



Department  
of Energy &  
Climate Change

# Surface Development Restrictions for Hydraulic Fracturing

Consultation on Proposed Restrictions on Surface  
Development through the Petroleum Exploration and  
Development Licence

URN 15D/513

4 November 2015

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# General information

## **Purpose of this consultation:**

The Government is seeking views on proposed surface development restrictions for hydraulic fracturing in specified protected areas, which are proposed to be delivered through Petroleum Exploration and Development Licences (PEDLs) for onshore activities.

**Issued:** 4 November 2015

**Respond by:** 16 December 2015

## **Enquiries to:**

The Office of Unconventional Gas and Oil  
Department of Energy & Climate Change,  
3rd Floor Area B,  
3 Whitehall Place  
London, SW1A 2AW

Email: [surface.restrictions@decc.gsi.gov.uk](mailto:surface.restrictions@decc.gsi.gov.uk)

Consultation reference: URN 15D/513 – Surface Development Restrictions

## **Territorial extent:**

As it is proposed currently that the licensing of onshore oil and gas extraction underlying Scotland and Wales will be devolved to the Scottish Government and Welsh Government respectively, the Government intends for the proposed changes outlined in this consultation to apply in England only.

## **How to respond:**

This is a targeted consultation which has been sent out to licence holders and representative bodies with a particular interest in this matter and the management of the specified protected areas. For any enquiries, please see the contact details given above.

## **Confidentiality and data protection:**

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

If you want information that you provide to be treated as confidential please say so clearly in writing when you send your response to the consultation. It would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

We will summarise all responses and place this summary on the [GOV.UK website](#). This summary will include a list of names or organisations that responded but not people's personal names, addresses or other contact details.

**Quality assurance:**

This consultation has been carried out in accordance with the [Government's Consultation Principles](#).

If you have any complaints about the consultation process (as opposed to comments about the issues which are the subject of the consultation) please address them to:

DECC Consultation Co-ordinator

3 Whitehall Place

London SW1A 2AW

Email: [consultation.coordinator@decc.gsi.gov.uk](mailto:consultation.coordinator@decc.gsi.gov.uk)

# Introduction

## Policy Background

The shale industry in the UK is still at a very early stage of development. The UK Government supports the development of domestic energy sources in a safe and sustainable manner. Our energy supply must be safe, low cost and low carbon. Shale gas can provide a cost-efficient bridge for our transition to a green future.

The Infrastructure Act 2015 put in place a range of measures to provide the public with confidence that the industry is being taken forward in a balanced way. This includes a ban on hydraulic fracturing<sup>1</sup> in all land above a depth of 1,000 metres. The Infrastructure Act 2015 also includes additional restrictions on hydraulic fracturing in protected groundwater source areas and other protected areas. The terms for these additional restrictions have been defined by the draft Onshore Hydraulic Fracturing (Protected Areas) Regulations 2015, which were laid in Parliament on 16 July 2015<sup>2</sup>.

While the Infrastructure Act 2015 and the draft Protected Areas Regulations address hydraulic fracturing which occurs underground, the Government has been clear that safeguards should also be applied to associated surface activities in specified protected areas. Alongside the draft Regulations, the Government therefore also set out its commitment to ensuring that hydraulic fracturing cannot be conducted from wells that are drilled at the surface in specified protected areas. This is not intended to impact on conventional drilling operations.<sup>3</sup>

## Proposals

In order to put this commitment into effect, the Government is proposing to include a licence condition in all new Petroleum Exploration and Development Licences (PEDLs), to be awarded from the 14<sup>th</sup> Onshore Licensing Round onwards, that will prevent hydraulic fracturing operations from taking place from new or existing wells that are drilled at the surface in specified protected areas.

For existing PEDLs, the Government is proposing to set out in a policy statement that the Secretary of State is minded not to approve any proposed programme of works which includes carrying out of hydraulic fracturing from new or existing wells drilled at the surface in specified protected areas.

## Purpose of the Consultation

This consultation seeks views on the impact of the proposed changes to new and existing PEDLs. In particular, the consultation seeks evidence as to the impacts that the proposals would have on existing and new PEDL licensees, and on the specified protected areas. Furthermore, the Government would also like to invite views on the areas within which surface development should be restricted.

