

# Hydrocarbon Extraction

Overview and Scrutiny Committee

24<sup>th</sup> May 2016



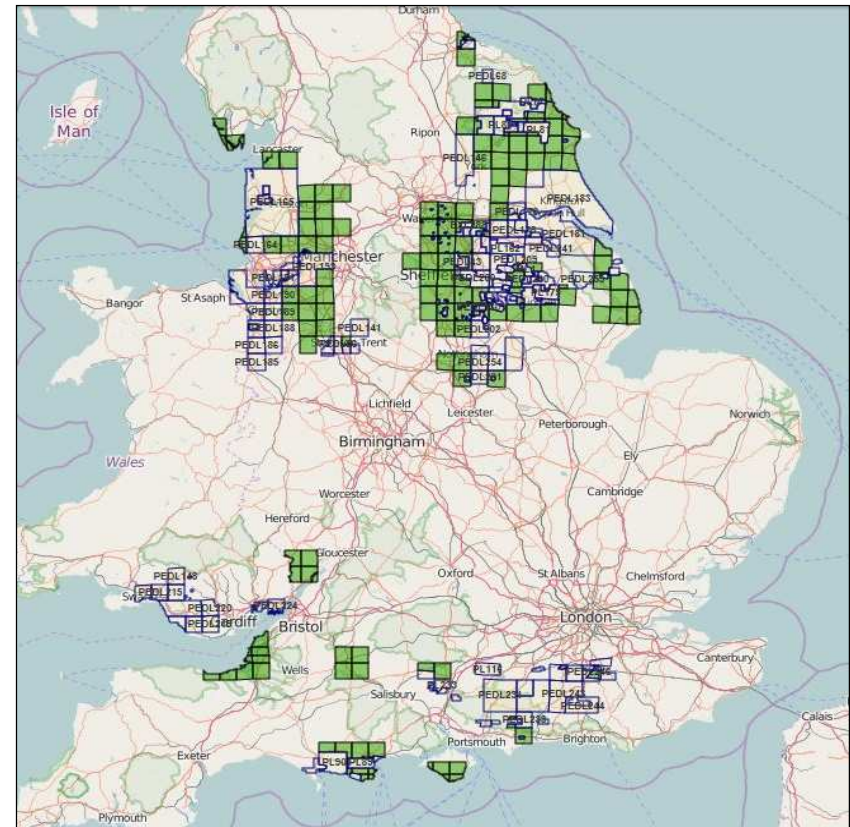
## **Two stage approach:**

May- Presentation: Explanation of the process, current national policy, process of decision making at both national and local level.

July- Report: Appraisal of policies that are in place in Wiltshire.

# 14<sup>th</sup> Onshore Oil and Gas Licensing Round

- Oil and Gas Authority (OGA) awarded 159 blocks to companies in December 2015
- 75% of the blocks relate to shale oil and gas
- Petroleum Exploration and Development Licence (PEDLs) grant the licensee exclusive rights for exploration, appraisal and extraction (subject to necessary consents).

