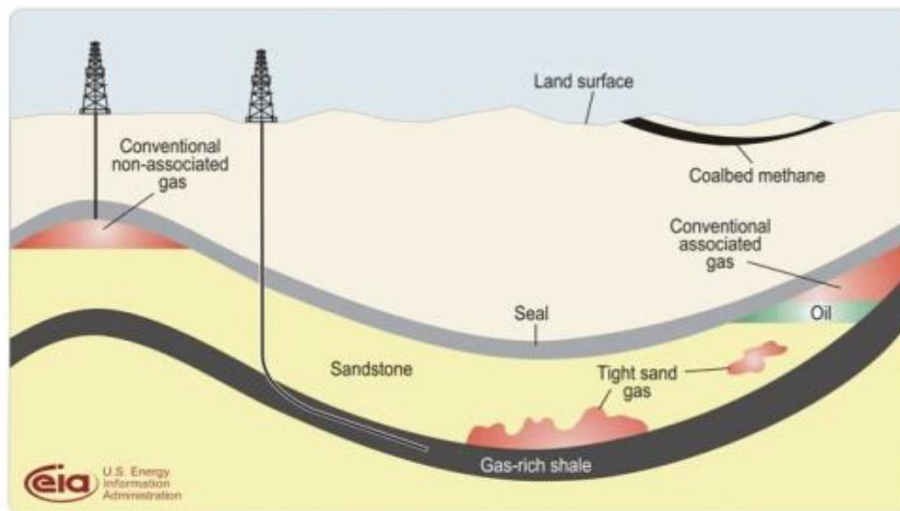


Shale Gas & "Fracking"

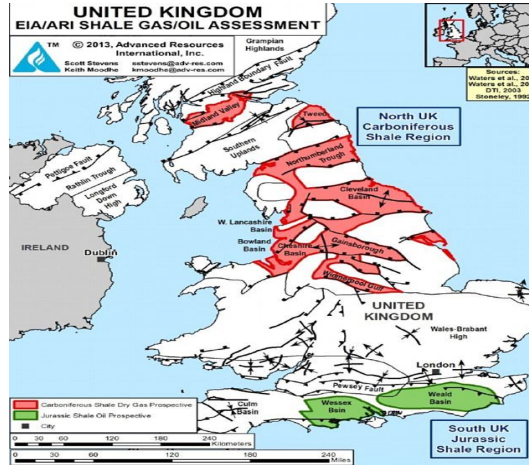
Briefing Session for Members of the
Environment and Transportation Select
Committee, 23rd September 2013



