FRACKING

Presentation for Ryedale Parish Liaison Forum

22\textsuperscript{nd} October 2014

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‘Fracking’
– *the* current buzz word
Campaigners step up fight against fracking

ANTI-fracking campaigns are gathering pace in Ryedale with the area’s Friends of the Earth group dubbing the drilling process a “dirty word”.

The York and Ryedale Friends of the Earth are planning a day of action against hydraulic fracturing to extract shale gas – fracking – in Malton at the weekend.

The campaigners say fracking is a “dirty word” and will be in the Market Place on Saturday with a “swear box” encouraging people to oppose the drilling.
FRACK OFF
Extreme Energy Action Network

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SHALE GAS
Shale Gas is methane (natural gas) which is trapped in impermeable shale rock deep underground, unlike conventional natural gas which is in permeable rocks, such as sandstone. The gas cannot flow through the shale, so simply drilling a well as you would for conventional natural gas, is not enough. The shale rock must be cracked to free the gas, hence the need for hydraulic fracturing (fracking). For the same reason it is necessary to drill large numbers of wells at regular intervals. To produce as much gas as a conventional gas field with a dozen or so wells, would require hundreds or thousands of shale gas wells.

RELATED POSTS
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- Hydraulic fracturing on trial - live updates

FRACK FREE RYEDEALE
We believe that fracking is both dangerous and unnecessary. The effects of fracking on our health, farming livelihoods, landscape, and property values are too much even to contemplate allowing it to go ahead.

Airth Australia Balcombe Barton
Moss Bio-Energy Coal Bed
Methane Cuadrilla Dart
City of York council passes anti-fracking motion!

York has become the latest local council to declare itself frack free.

In the full local council meeting this evening, councillors voted on an anti-fracking motion put forward by Labour Councillor Anna Semlyen. It was passed with a vote of 23 for, 11 against with 5 abstentions.

The full motion text is below:

"Fracking

This council believes that climate change is real and that it is a serious problem that is causing deaths and migration.

That fracking (hydraulic fracturing for shale gas) adds to climate change,

Recognises the over 2100 name petition submitted by Frack Free York requesting a York Councillor decision on fracking

Asks that Councillors vote that York should, where possible, publicly state its position as wanting to resist planning applications for drilling for shale gas as this is likely to deter applications from drilling companies."
Fracking in the USA

Shale gas was first extracted as a resource in Fredonia in 1825.

In the late 1940’s hydraulic fracturing first used to stimulate oil and gas wells.

Work on industrial-scale shale gas mining did not begin until the 1970’s when conventional gas deposits started to decline.

1980’s – 1990’s – large fracture design is combined with horizontal drilling

From 2000 onwards, shale gas production increased dramatically with new and improved drilling and extraction methods and increasing exploration methods.

By 2005, there were 14,990 shale gas wells.

Shale gas production has increased from 1 per cent of overall U.S. production in 1990 to 20 per cent in 2009

By 2011 – up to 2,000 shale gas exploration wells were being drilled each year. Since then, numbers have continued to rise.
Source: ‘FracTracker Alliance’ US website
(‘Orange’ indicates locations of oil and gas wells)
Onshore oil & gas developments in the UK

*Conventional* onshore oil and gas exploration is well-established in this country with around 2,100 wells having been drilled.

20 - 40 new sites are thought to be started in the next couple of years.

There are 176 Petroleum Exploration Development Licences (PEDLs) for onshore oil and gas in the UK.

However, sites which have come to the public eye include:

Fylde on the Lancashire coast (2011); and,
Balcombe (2013) in the Weald Basin in West Sussex involving Cuadrilla Resources Ltd
Source: NYCC-produced map with PEDL areas (yellow) & BGS/DECC Bowland Shale Study (2013) prospective areas (red) overlays
Well integrity is achieved by cementing steel pipes in place, known as casings, to provide a multi-layered barrier to protect fresh water aquifers.

Source: iGas Energy Plc
Not an untypical drill rig platform; indistinguishable from conventional gas drill rigs
The 3 stages
Stage 1 - EXPLORATION:

As an emerging form of energy supply, there is a pressing need to establish whether or not there are sufficient recoverable quantities of unconventional hydrocarbons such as shale gas present to facilitate economically viable full scale production.

For ‘unconventional’ hydrocarbons, exploratory drilling may take considerably longer than 5 to 6 months, especially if there is going to be hydraulic fracturing.
Important to note that there exists ‘permitted development’ rights from which shale gas developers may take benefit...

