

brownfieldbriefing

**Managing the environmental impacts of
unconventional gas exploration and production**

Charlotte Danvers

Programme Manager Oil and Gas,

Environment Agency



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Manager, Onshore Oil and Gas Programme

Brownfield Briefing and Environment OnSite Shale and Unconventional Gas conference

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An established onshore industry



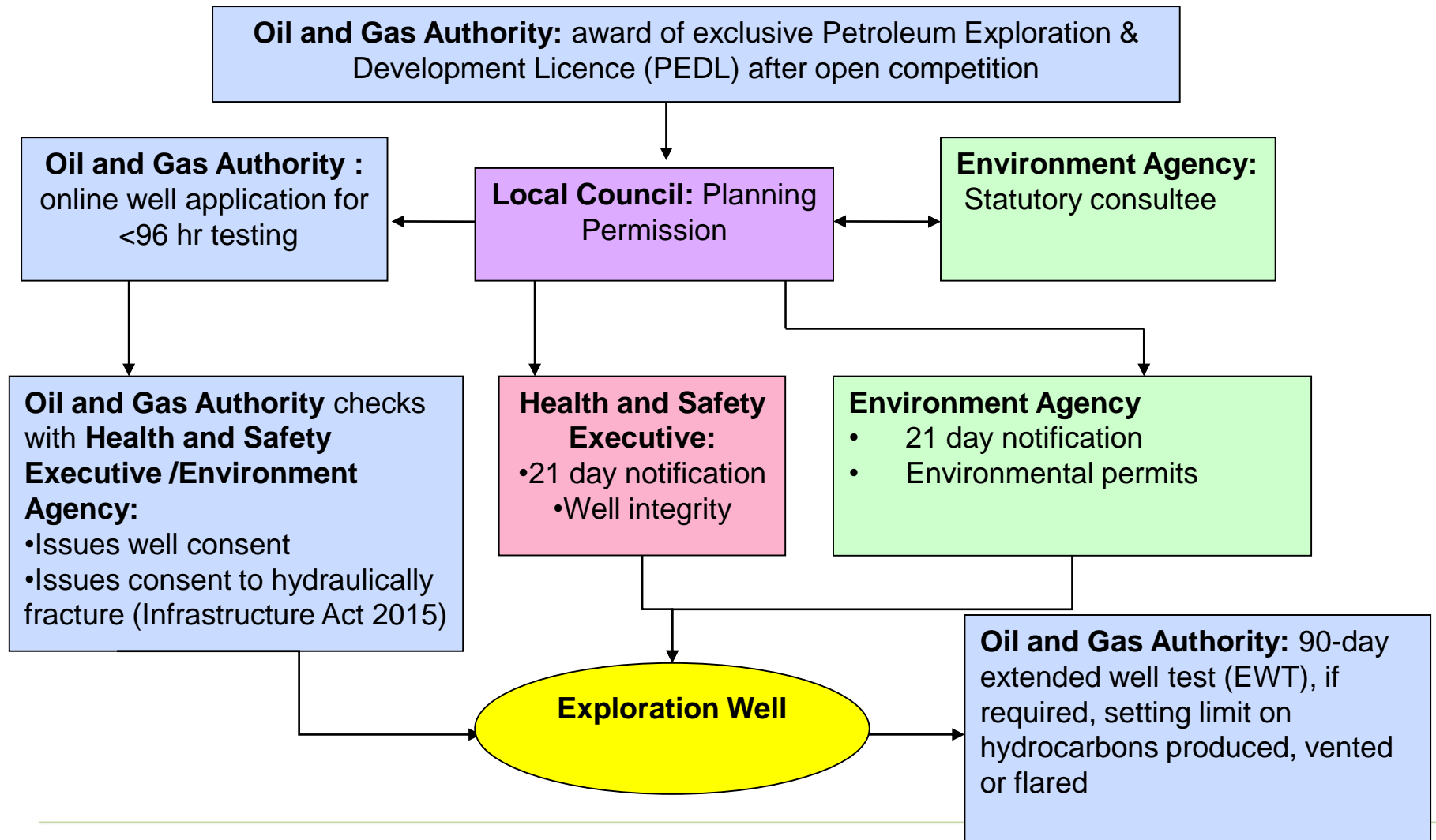
4th most expensive real estate in the world (reputedly)

