitation of shale gas reserves and whether extraction would be in the best interests of our local community.

1.5 The following terms of reference were agreed

1. To gain a clear understanding of the availability of shale gas within Pendle and the potential commercial viability of any future exploration and extraction.
2. To gain an awareness of the regulations, procedures and processes governing shale gas exploration/extraction.
3. To consider the potential environmental and public safety impact of exploration/extraction.
4. To consider the potential benefits that could result from shale gas

extraction such as reduced energy prices, improved energy security and job creation.

5. To draw conclusions and make recommendations for consideration by the Council.

1.6 Our study began in January, 2015.

2. METHOD OF REVIEW

2.1 We considered briefing notes prepared by the Scrutiny Manager.

2.2 We heard evidence from the local pressure group, Keep East Lancashire Frack Free (KELFF), as well as other views from local people opposed to the practice.

2.3 We also heard the views of a member of the Craven and Pendle Geological Society.

2.4 Representatives of the Environment Agency (EA) and the Health & Safety Executive (HSE) attended as witnesses.

2.5 The Department for Energy & Climate Change (DECC), Lancashire County Council (LCC) and UK Onshore Oil and Gas (UKOOG) submitted position statements.

2.6 We drew on the experience of two other Lancashire local authorities, namely Fylde and Preston, who had already carried out their own scrutiny reviews in this area.

3. OUR FINDINGS

Background Information

What is fracking?

- 3.1 Fracking is a method of extracting gas from mineral deposits by injecting water, sand and chemicals at high pressure into wells.
- 3.2 Exploration companies drill wells down into the gas-bearing shales, thousands of metres below the surface and drilling may also continue horizontally. The well is lined with a steel and concrete casing.
- 3.3 A perforation gun, consisting of a shaped explosive charge inside a steel container, is lowered into the well to make small holes in the well casing.
- 3.4 A mixture of water, chemicals and sand is pumped at very high pressure along the well and through perforations that fracture the shale.
- 3.5 The water opens up cracks in the rock and the sand grains lodge into the spaces and keep them open, allowing the released gas to flow out of the rocks and to travel back up the well casing.

Is Shale Gas present in Pendle?

- 3.6 The British Geological Survey reveals both upper and lower deposits of shale in parts of Lancashire and Yorkshire, including Pendle.
- 3.7 Currently gas extraction is only being explored in relation to upper deposits.
- 3.8 Exploration can only be carried out under licence and there are currently no licences covering Pendle.

Planning Policies

- 3.9 Lancashire County Council is the Mineral and Waste Authority responsible for dealing with planning applications for shale gas extraction throughout Lancashire.
- 3.10 Policies relating to fracking should be set against the National Planning Policy Framework. The Framework seeks to balance social, economic and environmental impacts of development but it also includes policy requirements which will affect the weight to be given to certain issues above others. For example it indicates that mineral extraction is essential for economic growth and that best use needs to be made of it.
- 3.11 Shale gas is seen as having a major longer term potential to support the energy needs of the country. It is likely that significant weight would be given to sites that could produce quantities of gas that would supply national needs. That would have to be balanced against the resulting environmental impact.
- 3.12 Fracking involves limited surface impacts compared to other fossil fuel extraction processes. The underground and geological impacts are however far more complex. The impacts would need to be specifically assessed for every proposed development. Fracking should not in any circumstances lead to geological instability.
- 3.13 The County Council has published a supplementary planning document on onshore oil and gas for consultation with a view to its adoption in May or June 2015.

Incentives

- 3.14 Communities are being offered incentives to allow fracking to take place under the UK Onshore Oil and Gas (the industry's representative body) Community Engagement Charter.

- 3.15 This package provides for the operator to
- at exploration/testing stage, provide £100,000 in community benefits per well-site where fracturing takes place;
 - at production, pay 1% of revenues to communities
 - publish evidence each year on how they have met these commitments.

The Role of Agencies

Department of Energy and Climate Change

- 3.16 The government believes that shale gas has the potential to provide the UK with greater energy security, growth and jobs. It is encouraging safe and environmentally sound exploration to determine this potential.
- 3.17 Within the DECC the office of unconventional gas and oil (OUGO) is responsible for licensing oil and gas exploration.
- 3.18 OUGO aims to promote the safe, responsible, and environmentally sound recovery of the UK's unconventional reserves of gas and oil, including the [development of shale gas and oil](#) and other forms of unconventional production such as coal bed methane.
- 3.19 The industry will determine what resources are economically viable, and the Government wants to ensure the right framework is in place to support industry and local communities as exploration and production, moves forward.