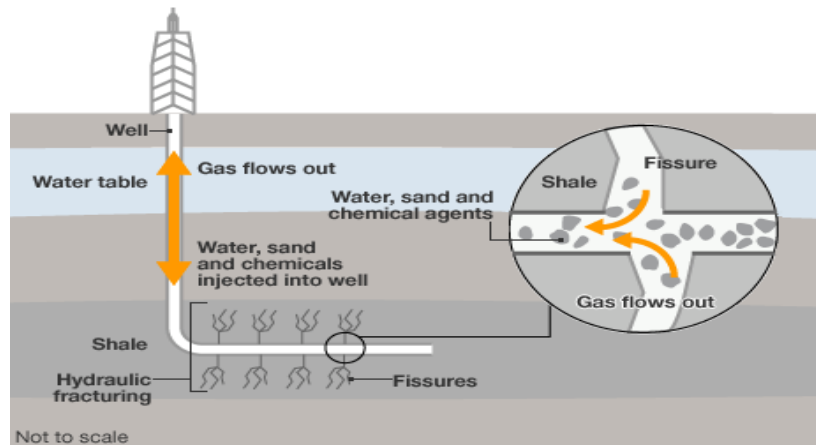
Conventional vs. Unconventional Gas



Shale gas resource estimates in England & Wales



Shale gas extraction

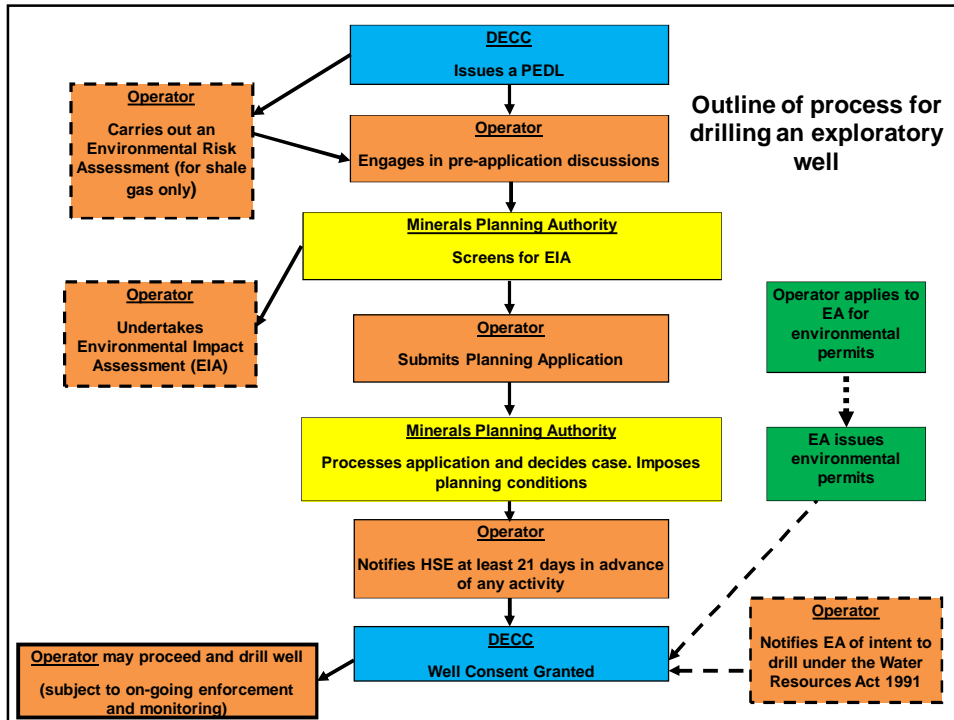


Potential benefits

- Energy security. Major domestic resource so less gas imports – balance of payments
- Contribution to lower energy prices
- Could provide transitional space for renewables with clean burning fuel
- Tax revenues for public services (up to £5-6bn over 30 years).
- The Government has also outlined measures to ensure local communities benefit from the development of shale, with £100,000 paid for each well where fracking takes place and 1% of revenues if the drilling proves to be commercially viable.