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<sup>1</sup> As defined by section 4B(1) of the Petroleum Act 1998.

<sup>2</sup> See <http://www.legislation.gov.uk/ukdsi/2015/9780111137932>.

<sup>3</sup> See <https://www.gov.uk/government/news/government-defines-protected-areas-for-shale-developments/>

# Surface Development Restrictions for Hydraulic Fracturing

This section sets out the policy background to this consultation and details of the proposed changes to new and existing Petroleum Exploration and Development Licences (PEDLs) in England.

## Policy background

### Government Policy on Onshore Shale Gas Development

- 1.1. The shale industry in the UK is still at a very early stage and production has not yet started. The Government supports the development of domestic energy sources in a safe and sustainable manner. Shale gas and oil may hold huge potential for adding to the UK's energy sources, helping to improve energy security, create jobs and meet carbon-reduction targets.
- 1.2. The Government has been clear that our energy supply must be safe, low cost and low carbon. Britain will still need significant oil and gas supplies over the next few decades. Over 85% of British people use gas for heating and cooking, and this will continue for many years to come. Shale gas can create a bridge while the UK is developing renewable energy sources, improving energy efficiency and building new nuclear.

### Existing Protections for Protected Areas

- 1.3. Reviews of the existing evidence and UK regulatory system, such as reports by the Royal Society and Royal Academy of Engineering<sup>4</sup> and Public Health England<sup>5</sup>, have concluded that shale can be developed while protecting the environment, provided that operational best practices are implemented and enforced through regulation. The UK has been successfully regulating gas and oil drilling for over 50 years and has tough regulations in place enforced by dedicated and independent environmental regulators to ensure on-site safety, prevent water contamination, and mitigate seismic activity and air pollution.
- 1.4. A company looking to develop shale needs to obtain all the necessary permissions, including a PEDL, planning permission from the relevant planning authority and environmental permits from the relevant environmental regulator. Proposals for onshore oil and gas extraction, including shale gas, are subject to scrutiny through the planning system, which will address impacts such as traffic movements and noise. Proposals will also be scrutinised by the relevant environmental agency (the

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<sup>4</sup> Shale gas extraction in the UK: a review of hydraulic fracturing, see <https://royalsociety.org/~media/policy/projects/shale-gas-extraction/2012-06-28-shale-gas.pdf>.

<sup>5</sup> Review of the potential public health impacts of exposures to chemical and radioactive pollutants, see [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/332837/PHE-CRCE-009\\_3-7-14.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332837/PHE-CRCE-009_3-7-14.pdf).

## Surface Development Restrictions for Hydraulic Fracturing

Environment Agency (EA) in England), and by the Health and Safety Executive (HSE). The HSE scrutinises well design and monitors its progress to ensure the operator manages risks effectively throughout the life cycle of the well. Every shale well site will be inspected by the HSE and EA at exploration stage. Furthermore, consents are required from DECC and the Oil and Gas Authority (OGA) before drilling or production activities can commence. To mitigate seismic risks, DECC also set out new requirements for operators. Operators have to assess the proximity of relevant faults before fracturing, monitor seismic activity before during and after operations, and halt them if seismic activity exceeds a predefined level.