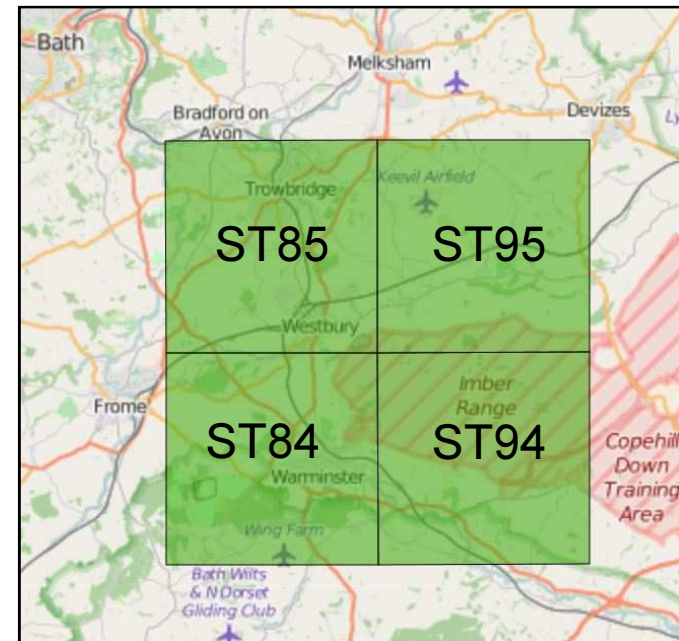


DECC - Licences OGA - 14th Round Blocks Offered For Award



# Wiltshire

- OGA offered licences for four blocks of land in Wiltshire which encompass Westbury, Warminster, Trowbridge and parts of Bradford on Avon.
- Exploration of **coal bed methane**.
- Licences for these blocks will contain conditions prohibiting activities in order to protect ecological sites.



# Phases of Oil and Gas Development

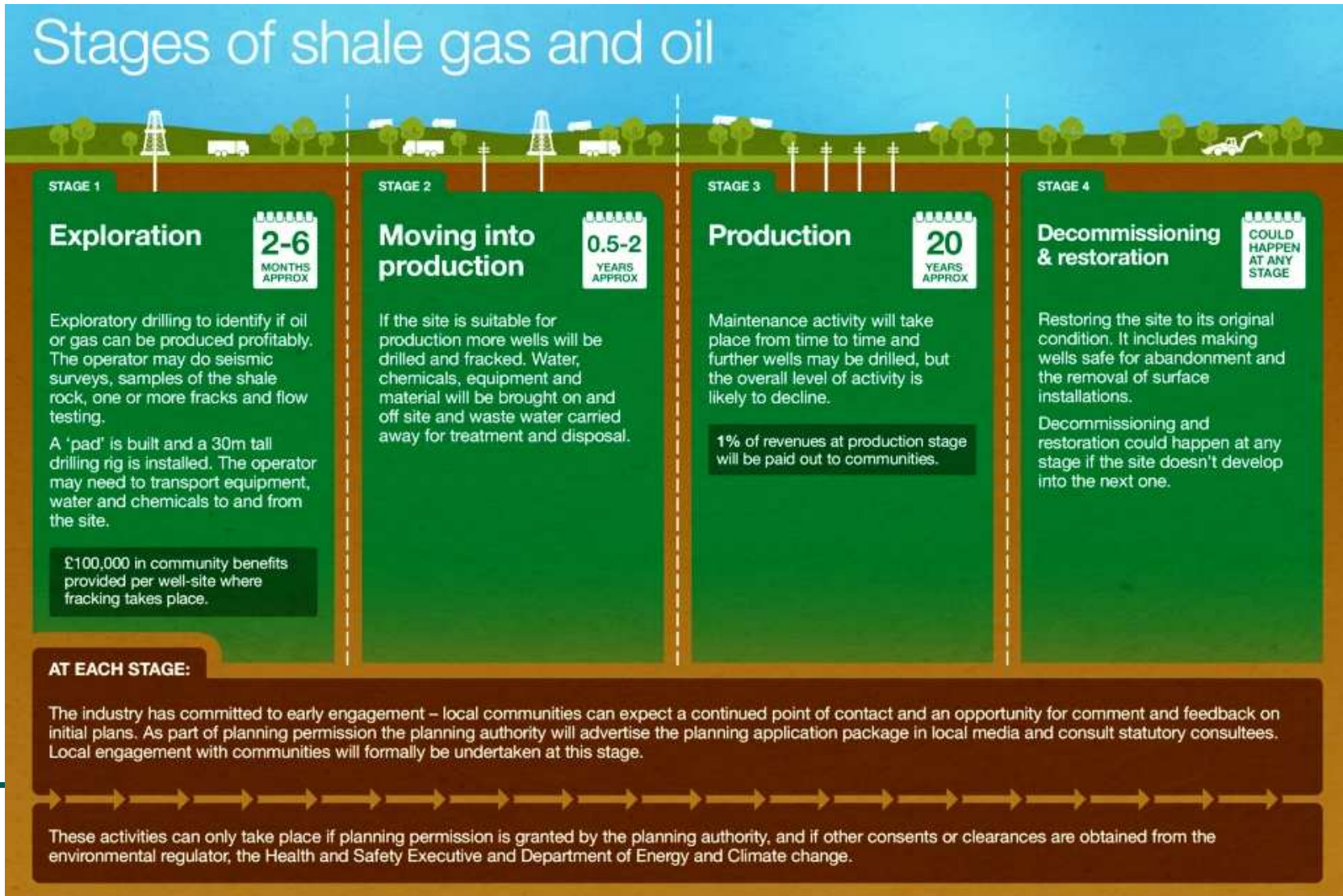
The exploitation of oil and gas resources typically occurs in four key phases:

- **Exploration:** the use of seismic surveys to provide information about geological structures and exploratory drilling to verify the presence or absence of oil or gas reserves.
- **Appraisal:** the assessment of exploration prospects using extended well tests and additional drilling to determine if reservoir development is economically feasible.
- **Development:** and production development and production can only be initiated by the operator once a field development plan has been submitted to and approved by OGA/DETI, as technically shale gas does not involve conventional fields.
- **Decommissioning, restoration and aftercare:** operations for the abandonment of wells, the removal of surface installations and the restoration of the site.

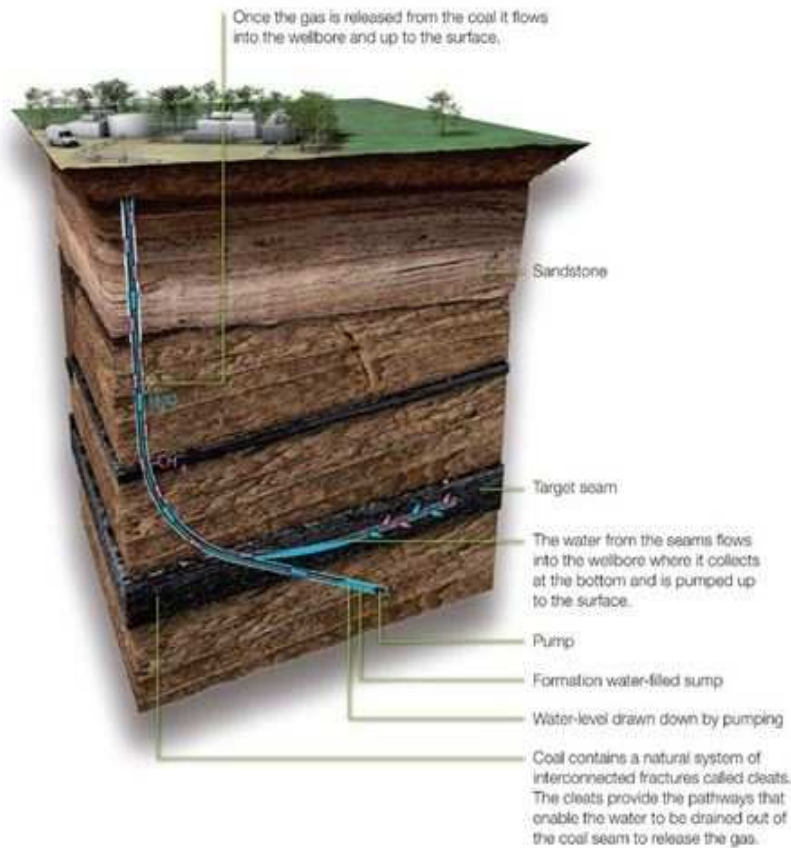
# What is Hydraulic Fracturing?

- **'Hydraulic Fracturing'** is a well-stimulation technique in which rock is fractured by a hydraulically pressurised liquid containing water, sand and chemical additives into the shale opening up hairline fractures to allow gas to flow from the shale.
- 99% is water and sand
- **Additives** are non-hazardous and require prior approval from EA

# Process



# How is Coal Bed Methane extracted?



**Coalbed methane (CBM)** is a form of natural gas extracted from coal beds.

It is an unconventional resource.

