

How HSE regulates onshore oil and gas

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Health and Safety Policy – Shale Gas

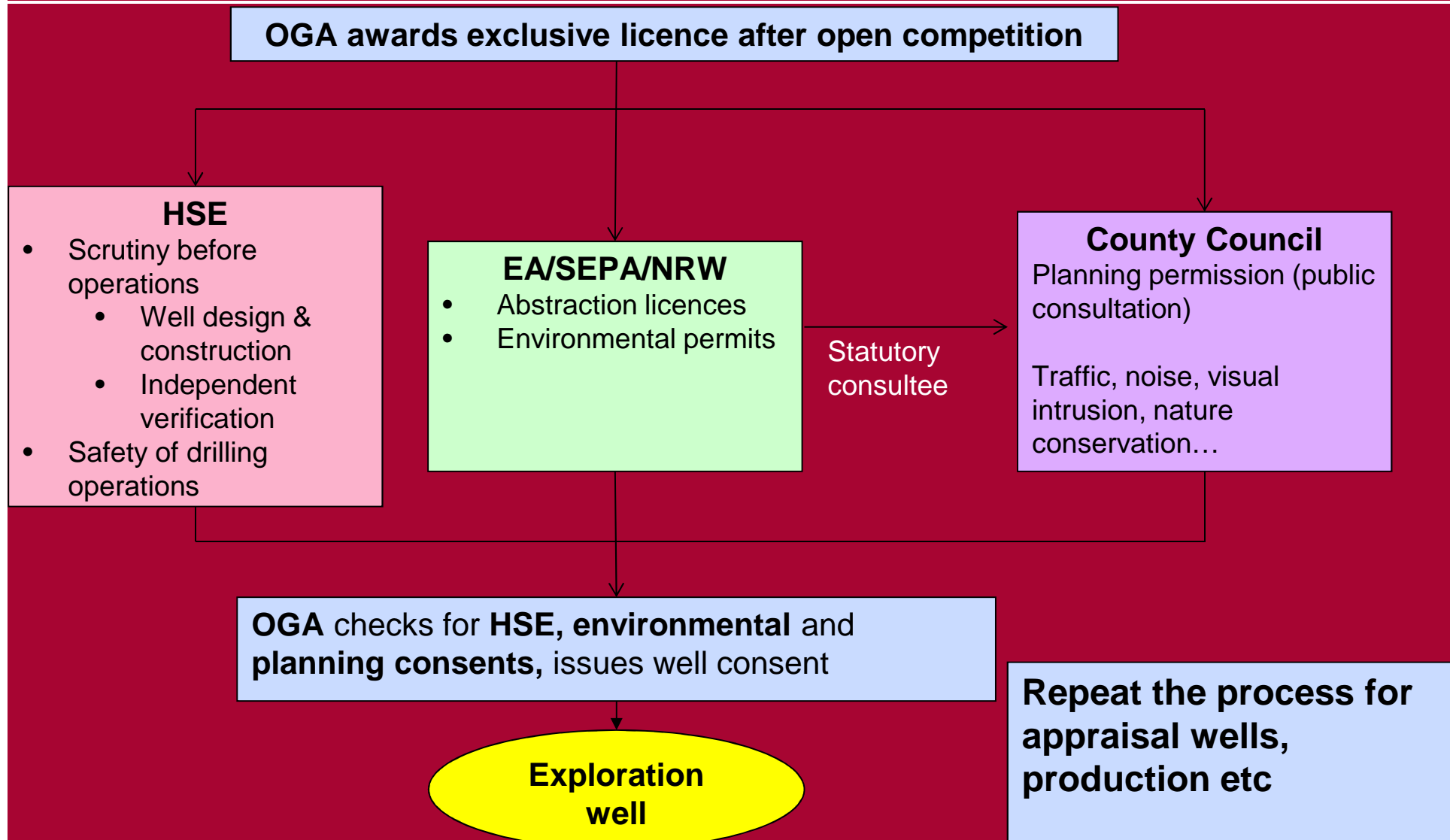
Health & Safety Executive

Health and Safety Executive's role



- Britain is one of the safest places to work in the world
- Over 20 years' experience of regulating the oil and gas industry on and offshore
- HSE has no involvement in setting UK energy policy or environmental and planning decisions
- Cooperation with other regulators and public bodies
- Operators are responsible for managing risks
- HSE regulates and holds them to account

Regulatory landscape for unconventional gas



What are the main hazards?