Area of Outstanding Natural Beauty and Site of Special Scientific Interest

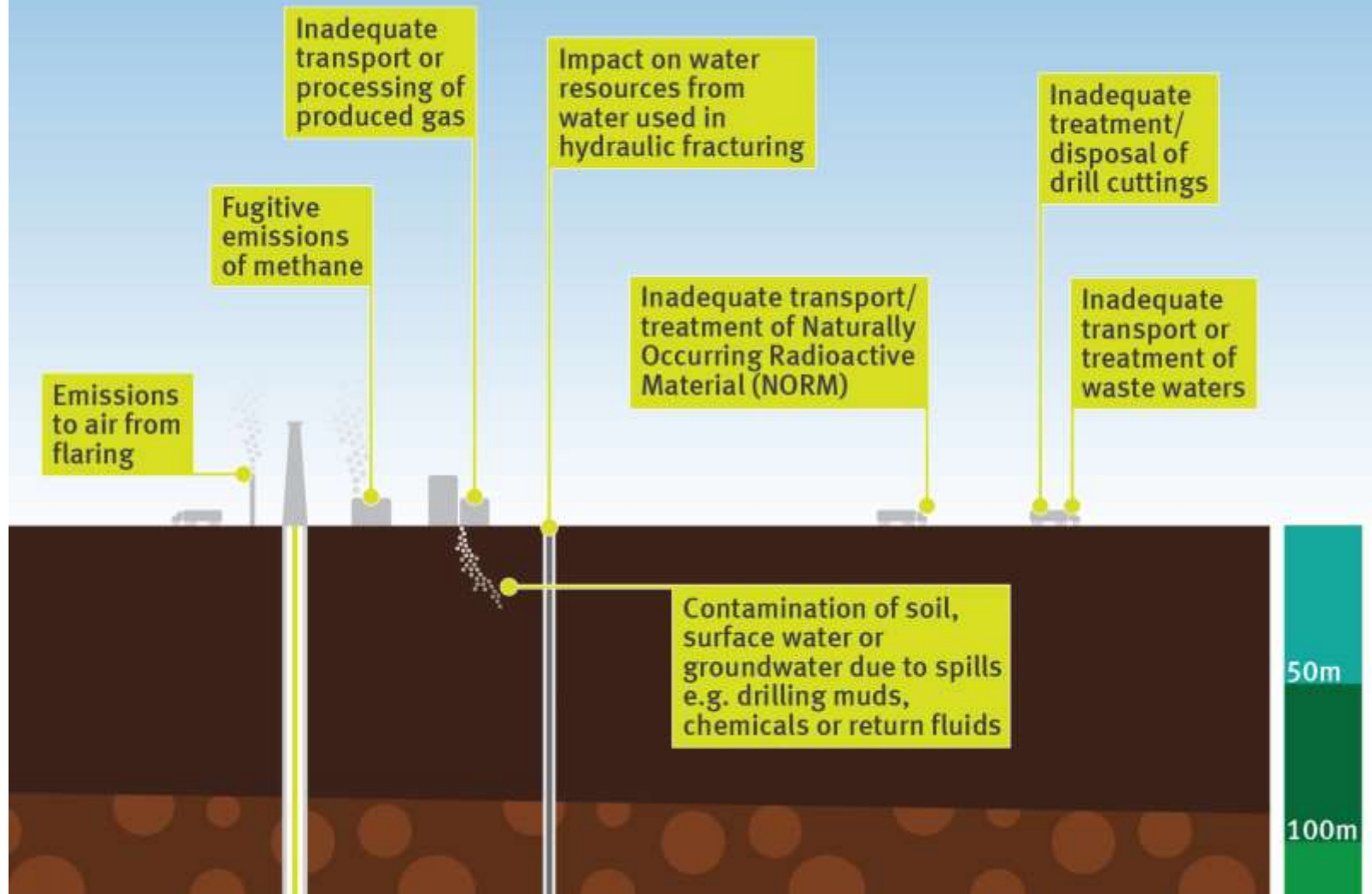
Part of drilling operations at Wytch Farm, Europe's largest onshore oil field

Source: Silson Communications Ltd.