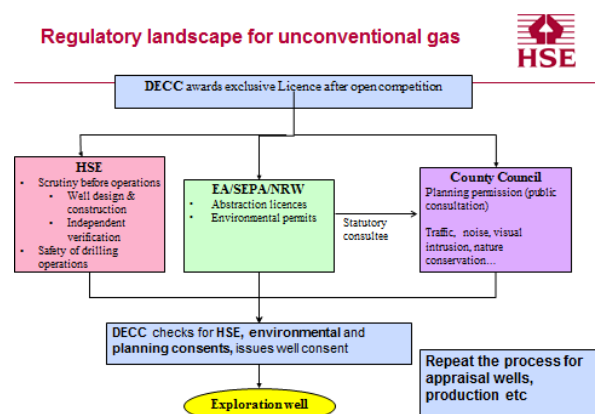
Environment Agency

- 3.20 The Environment Agency (EA) is one of several regulating bodies in respect of unconventional gas.

- 3.21 Before any drilling can commence an environmental permit is required from the Environment Agency.
- 3.22 Permits are risk based and site specific and are the subject of public consultation.
- 3.23 Pre-operation conditions apply and post decommissioning monitoring is required.
- 3.24 Non-compliance is a criminal offence.
- 3.25 The components of fracturing fluids must be approved and requirements are applied where groundwater resources are at risk.
- 3.26 Waste management plans are also required.
- 3.27 The EA has defined two groundwater protection zones within Pendle.

Health & Safety Executive

- 3.28 The Health & Safety Executive (HSE) provided the following diagram clearly setting out the regulatory landscape for unconventional gas.
- 3.29 This shows that the first requirement is a licence, issued by the DECC. EA permits, planning permission and H&SE consents are then required before the final consent can be granted.



- 3.30 The HSE's role is to make sure that any risks associated with shale gas activity are managed and controlled by the operator.
 - 3.31 The relevant certification must be obtained from the police for the use of the explosive in the perforation gun.
 - 3.32 There have been no proposals to use depleted uranium (DU) in the UK either onshore or offshore and it is considered extremely unlikely that DU would be used for this purpose in the UK.
 - 3.33 If there was a proposal to use DU in perforation guns, the HSE would expect any dutyholder working with the radioactive material to comply with the requirements of the Ionising Radiation Regulations 1999.
 - 3.34 It may also require justifying under the Justification of Practices Involving Ionising Radiation Regulations 2004.
 - 3.35 The focus is on well integrity which is important for both safety purposes and for environmental protection.
 - 3.36 The main hazard is the uncontrolled release of hydrocarbon gas due to a failure of the well structure. There is potential for ignition leading to fire or explosion.
 - 3.37 A loss of well integrity could also lead to fracking fluids or water being released with potential environmental impacts.
 - 3.38 However, the occupational risks to workers are considerably lower than for similar industries such as coal mining and offshore oil and gas.
 - 3.39 Regulations require notifications to the HSE about design, construction and operation of wells together with a health and safety plan setting out how risks will be managed.
 - 3.40 Separate regulations set out specific requirements.
 - 3.41 The HSE is thus provided with information at key stages to assess whether risks are being controlled and if not to intervene.
 - 3.42 During both construction and decommissioning weekly reports on activity are required.
 - 3.43 An independent well examiner provides important quality control for the industry.
- LCC**
- 3.44 The County Council is clear that it must be neutral in its approach and should not take a formal position that could be seen to prejudge planning applications.
 - 3.45 At the time of writing, planning applications for the exploration of shale gas at two sites in the Fylde were being assessed.
 - 3.46 There is no active interest in unconventional gas in Pendle at the moment and any such interest will not be known until after the publication of the next round of petroleum exploration development licences to be issued by DECC.
 - 3.47 Without such a licence no interest can be pursued. If no licence is issued for Pendle there would be no shale exploration in the borough.
 - 3.48 In the event licences are issued and interest is pursued, LCC may then be in a position to contribute to our scrutiny study.
 - 3.49 Meanwhile, they would be happy to provide answers to written questions on the planning process and once the current applications are determined may make a further contribution if required.

UKOOG

- 3.50 UKOOG is the onshore oil and gas industries representative body.
- 3.51 At this stage in our review it took the view that its involvement would be premature.
- 3.52 No onshore licences currently exist in Pendle and whilst this may change as a result of the next licensing round such information is commercially confidential.
- 3.53 UKOOG has no information about potential new areas or operators and so therefore was unable to comment on the potential in Pendle for shale gas reserves.

Opposition to Fracking

- 3.54 KELFF cites the following dangers associated with the process –
- Contamination of water supplies
 - Pollution from toxic and carcinogenic gases and radioactive waste
 - Damage to local environment, ecology and biodiversity, much beyond repair
 - Vast amounts of water wasted due to harmful chemicals.
 - Processing of above off site involving much heavy traffic movement
 - Earthquakes and tremors and potential damage to property and subsidence
 - Falling properties prices and rising insurance premiums
 - Amended trespass laws making it legal to frack under people's properties
 - Infrastructure Bill would allow drilling companies to leave any substance in the ground after fracking
 - Adverse impact on farming and tourism of industrialisation of countryside.