- 1.5. The Infrastructure Act 2015 amends the Petroleum Act 1998 by inserting new sections 4A and 4B. These new sections set out further requirements and safeguards for onshore hydraulic fracturing to provide the public with confidence that this industry is being taken forward in a balanced and measured way. This includes, for example, an absolute prohibition on hydraulic fracturing in all land above a depth of 1,000 metres, measures on taking into account the environmental impact of a development, groundwater monitoring, community benefits and the exclusion of associated hydraulic fracturing in protected groundwater source areas and other protected areas.
- 1.6. On 16 July, the Government laid draft regulations in Parliament which set out definitions for the protected groundwater source areas and other protected areas within which hydraulic fracturing is prohibited. These are defined as National Parks, the Broads, Areas of Outstanding Natural Beauty (AONBs), World Heritage Sites and Source Protection Zones (SPZ) 1 (areas close to a drinking water source where the risk associated with groundwater contamination is at its greatest). The draft regulations ensure the process of hydraulic fracturing cannot take place at depths above 1,200 metres in these areas. As hydraulic fracturing occurs far below the surface, these regulations can only relate to sub-surface activities. The regulations are in draft form and will be considered for approval by Parliament in Autumn 2015.
- 1.7. In terms of the current approach to surface development in sensitive areas, planning guidance published in 2014<sup>6</sup> already explains that mineral planning authorities should refuse a planning application for unconventional hydrocarbon development such as shale gas in National Parks, the Broads and AONBs where it is considered to be “major development”, unless it can be demonstrated that both exceptional circumstances exist and such development is in the public interest. Where a proposed development for unconventional hydrocarbons would lead to substantial harm to or loss of a World Heritage Site, mineral planning authorities should refuse consent unless wholly exceptional circumstances apply. There is also a general statutory duty in legislation on all relevant authorities, requiring them to have regard to the respective statutory purposes of National Parks, the Broads and AONBs when coming to decisions or carrying out activities relating to or affecting land within them.
- 1.8. In addition to this, the existing regulatory regime also ensures that no hydraulic fracturing will be permitted by the environmental regulators where groundwater and drinking water supplies could be affected by the activity. The environmental regulators do not permit any activities where there is a significant risk that pollution of groundwater will occur and consequently do not permit drilling for oil or gas in SPZ 1. The area of an

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<sup>6</sup> See [http://planningguidance.planningportal.gov.uk/blog/guidance/minerals/planning-for-hydrocarbon-extraction/determining-the-planning-application/#paragraph\\_223](http://planningguidance.planningportal.gov.uk/blog/guidance/minerals/planning-for-hydrocarbon-extraction/determining-the-planning-application/#paragraph_223).



SPZ 1 is defined as the 50-day travel time from any point below the water table to the abstraction source. This represents the immediate area around a borehole (with a minimum radius of 50 metres) where remediation of pollution is unlikely to be achievable within available timescales.<sup>7</sup> In the past, the environmental regulators have successfully influenced operators not to apply for an environmental permit for sites in SPZ1s and have also ensured oil and gas pipelines do not run through SPZ1s. Where an activity poses an unacceptable risk to the environment, environmental regulators will refuse to grant environmental permits for drilling activities within an SPZ 2 or 3 or outside those areas.

### Government Announcement on Surface Development Ban

- 1.9. On 16 July 2015, the Government announced its commitment to ensuring that hydraulic fracturing cannot be conducted from wells that are drilled at the surface in specified protected areas (including, for example, National Parks). This is not intended to impact on conventional drilling operations. The announcement was made alongside the draft Protected Areas Regulations being laid in Parliament.
- 1.10. The proposals described in this consultation which are to give effect to this commitment would further strengthen the safeguards set out in the Petroleum Act 1998 and the draft Protected Areas Regulations and would be designed to ensure that, through the PEDL licensing regime, no consent is given to the carrying out of “associated hydraulic fracturing” (the definition of which is set out in section 4B(1) of the Petroleum Act 1998) from new or existing wells that have been drilled at the surface in specified protected areas.

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<sup>7</sup> For more information see also <http://apps.environment-agency.gov.uk/wiyby/37833.aspx>.

### Proposed Changes

#### What is the Government proposing?

- 1.11. The Government is seeking to ensure that surface activities associated with hydraulic fracturing will not occur in specified protected areas. In the proposals put forward in this consultation document, this would be delivered through the inclusion of a licence condition in **new** Petroleum Exploration and Development Licences (PEDLs) and the development of a policy statement designed to inform the approval process for programmes submitted for approval under **existing** PEDLs.

#### Rationale for the Shale-Specific Surface Development Restrictions

- 1.12. The UK has a strong regulatory system which provides a comprehensive regime for petroleum exploratory activities. As set out above, reviews of the existing regulatory regime and the potential risks have shown that the risks are low and that the impacts of the shale industry can be addressed through the existing regulatory and planning regimes. At the same time, however, the Government understands that it is critical for this new industry to have the confidence of the public if it is to flourish in the long term.
- 1.13. The shale industry is still in an early stage of development and the Government recognises that there is a high level of public concern around hydraulic fracturing, in particular in protected areas of significance due to their environmental, landscape or heritage characteristics.
- 1.14. Accordingly, and in order to assure the public that the shale industry is being taken forward in a measured and reasonable manner, the Government believes that it is right to proceed with some caution and to introduce tighter controls specifically for shale development in specified protected areas.
- 1.15. The Government's view is that the most suitable way to do so is through the petroleum licensing process.