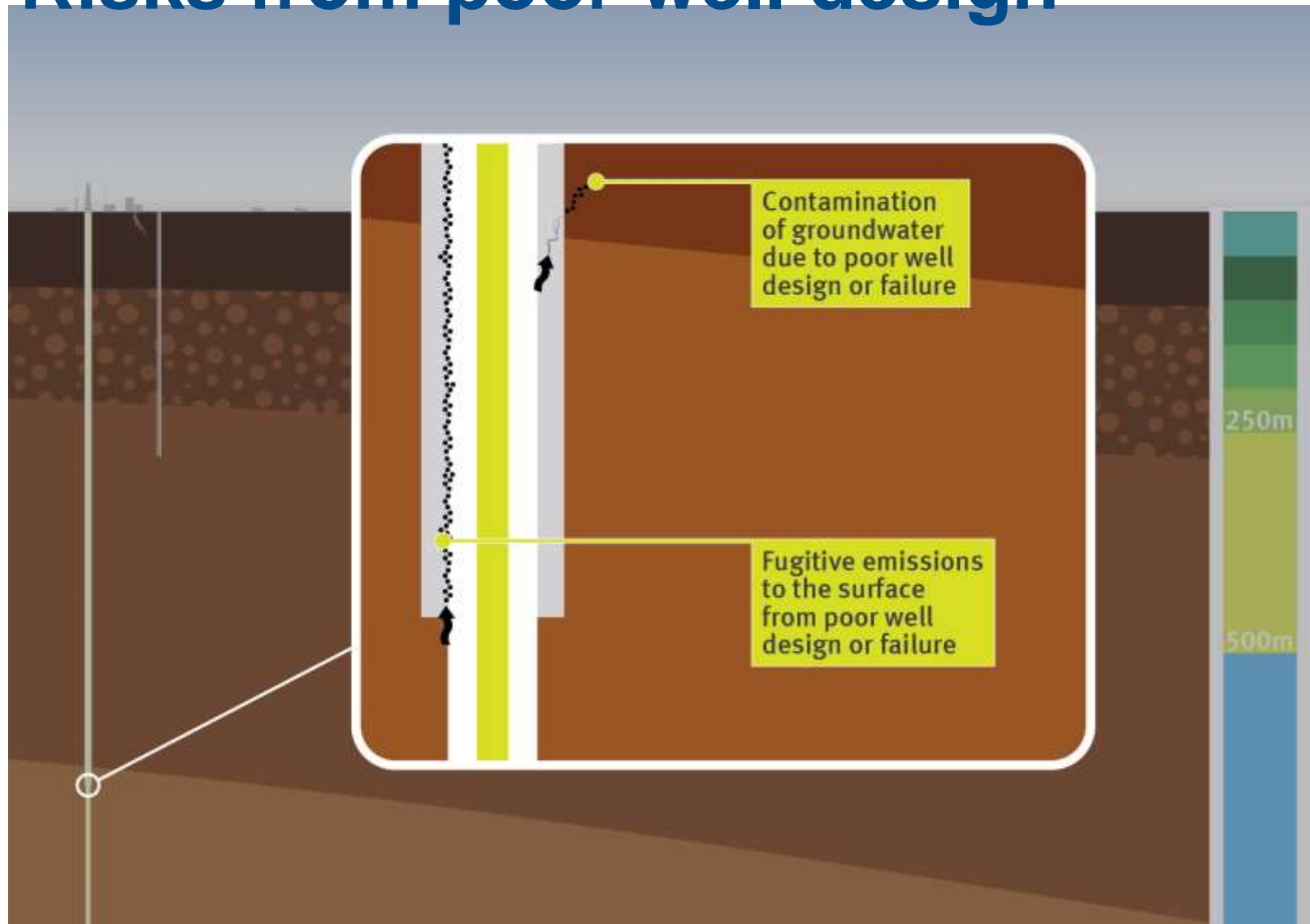
Regulatory regime in England – exploration