Uncontrolled release leading to explosion or fire

Fluids or water being released to rock formations or at surface, with safety and environmental consequences

Before work starts



- Industry standards
- Meeting operators
- Auditing well examination scheme and appointment of independent well examiner



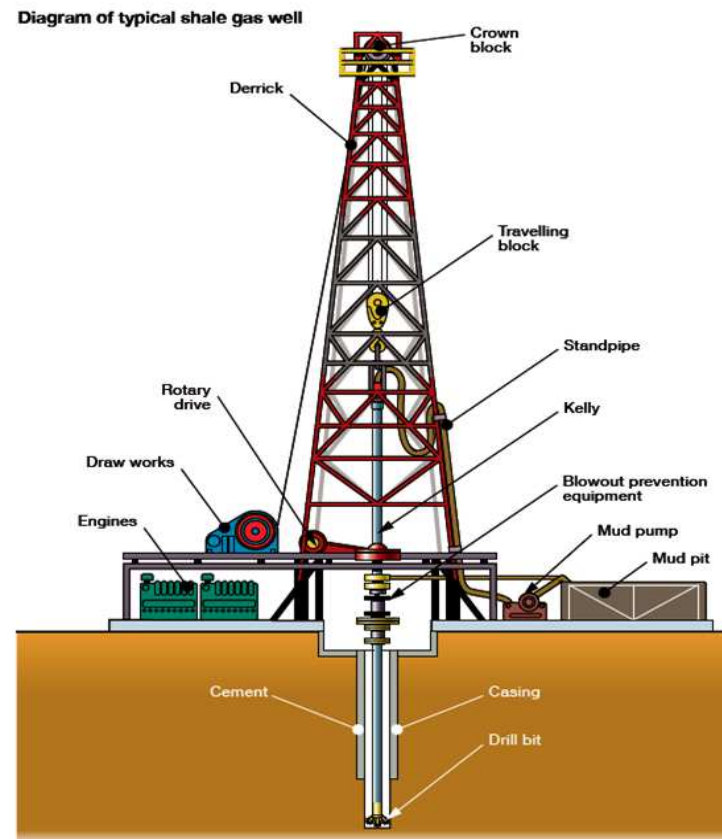
The independent well examiner

- Important quality control for the industry
- Independent competent person
- Assess well design, construction and maintenance.
- Review the proposed and actual well operations to confirm they meet the operator's policies and procedures, comply with HSE's Regulations and follow good industry practice.
- HSE checks that the operator has these arrangements in place for the complete lifecycle of the well from design through to final plugging and decommissioning

Design of the well

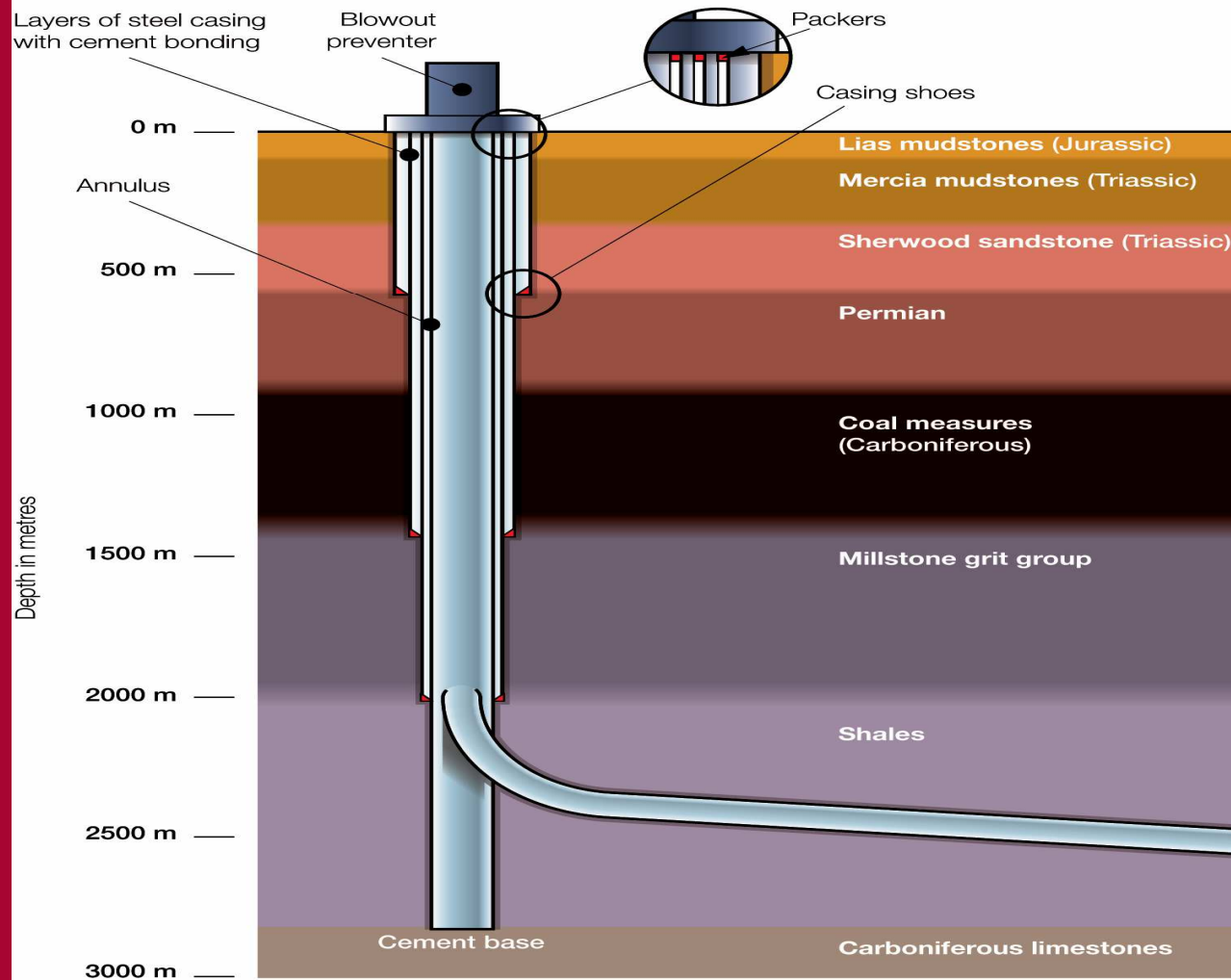
- The life cycle approach
- Well must be designed, constructed operated, maintained suspended and abandoned so that there can be no unplanned escape of fluids for its entire life cycle
- Operator must mitigate all risks
- All wells constructed to industry standards with suitable well integrity and well control
- The well must be designed with decommissioning in mind