Its extraction involves drilling down vertically and then horizontally in the coal seam.

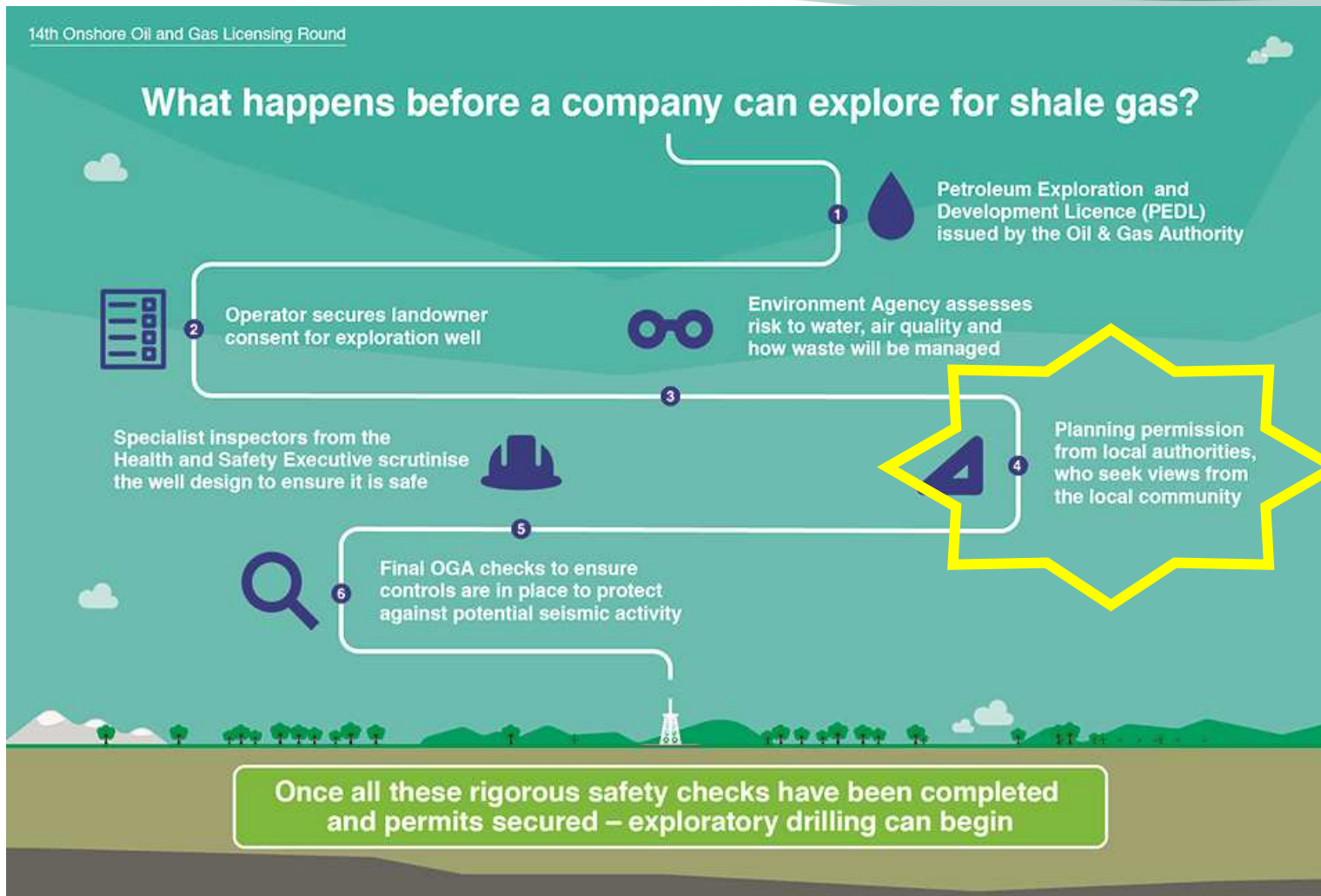
Wells are drilled into the coal seams, and the water is removed to reduce the pressure on the coal so the gas can be collected.