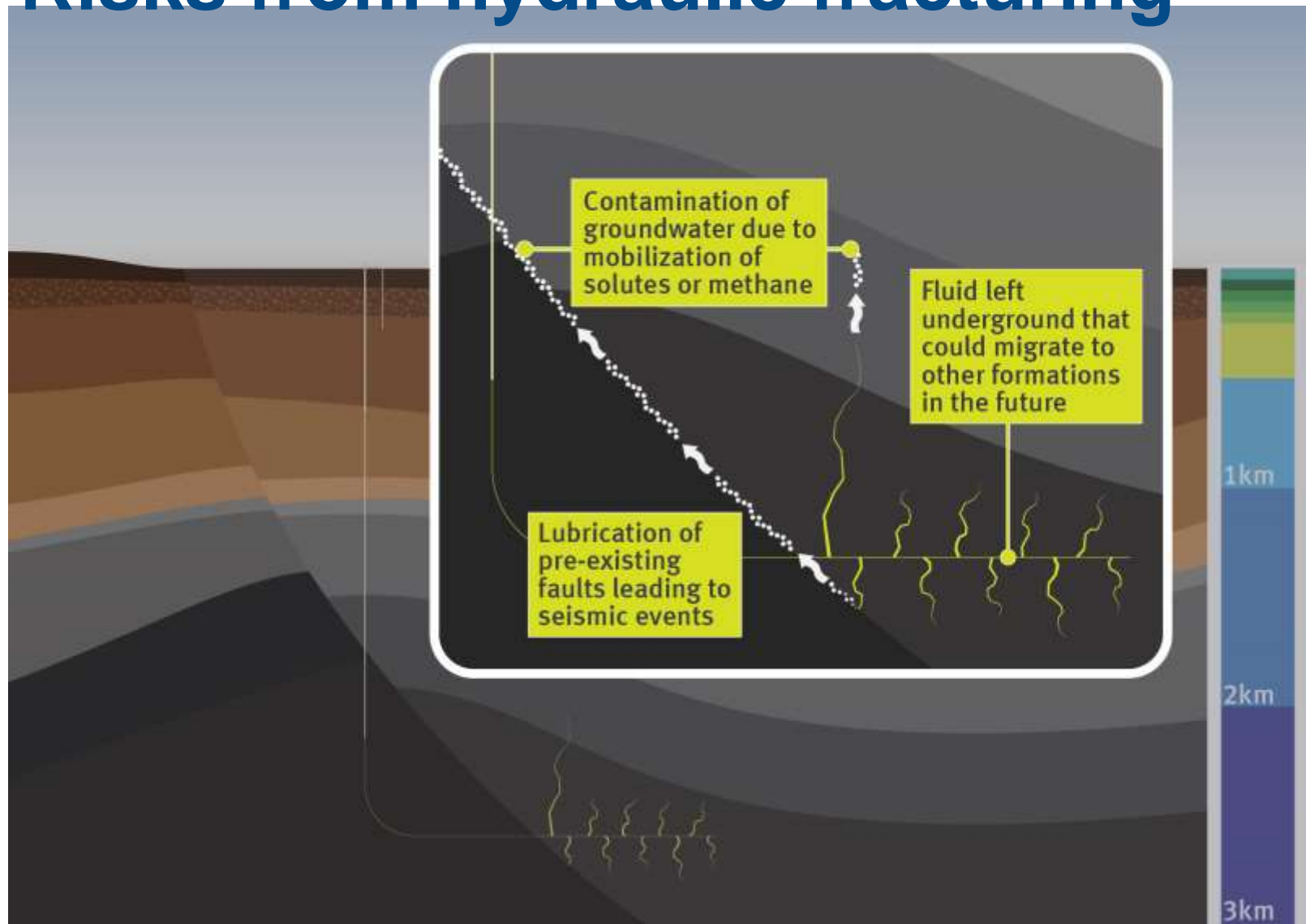
Risks from surface operations

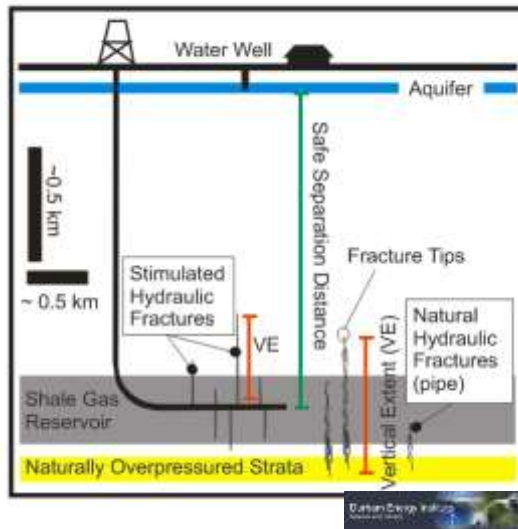
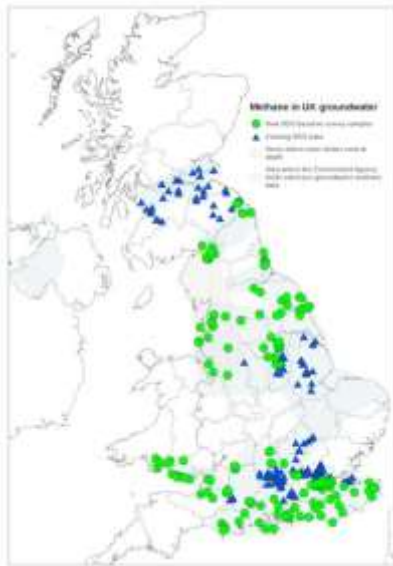