- notification of proposed development or requests for prior written approvals from the County Planning Authority under the Town & Country Planning (General Permitted Development) Order 1995 (as amended) in respect of:

* Part 22 Mineral Exploration
Stage 2 - APPRAISAL:

This may include additional seismic work, longer-term flow tests, or the drilling of further wells.

This may involve additional drilling at another site away from the exploration site or additional wells at the original exploration site.

It may also involve further hydraulic fracturing followed by flow-testing to establish the economic viability of the resource and its potential productive life.

However, much will depend on the size and complexity of the hydrocarbon reservoir involved.
Stage 3 - PRODUCTION:

This normally involves the drilling of a number of wells.

These may be wells used at the sites at the exploratory and/or appraisal phases of hydrocarbon development, or from a new site.

Associated equipment such as pipelines, processing facilities and temporary storage tanks are also likely to be required.

The production life of an oil or gas field can be up to 20 years, possibly more.

When production ceases, the facilities would be dismantled and the sites restored to their former use, or, in some circumstances, an appropriate new use.
Unconventional gas resources can include:

- coal-mine methane (CMM);
- coal-bed methane (CBM); and,
- shale gas
Unconventional gas resources are those which cannot be extracted using standard drilling techniques.
Shale gas, by virtue of the underlying geology, is drilled at depths far greater than conventional gas

e.g. >8,000ft (or >1.5 miles) below ground in the case of the Bowland Shales lying below North Yorkshire
The impacts of hydraulic fracturing or ‘fracking’ include:

- noise;
- vibration and possible ground movement;
- groundwater abstraction & associated impacts;
- waste water disposal as a result of well stimulation and gas production;
- traffic etc.
Who is involved?

• Department of Energy and Climate Change
  • On the 28th July 2014, the Energy Minister invited applications for Licences in the 14th Landward Licensing Round. Applications can be made up to the 28th October 2014
  • Issue exclusive licenses to explore and extract.
  • Assess and control seismic risks.
  • Control any flaring or venting.
  • Assess and consent any Hydraulic Fracturing programme.
  • Issue final well consent when HSE satisfied.
Who else?

Environment Agency

Jurisdiction to issue Environmental Permits:

• protecting water resources, including groundwater (aquifers) as well as assessing & approving the use of chemicals forming the hydraulic fracturing fluid

• specifying appropriate treatment and disposal of mining waste produced during the borehole drilling and hydraulic fracturing process

• stipulating suitable treatment and management of any naturally occurring radioactive materials (NORM); and,

• controlling disposal of waste gases through flaring
Who else?

• **Health & Safety Executive**
  
  • HSE monitors shale gas operations from a well integrity and site safety perspective
  
  • They oversee that safe working practices are adopted by onshore operators as required under the Borehole Site and Operations Regulations 1995 and the Offshore Installations and Wells (Design and Construction etc.) Regulations 1996
Who else, besides DECC, EA & HSE?

- **The Coal Authority** - permission is required, should drilling go through a coal seam;
- **Natural England** - European Protected Species Licences may needed;
- **British Geological Survey** – may need to be notified by licensees of their intention to undertake drilling and, upon completion of drilling, must also receive drilling records and cores; and
- **Hazardous Substances Authorities** - may need to provide Hazardous Substances Consents.
What’s the role of the planning system in all this?

Understanding context, proportionality and balance.
The role of the County Council as the relevant Planning Authority in the context of the oil and gas industry

• Determine applications for minerals-related development including onshore oil and gas proposals;

• Monitor and ensure compliance with planning permissions; and

• Prepare statutory Local Plan for the steady supply of minerals.
Decide whether a proposal is appropriate for its location having regard to impact on health and natural environment and general amenity considerations.

Planning’s role is *not* to control process or health and safety or emissions issues.

National Planning Practice Guidance advises,

“*mineral planning authorities should assume that [other regulatory] regimes will operate effectively*”.
"give great weight to the benefits of mineral extraction, including the economy"
But, it’s important to note, the NPPF hasn’t removed the following duty on MPAs...