- 3.55 The Group also disputes the claims that
- It would be a quick fix for energy supplies
 - Energy bills would be reduced
 - It would boost the economy and create jobs
 - Fracking gases are “transitional” fuels.
- 3.56 We were asked to consider responding to LCC’s draft supplementary planning document in line with the views of Barrowford Parish Council. It had been concerned over the lack of reference to climate change and the release of fossil fuels into the environment leading to global warming.
- 3.57 We were also asked to request the publication of the full version of a heavily redacted report entitled “Shale Gas Rural Economy Impacts”.
- 3.58 A further request was for the inclusion of the implementation of renewable energy sources such as water/wind/solar power, which would generate jobs and help reduce carbon emissions, in the Council’s Climate Change Action Plan.
- 3.59 Other concerns raised with us include the following –
- Flow-back of the used fracturing fluid and its safe disposal
 - The potential for contamination of the water and air supply
 - Details of the chemicals present in the perforation guns and the process for regulating and monitoring the chemicals to be used
 - The level of involvement of the water industry
 - Access to compliance records
 - The adverse effect on property prices and insurance premiums in the vicinity of a potential or active site.

- The invasion of human rights in allowing drilling to take place directly under private properties without owners' consent
- The perceived well failure rate
- The failure to clearly indicate fault lines on diagrams presented to the public
- Information published in The Lancet suggests that those living within 10 miles of a fracking site will become sick.

4. INTERIM POSITION

- 4.1 This report summarises the work which took place between January and March, 2015.
- 4.2 We believe it is important that the study continues in the new municipal year and to this end we have included it in the work programme for 2015/16.
- 4.3 The Study Plan is appended to the report.
- 4.4 The Scrutiny Management Team appointed in the new municipal year may wish to review the plan in the light of any further developments in the meanwhile.

BOROUGH OF PENDLE



**SCRUTINY STUDY OF
THE POTENTIAL FOR SHALE GAS EXPLORATION IN PENDLE**

STUDY PLAN

Scrutiny Team Membership 2014/15	Councillors: A. Aziz A. Mahmood A. J. Beckett N. McEvoy S. Benson G. Roach (Chairman) K. Hartley M. Sakib M. Horsfield D. Whalley A. Kerrigan S. Wicks	
Relevant Exec Member(s)	Planning and Development – Cllr. G. Waugh Communities and Public Health – Cllr. J. Purcell	
Public Participation	All meetings to be open to the public	
Background	At its December meeting the Team agreed to add to its current work programme a piece of work relating to the potential for and implications of hydraulic fracturing ("Fracking") in Pendle. At a subsequent meeting of the full Council the team was requested to gather evidence on the practicability, likelihood and desirability (or otherwise) of possible shale gas exploration and exploitation in this area.	
Links with Corporate Objectives	Achieving successful regeneration and sustainable development Successfully engaging and leading our community	
Issue	What potential exists in Pendle for the exploitation of shale gas reserves and would extraction be in the best interests of our local community.	
Terms of Reference	<ol style="list-style-type: none"> 1. To gain a clear understanding of the availability of shale gas within Pendle and the potential commercial viability of any future exploration and extraction. 2. To gain an awareness of the regulations, procedures and processes governing shale gas exploration/extraction. 3. To consider the potential environmental and public safety impact of exploration/extraction. 4. To consider the potential benefits that could result from shale gas extraction such as reduced energy prices, improved energy security and job creation. 5. To draw conclusions and make recommendations for consideration by the Council. 	
Information Requirements		Source (e.g. documents, briefing notes, witnesses, site visits, case studies, surveys, public view, mystery shopping)
<u>Current Situation</u>		
Initial background information		Scrutiny Manager's briefing note

Shale deposits in Pendle Regulatory processes etc. governing exploration and extraction <u>Relevant Future Issues</u> Industry view on commercial viability of exploration/extraction in Pendle Evidence of potential benefits Evidence of potential negative environmental impact and public health risks <u>Comparisons</u> Evidence from areas where exploration/extraction is/has taken place <u>Resources Issues</u>		British Geological survey Planning Manager Lancashire County Council Department for Energy & Climate Change Environment Agency Health & Safety Executive United Kingdom Onshore Oil and Gas (UKOOG)				
Training Needs						
Publicity						
Officer Support	Lead Officer: Kath Haydock Committee Administrator: Lynne Rowland					
Timetable	<u>ACTION/ MONTH</u>	JAN	MARCH			
	Plan	X				
	Documents	X	X			
	Witnesses		X			
	Interim Report		X			
Report to	Council		On:			
Monitor Progress						