Risks from poor well design

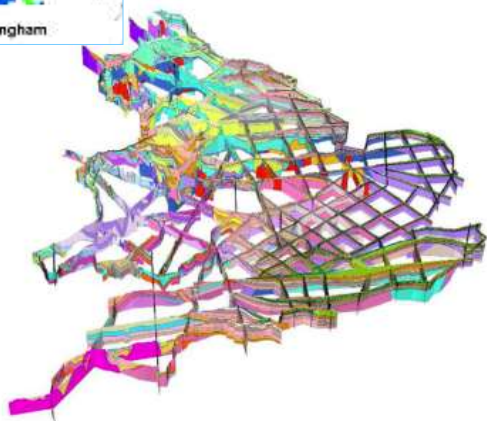


Risks from hydraulic fracturing





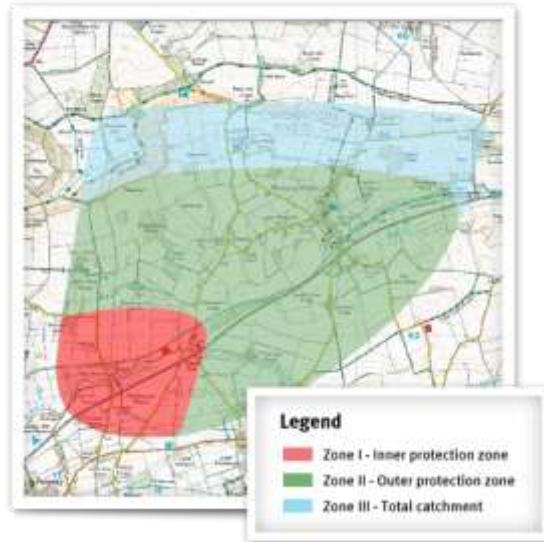
**EUROPEAN
COMMISSION**



Environmental controls

Risk	Controls
Over abstraction of water	<ul style="list-style-type: none"> • Abstraction licensing under the Water Resources Act 1991
Groundwater pollution	<ul style="list-style-type: none"> • Notice under Section 199 of the Water Resources Act 1991 • Environmental permit for a Groundwater Activity (unless we are satisfied that there is no risk of inputs to groundwater) • Assessment of drilling mud and fracturing additives
Poor management of wastes, including used and residual hydraulic fracturing fluid	<ul style="list-style-type: none"> • Environmental permit for a Mining Waste Operation (or Mining Waste Facility) • Environmental permit for a Radioactive Substances (NORM) • Site inspection and compliance regime
Fugitive methane emissions and other air quality concerns	<ul style="list-style-type: none"> • Environmental permit for a Mining Waste Operation • Environmental permit for an Installation (IED) (flaring more than 10 tonnes per day)
Surface spills	<ul style="list-style-type: none"> • Environmental permit for a Water Discharge Activity (if surface water run-off becomes polluted)

Environmental controls – Water



- ⇒ Abstraction licence >20m³/day
- ⇒ No drilling in Source Protection Zones 1
- ⇒ Hydrogeological risk assessment
- ⇒ Chemicals disclosure
- ⇒ No chemicals hazardous to groundwater in fracking fluid

Environmental controls – Waste



- ⇒ Waste Management Plan covers all wastes
- ⇒ Best Available Techniques
- ⇒ Sealed tanks for waste fracking fluid
- ⇒ Offsite disposal at licensed treatment works
- ⇒ Enclosed flares (exploration only)



Monitoring

- ➔ Requirement to produce a site condition report at the beginning and end of operations
- ➔ Monitoring regime set out in the permit or accompanying Waste Management Plan
- ➔ Baseline monitoring of groundwater particularly where fracking is proposed
- ➔ Post-decommissioning monitoring until we are satisfied that there is no significant ongoing environmental risk



Engaging with communities

- ➔ Local consultation on bespoke permits
- ➔ Extra consultation for sites of high public interest – including fracking sites
- ➔ Close working with local authorities and other regulators
- ➔ Developed a short video and leaflet that explain our role

'Meet the regulators



A changing regulatory landscape

➔ Infrastructure Act

- ➔ Introduces a new consent for hydraulic fracturing
- ➔ Reinforces existing environmental, planning and health and safety safeguards
- ➔ Baseline monitoring requirements
- ➔ New definitions for protected areas
- ➔ Water companies as statutory consultees

➔ Permitted development rights

Streamlining Regulation

⇒ Oil and Gas Unit and Single Point of Contact



⇒ Technical Guidance: consultation draft



⇒ Single application form



⇒ Bespoke permits within 13 weeks, unless they are sites of high public interest



⇒ Standard rules permits –
1st tranche (Autumn 2014)
2nd tranche (Spring 2016)



Publishing

Conclusions

- ➔ We have thoroughly assessed the environmental risks for exploration
- ➔ We have the right regulatory controls
- ➔ We will engage local communities and keep the public informed
- ➔ We will work with partners to ensure joined up regulation
- ➔ We will streamline the permitting process, whilst maintaining high standards of environmental protection
- ➔ We will keep this under review, especially as the industry develops towards full scale production