**Planning and Compulsory Purchase Act 2004**
**Section 38 (6)**

“all determinations [...] must be made in accordance with the Development Plan unless material considerations indicate otherwise”
‘Other material considerations’ may include…

Sites of Special Scientific Interest
Site of Interest for Nature Conservation
Areas of Bio-diversity Importance
Areas of Outstanding Natural Beauty
Tree Preservation Orders
Scheduled Ancient Monuments
Public footpaths
National Cycle Routes

Ancient Woodlands
Local Nature Reserves
Historic Parks & Gardens
Listed Buildings
Conservation Areas
Historic Battlefields
Restricted Byways
Bridleways
MATERIAL PLANNING CONSIDERATIONS:
Issues that may be relevant to the decision
(There may exist further material planning considerations not included here)
- Local, strategic, national planning policies and policies in the Development Plan
- Emerging new plans which have already been through at least one stage of public consultation
- Pre-application planning consultation carried out by, or on behalf of, the applicant
- Government and Planning Inspectorate requirements - circulars, orders, statutory instruments, guidance and advice
- Previous appeal decisions and planning Inquiry reports
- Principles of Case Law held through the Courts
- Loss of sunlight (based on Building Research Establishment guidance)
- Overshadowing/loss of outlook to the detriment of residential amenity (though not loss of view as such)
- Overlooking and loss of privacy
- Highway issues: traffic generation, vehicular access, highway safety
- Noise or disturbance resulting from use, including proposed hours of operation
- Smells and fumes
- Capacity of physical infrastructure, e.g. in the public drainage or water systems
- Deficiencies in social facilities, e.g. spaces in schools
- Storage & handling of hazardous materials and development of contaminated land
- Loss or effect on trees
- Adverse impact on nature conservation interests & biodiversity opportunities
- Effect on listed buildings and conservation areas
- Incompatible or unacceptable uses
- Local financial considerations offered as a contribution or grant
- Layout and density of building design, visual appearance and finishing materials
- Inadequate or inappropriate landscaping or means of enclosure

Source: Royal Town Planning Institute website
NON-MATERIAL PLANNING CONSIDERATIONS:
Issues that are not relevant to the decision:
(There exist further non-material planning considerations not included in this list)
- Matters controlled under building regulations or other non-planning legislation e.g. structural stability, drainage details, fire precautions, matters covered by licences etc.
- Private issues between neighbours e.g. land/boundary disputes, damage to property, private rights of access, covenants, ancient and other rights to light etc.
- Problems arising from the construction period of any works, e.g. noise, dust, construction vehicles, hours of working (covered by Control of Pollution Acts).
- Opposition to the principle of development when this has been settled by an outline planning permission or appeal
- Applicant's personal circumstances (unless exceptionally and clearly relevant, e.g. provision of facilities for someone with a physical disability)
- Previously made objections/representations regarding another site or application
- Factual misrepresentation of the proposal
- Opposition to business competition
- Loss of property value
- Loss of view
Public Engagement & Representation:

• All proponents of ‘fracking' applications should be encouraged to engage with communities in which their development is proposed to be located at the earliest possible opportunity….

......definitely not an ‘easy’ task in a high-profile controversial application....

......BUT, the sheer volume of objections doesn’t carry more weight in decision-making....
Public Engagement & Representation (cont’d):

• All planning applications are subject to publicity by means of a Site Notice erected on or in a publicly accessible place near an application site

• Shale Gas applications must be advertised by means of a Press Notice too

• Often a means of advertising the existence of an application gives rise to sending Neighbour Notification letters to those potentially affected
Not only public, but also political engagement:

- All proponents of major applications should be encouraged to engage with local Ward Members in which their development is proposed to be located at the earliest possible opportunity.

...... so long as an ‘open mind’ is demonstrated to be maintained, then engaging and attending public meetings about developments ensures everyone hears the facts at the same time.....it is possible to avoid being seen to be pre-determined
Experience of dealing with complex, high-profile and controversial applications has shown that ‘active’ campaigners against development proposals are often significantly more knowledgeable about the proposals than ‘passive’ supporters.
So... where possible...

- dispelling fear (which can often be out of proportion to the actual risks); and,
- addressing perceptions (or indeed misconceptions)

are important roles of the planning process
Key points:

- Developments of a highly complex and controversial nature must be accompanied by as comprehensive a set of information as possible;

- Ensure the impacts of any development in the short, medium and long-term are considered at the earliest possible stage;

- Communicate with absolute clarity the roles & responsibilities of the individual organisations involved in the process;

- Ensure, as far as practicable, all inclusive engagement from the start;

- Always ensure accurate and timely information in as many formats and forums as possible (OPRs etc.)
Thank you for listening everyone