Cuadrilla site Lancashire

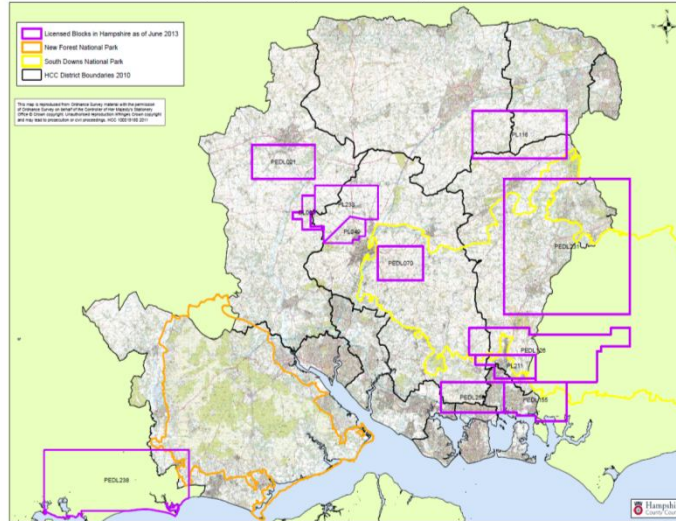




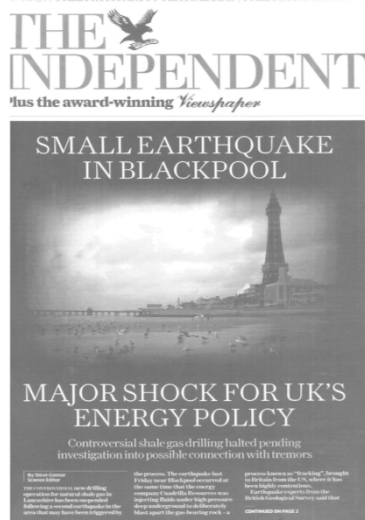
Department of Energy & Climate Change

- Issues Petroleum Exploration & Development Licences (PEDL)
- Gives consent to drill under the licence once the permission and approvals are in place
- Responsibility for assessing risk of and monitoring seismic activity
- Granting consent to flaring or venting

Existing Petroleum Exploration & Development Licenses (PEDL) in Hampshire



Seismic Activities

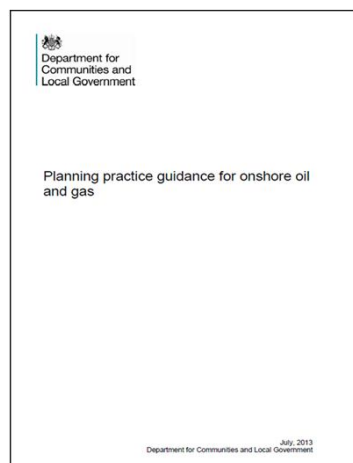


- 2 small earthquakes (2.3 & 1.5 magnitude) were recorded in the Blackpool area.
- Subsequently linked to fracking operations being undertaken nearby by a company called Cuadrilla.

Minerals Planning Authority

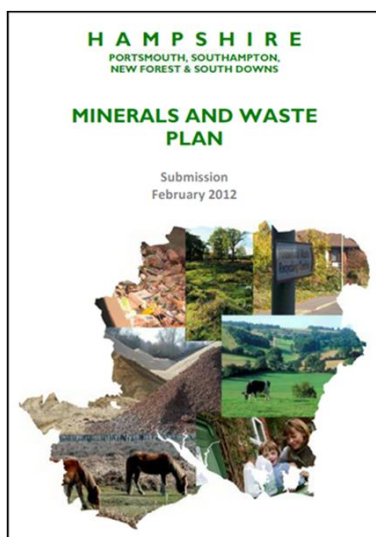
- HCC; SDNPA; NFNPA; SCC; PCC
- Establish the need for Environmental Impact Assessment
- Register and process planning application
- Consultation
- Decision making process - Grant permission for the location of any wells and wellpads.
- Impose conditions to ensure the impact on the use of land is acceptable
- Monitor planning permission

PLANNING GUIDANCE



**Planning Practice Guidance for onshore oil & gas (July 2013)
Principal environmental issues of hydrocarbon extraction that should
be addressed by MPAs**

- Noise associated with the operation
- Dust
- Air quality
- Lighting
- Visual intrusion
- Landscape character
- Archaeological and heritage features
- Traffic
- Risk of contamination to land
- Soil resources
- The impact on best and most versatile agricultural land
- Flood risk
- Land stability / subsidence
- Environmental / habitat Designations
- Nationally protected geological / geomorphological sites / features
- Site restoration & aftercare



Hampshire Minerals & Waste Plan

Policy 24: Oil and Gas Development

Oil and gas development will be supported subject to environmental and amenity considerations:

a. Exploration and appraisal of oil and gas will be supported, provided the site and equipment:

i. is not located within the New Forest National Park or South Downs National Park except in exceptional circumstances, where the reasons for the designation are not compromised and where the need for the development can be demonstrated; and

ii. is sited at a location where it can be demonstrated that it will only have an acceptable environmental impact; and

iii. the proposal provides for the restoration and subsequent aftercare of the site, whether or not oil or gas is found.

b. The commercial production of oil and gas will be supported, provided the site and equipment:

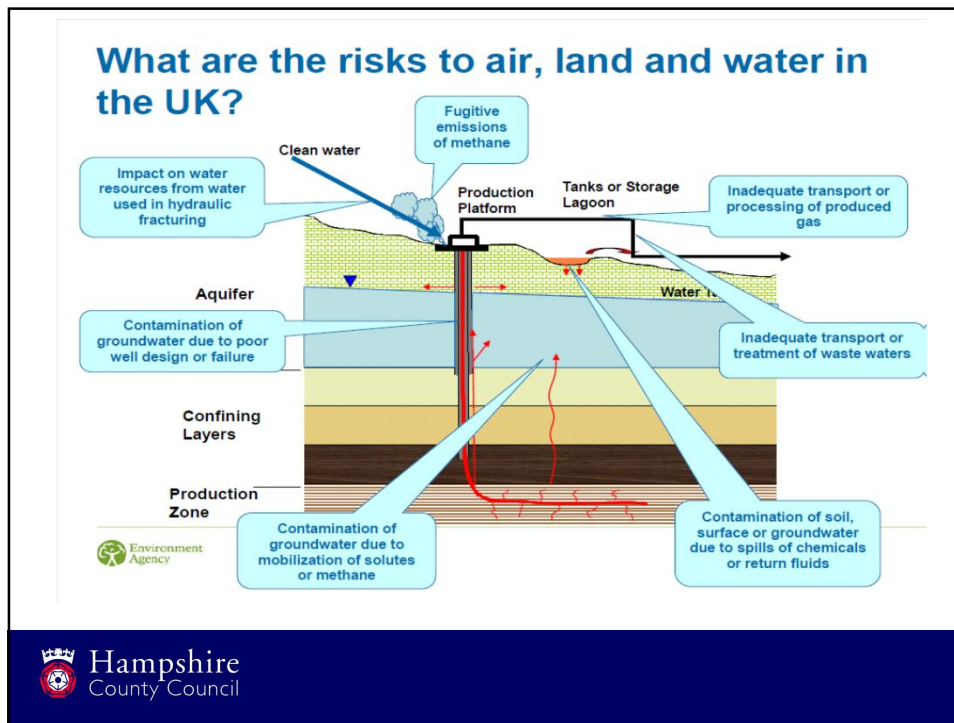
i. is not located within the New Forest National Park or South Downs National Park except in exceptional circumstances, where the reasons for the designation are not compromised and where the need for the development can be demonstrated; and

ii. a full appraisal programme for the oil and gas field has been completed; and

iii. the proposed location is the most suitable, taking into account environmental, geological and technical factors

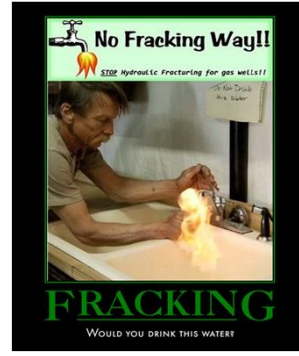
Environment Agency

- Statutory consultee in planning process
- Environmental Permit for groundwater activity; protecting water resources, including groundwater (aquifers) as well as assessing and approving the use of chemicals which form part of the hydraulic fracturing fluid
- Environmental Permit for a mining waste activity; appropriate treatment and disposal of mining waste produced during the borehole drilling and hydraulic fracturing process
- Environmental Permit for a radioactive substances activity; suitable treatment and management of any naturally occurring radioactive materials (NORM)
- Environmental Permit for a water discharge activity



Health and Safety Executive

- Regulating the health and safety aspects of shale gas exploration in particular considering well integrity and construction ('Borehole Sites and Operations Regulations').
- Requiring operators to produce a Health and Safety document.
- Requiring operators to notify HSE on well design. The HSE do not give consent, but will issue a prohibition notice if they have concerns about the proposed drilling activities.
- The examination of the scheme design, construction and planned maintenance for when the site is in production.
- The integrity of the well casing to ensure environmental protection, and minimising risk of contamination of the aquifer.
- The HSE also regulate transport of gas products and injection into the grid.



- Fracking is controversial
- Anti-fracking movement is very active
- High profile in local & national media
 - Website FAQs