The majority of the same regulations and controls that apply to shale gas and shale oil also apply to CBM, particularly if hydraulic fracturing is involved.

Extraction is likely to be achievable between 200 and 1500 metres, depending on the coal permeability and other issues.



# Awards and Consent Process



# Public Consultation

- Public consultation is required at each stage of exploration, appraisal and production
- Planning guidance recommends the operator engages in pre-application discussion with local communities, MPA and statutory consultees
- The Environment Agency will carry out public consultation for the issues of environmental permits (varies from 4 to 12 weeks)
- MPA's will advertise and consult on each individual applications

# Visual Context



1

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87

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1,520,000

# Shale Gas Exploration Site



# Clear Government Message

- **Energy and climate change Secretary Amber Rudd said:**

“As a One Nation Government, we are backing the safe development of shale gas because it’s good for jobs giving hardworking people and their families more financial security, good for our energy security and part of our plan to decarbonise the economy.”



Department  
of Energy &  
Climate Change

- **Communities Secretary Greg Clark said:**

“There is huge potential right across the country for safe and sustainable use of shale gas, to provide a clean long term energy source and create British jobs and growth.”

- **Prime Minister David Cameron:**

"Shale is important for our country, it could bring 74,000 jobs, over £3bn of investment, give us cheaper energy for the future, and increase our energy security. I want us to get on board.”

# Fast Tracking Applications

**Communities Secretary Greg Clark said:**

- “Safety and the environment will remain paramount and communities will always be involved in planning applications but no one benefits from uncertainty caused by delays in planning decisions. By fast tracking any appropriate applications today’s changes will tackle potential hold ups in the system.”

# Planning for Shale Oil and Gas



# National Policy and Guidance

	National Planning Policy Framework (NPPF)
<b>Para 14</b>	Presumption in favour of sustainable development
<b>Para 142</b>	Important that there is a sufficient supply of material to provide the ...energy...that the country needs
<b>Para 144</b>	LPA's should give great weight to the benefits of mineral extraction, including to the economy ...(and) ensure...that there are no unacceptable adverse impacts on the natural and historic environment, human health...
<b>Para 147</b>	When planning for...unconventional hydrocarbons, MPA's should clearly distinguish between the three phases of development (exploration, appraisal and production) and address constraints on production and processing within licensed areas
<b>Para 122</b>	Advises Planning Authorities to focus on whether the development itself is an acceptable use of land, and the impact of the use, rather than the control of processes or emissions where these are subject to approval under pollution control regimes.



# National Policy and Guidance

	Planning Practice Guidance (PPG)
<b>Para 91</b>	In the case of unconventional hydrocarbons (such as shale gas) ... there is a pressing need to undertake exploratory drilling to assess whether or not there are sufficient recoverable reserves to allow full scale production on an economically viable scale.
<b>Para 106</b>	Local Plans should include PEDL areas on Proposals Maps and develop criteria-based policies for each of the exploration, appraisal and production phases of hydrocarbon extraction. These policies should set clear guidance and criteria for the location and assessment of hydrocarbon extraction within the Petroleum Licence Areas
<b>Para 110</b>	Identifies issues which are covered by other regulatory regimes and advises that MPAs should rely on the assessment of other regulatory bodies:- Seismic monitoring, flaring, operation of surface equipment, treatment of waste, chemical content of fluid, well design, construction and integrity and decommissioning.
<b>Para 112</b>	Before granting planning permission MPAs will need to be satisfied that these issues can or will be satisfactorily addressed by taking advice from the regulatory body
<b>Para 223</b> (PPG amendment July 2014).	Where applications represent major development, shale gas extraction in National Parks, the Broads and AONBs should be refused except in exceptional circumstances and where they are in the public interest. In World Heritage Sites consent should be refused if substantial harm would result unless wholly exceptional circumstances apply*.

