



## ENGLAND

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# THE WILDLIFE TRUSTS' POSITION STATEMENT

## ON-SHORE HYDRAULIC FRACTURING FOR SHALE GAS EXTRACTION IN ENGLAND

### Introduction

With climate change presenting a significant and serious long-term threat to biodiversity and societies worldwide, The Wildlife Trusts believe that:

- a reduction in energy demand and greater energy efficiency measures should provide the central focus of Government's approach to sustainable energy policy;
- there should be a reduction in dependency on fossil fuels (coal, natural gas and oil);
- Government funding should be prioritised on the development and implementation of renewable technologies;
- Restoring ecosystems, such as peatlands to absorb carbon (as well as a range of other ecosystem services) should be a key consideration in mitigating the potential impact of shale gas exploration and extraction.

### Scope

The Wildlife Trusts recognise that all forms of energy generation will entail some environmental costs and that the risks and benefits associated with each must be weighed against each other and considered in the context of location and scale. This position focuses on The Wildlife Trusts views and recommendations with regards to on-shore hydraulic fracturing (fracking) which is used to access natural gas reserves in shale rock.

It should be read in conjunction with: Responding to Climate Change (Interim Policy Statement, 2005); Windfarms on land (Interim Policy Statement, 2005); Energy Review and the Importance of Climate Change (Briefing, 2006); and revised position statement energy generation (draft position statement, 2017).

### Headline Position

The Wildlife Trusts believe that the extraction of shale gas undermines UK efforts to reduce greenhouse gas emissions and tackle climate change. New evidence from the Climate Change Committee<sup>1</sup> indicates that methane sourced

<sup>1</sup> Committee on Climate Change (2016) Onshore Petroleum The compatibility of UK onshore petroleum with meeting the UK's carbon budgets : 'The CCC's report finds that the implications

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by fracking will be in addition to existing emissions rather than substituting for them. In addition, shale gas extraction often results in fugitive methane emissions, i.e. methane that is leaked directly into the air.

The extraction of shale gas by hydraulic fracturing presents a number of additional environmental risks to wildlife and society. Impacts on the environment are not well understood but they could be potentially significant and existing environmental regulation seems to be inadequate to manage these risks<sup>2</sup>.

We are particularly concerned about the impacts on habitats, species and ecosystems due to:

- Reduction in water quality (surface and ground water contamination) and quantity (water stress and availability).
- Cumulative impacts of disturbance, damage, loss and fragmentation at the landscape level. Commercial extraction of shale gas involves establishing many drill sites and pads dotted across the landscape. This large area, and the associated construction infrastructure, is likely to have a significant impact on landscape fragmentation and direct impacts on many sites that are rich in wildlife.

**The Wildlife Trusts oppose fracking in principle** because of its contribution to greenhouse gas emissions and climate change.

If, despite this, extraction does go ahead, then to address and minimise other, avoidable risks associated with hydraulic fracturing, proposals should be aligned with the recommendations set out below:

### **Recommendations**

To minimise the potential risks associated with hydraulic fracturing, The Wildlife Trusts believe that:

- All proposals for shale gas extraction should go through the full planning process and in each case include public consultation, compliance with EU Directives and a full Environmental Impact Assessment (EIA).
- The EIA should be undertaken, prior to the submission of a planning application and cover the lifetime of the project through to decommissioning of the site. It should:
  - include baseline ecological data and baseline data for air and water quality;
  - disclose all chemicals involved in the process;
  - assess the risks of waste water disposal against reuse of waste water;
  - identify the least damaging disposal route for the waste water (including an assessment of the potential impacts of discharging waste water into the marine environment);
  - fully assess the effects on the local hydrological regime and water supplies;

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*of UK shale gas exploitation for greenhouse gas emissions are subject to considerable uncertainty – from the size of any future industry to the potential emissions footprint of shale gas production. It also finds that exploitation of shale gas on a significant scale is not compatible with UK carbon budgets, or the 2050 commitment to reduce emissions by at least 80%, unless three tests are satisfied*

<sup>2</sup> RSPB and the Fit to Frack partnership (2014) Hydraulic fracturing for shale gas in the UK: Examining the evidence for potential environmental impacts

- a lifetime assessment of carbon emissions associated with the site (including transport, gas leakage etc);
- set out how the abandoned wells will be monitored to ensure well integrity is maintained in the long term; and
- include current and future operation proposals to ensure that the total ecological footprint of the development and phased future wells are accounted for.
- Planning consent should be refused for shale gas extraction in protected sites or where operations would pose a significant direct or in-combination impact to wildlife, habitats or ecosystems or where the potential risk of environmental damage is high, regardless of mitigation.
- An abstraction licence should be refused where there is likely to be a significant impact on the local hydrological regime and water supplies.
- There should be strict interpretation and enforcement of the regulatory regime to ensure that wildlife habitats and ecosystems are protected from the potentially damaging effects of shale gas extraction. This will require a sufficient number of adequately skilled and resourced regulators.
- To minimise risks to the water environment:
  - fracturing should never be permitted where the separation zone between an aquifer and the gas extraction zone is less than 600 m<sup>3</sup> Where geological conditions are particularly risky, this separation zone may need to be greater and as such, the separation zone should always be assessed on a case by case basis.
  - only substances assessed as non-hazardous should be used in the fracturing fluid.
  - options for treating and disposing of waste water must be planned and agreed with the planning authority and the regulating body - these options should assess and address the potential impacts of discharging waste water into the sea; and the potential for reusing waste water.
  - wastewater should not be re-used in the fracturing fluid if it contains chemical contaminants and radioactive materials that may pose a risk to the water quality of the aquifer.
- Air quality (including methane emissions) and the water environment (for methane and other contaminants), should be monitored and funded by the operator during production operations and all findings should be regularly reported to the appropriate regulating body.
- Consented operations should result in a net gain in biodiversity in line with current legislation, the National Planning Policy Framework and other biodiversity commitments.
- The precautionary principle should always be adopted until adequate scientific evidence exists with regards to the immediate and long-term environmental impacts.

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**(Author Rachel Hackett. Updated from March 2014)**

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<sup>3</sup> See: Davies, R.J et al (2012) Hydraulic fractures: How far can they go? Marine and Petroleum Geology, 45: 171-185