Designing the well: notification



Design of the well

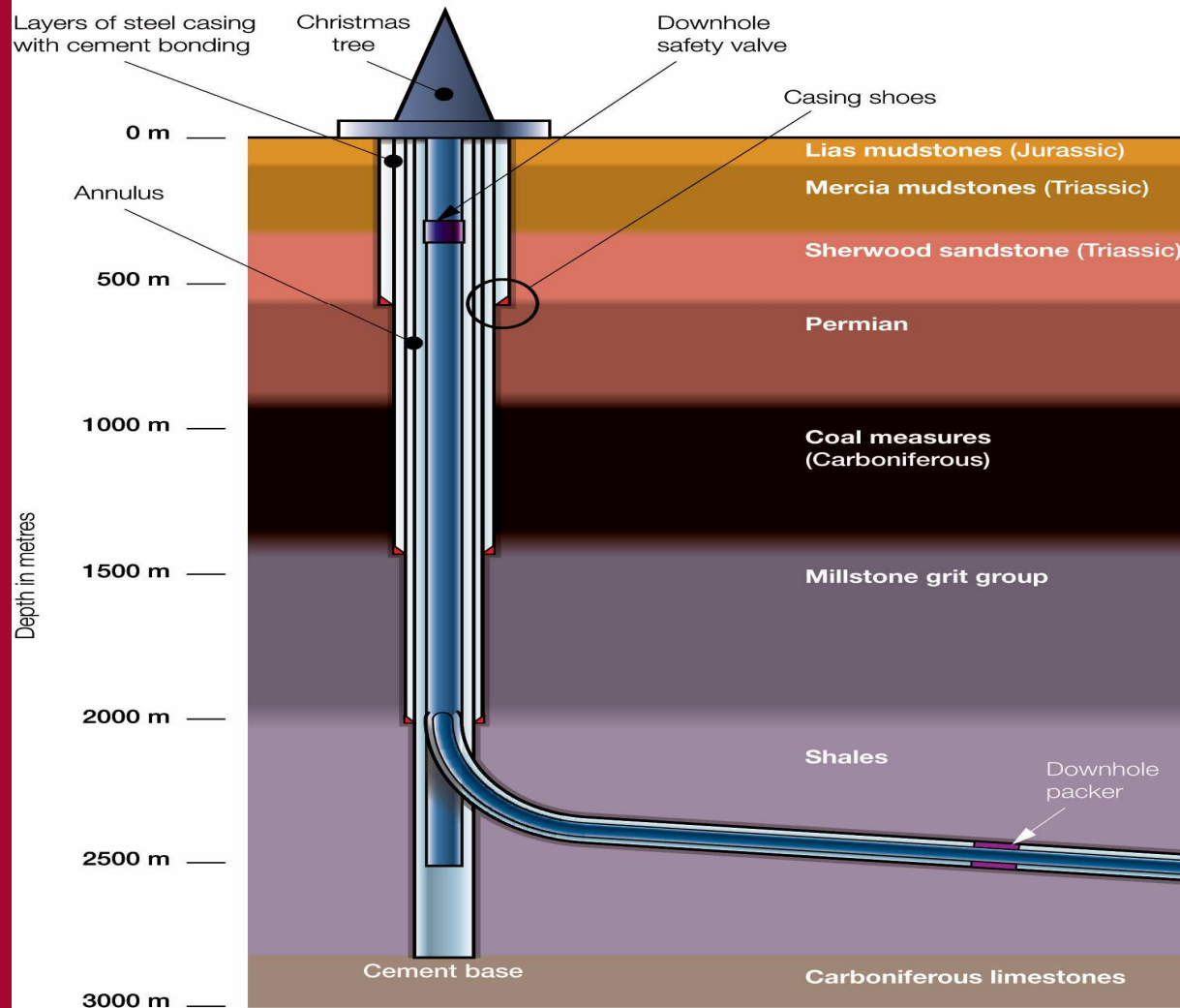
Diagram of typical shale gas well - construction phase (illustrative only)



Construction of the well



Diagram of typical shale gas well - testing phase (illustrative only)



Operation of the well



Decommissioning and abandonment of the well

Diagram of typical shale gas well - abandonment (illustrative only)