# Written Ministerial Statements

## Written Statement on Shale Gas and Oil issued by Amber Rudd on 16<sup>th</sup> September 2015:

- Identified a clear need to seize the opportunity to explore and test our shale potential.
- made clear Government's desire to ensure planning applications for shale gas and oil developments are dealt with quickly within statutory time frames (16 weeks for EIA development).
- £1.2m shale support programme - providing funding to MPAs in 2015/16 to enable the timely determination locally of planning applications (being updated for 2016.17)
- emphasised the importance of public engagement, and the necessary involvement of other regulators.
- MPAs to be confident that the regulators will enforce safety, environmental and seismic regulation effectively.



# Infrastructure Act 2015

- **The Infrastructure Act 2015** simplified the procedure for obtaining the right to use underground land 300 metres and below for the purpose of exploiting oil and gas. Most of the provisions came into force on 12 April 2015.
- **Section 50** introduces a range of further requirements (safeguards) that must be met before a hydraulic fracturing consent will be issued.
- In December 2015 Government approved the protected areas in which hydraulic fracturing will be prohibited. It cannot take place in at depths above 1200 metres in National Parks, the Broads, AONBs, World Heritage Sites and areas that are most vulnerable to groundwater pollution (SPZ1s).

# Next Steps..

- Monitoring activity of other MPA's  
Learning from examples including:
  - Lancashire CC: recent applications at Roseacre Wood and Preston New Road (Exploration including hydraulic fracturing)
  - North Yorkshire CC – application near Kirby Misperton (Appraisal and Production)
  - Nottinghamshire CC – Spring Road, Mission (Exploration) and Tinker Lane (Scoping request for exploratory wells)
- Provide dedicated web pages on Wiltshire Council website with information on Hydrocarbon Extraction, to include FAQs and sign posts to information from: Planning Advisory Service (PAS), regulatory bodies, Government, DECC etc.

# Next Steps

- Explore potential to secure additional government resources for MPAs (£1.2m DCLG fund was made available for 2015/16 ). No announcement yet about 2016/17.
- **Draft report for July 2016:** What planning policies are in place in Wiltshire in relation to Oil and Gas Exploration and Hydraulic Fracturing.



Questions?

# Useful links

## **Planning Advisory Service (PAS):**

[www.pas.gov.uk](http://www.pas.gov.uk)

Briefing Paper:

<http://www.pas.gov.uk/documents/332612/6752551/Updated+26.4+Shale+advice+note+1/cb21f215-c483-42eb-af24-3d8363efb8f5>

Presentations:

[http://www.pas.gov.uk/pre-application/ /journal\\_content/56/332612/7136751/ARTICLE](http://www.pas.gov.uk/pre-application/ /journal_content/56/332612/7136751/ARTICLE)

## **DECC Website**

<https://www.gov.uk/government/organisations/department-of-energy-climate-change>

Publications:

<https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk>

## **Hampshire County Council:**

<http://www3.hants.gov.uk/oil-gas-development.htm>

# Recommended Websites

Oil and Gas Authority: [www.gov.uk/government/organisations/oil-and-gas-authority](http://www.gov.uk/government/organisations/oil-and-gas-authority)

Environment Agency: [www.gov.uk/government/organisations/environment-agency](http://www.gov.uk/government/organisations/environment-agency)

Health and Safety Executive: [www.hse.gov.uk/offshore/unconventional-gas.htm](http://www.hse.gov.uk/offshore/unconventional-gas.htm)

British Geological Society: [www.bgs.ac/shalegas](http://www.bgs.ac/shalegas)

Public Health England: [www.gov.uk/government/organisations/public-health-england](http://www.gov.uk/government/organisations/public-health-england)

United Kingdom Onshore Operators' Group: [www.ukoog.org.uk](http://www.ukoog.org.uk)

The UK Onshore Geophysical Library (UKOGL): <http://ukogl.org.uk/>