#### Scope of the Proposals

- 1.16. As the draft Protected Areas Regulations already address underground activities, the specific focus of the proposals contained in this consultation is on the surface developments that are required in order to carry out hydraulic fracturing operations. The proposals are designed to complement the safeguards in the Petroleum Act 1998 and the draft Protected Areas Regulations.
- 1.17. The proposals cover both new and existing onshore PEDLs in England. As the Government currently intends to devolve the licensing of the extraction of onshore oil and gas underlying Scotland and Wales in accordance with the new devolution settlements, and licensing is already devolved to Northern Ireland, the Government is minded to only implement the proposed changes in England. However, the Government is interested to know whether there is a case for the proposals extending beyond England.
- 1.18. The proposals contained in this consultation would apply only to surface activity that is required for the carrying out of "associated hydraulic fracturing", the definition of which

is contained in section 4B(1) of the Petroleum Act 1998 (as inserted by section 50 of the Infrastructure Act 2015)<sup>8</sup>.

- 1.19. These proposals will not apply to drilling for conventional hydrocarbon resources, which has been conducted safely for decades, including, for example, in National Parks and AONBs. This is a well-established industry and existing evidence shows that it can comply with the strict requirements that are already in place for protected areas.
- 1.20. The proposals will also not apply to the production of other unconventional resources, such as coal bed methane, which do not use high-volume hydraulic fracturing.
- 1.21. The Government proposes to apply the surface restrictions to the “protected groundwater source areas” and “other protected areas” as defined in the draft Onshore Hydraulic Fracturing (Protected Areas) Regulations 2015<sup>9</sup> (herein referred to simply as “protected areas”). In addition, recognising that surface activities are of greatest public concern, the Government is minded to apply the proposals to additional sensitive areas. This will mean that the proposals contained in this consultation will apply in the following areas:
  - **National Parks, the Broads and Areas of Outstanding Natural Beauty (AONBs)** – representing landscapes with the highest level of protection from damaging development within the planning system.
  - **World Heritage sites** - the highest international heritage designation.
  - **Source Protection Zones (SPZ) 1** - the areas close to a drinking water source where the risk associated with groundwater contamination is at its greatest.
  - **Sites of Special Scientific Interest (SSSIs)** - areas designated by the statutory nature conservation agencies in accordance with the Wildlife and Countryside Act 1981 in order to provide protection for specific flora, fauna, or geological or physiographical features. Around 70% of Sites of Special Scientific Interest carry a European designation which means that the protections in the Conservation of Habitats and Species Regulations 2010 must be observed (see below).
  - **Natura 2000** - an EU-wide network of nature protection areas established under the 1992 Habitats Directive<sup>10</sup> in order to protect biodiversity. Natura 2000 sites are comprised of Special Areas of Conservation (SAC) and Special Protection Areas (SPAs) designated by Member States under the Habitats Directive and the 1979 Birds Directive respectively.

Under the UK Regulations<sup>11</sup> which implement the Habitats Directive special consideration must be given to any proposed plan or project that is likely to have a significant effect on a European site<sup>12</sup>. Before permitting such plans or projects the decision maker must carry out a Habitats Regulations Assessment (HRA) in order to analyse the possible impacts on the site in view of the site’s conservation objectives.

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<sup>8</sup> See <http://www.legislation.gov.uk/ukpga/2015/7/section/50/enacted>.

<sup>9</sup> See [http://www.legislation.gov.uk/ukdsi/2015/9780111137932/pdfs/ukdsi\\_9780111137932\\_en.pdf](http://www.legislation.gov.uk/ukdsi/2015/9780111137932/pdfs/ukdsi_9780111137932_en.pdf).

<sup>10</sup> Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

<sup>11</sup> Conservation of Habitats and Species Regulations 2010 (SI 2010/490).

<sup>12</sup> “European sites” encompass Special Areas of Conservation (SACs) and Sites of Community Importance (SCI), designated under the Habitats Directive, and Special Protection Areas (SPAs) designated under the Birds Directive.

## Surface Development Restrictions for Hydraulic Fracturing

- **Ramsar sites** - areas designated as Wetlands of International Importance in accordance with the Ramsar Convention. They are afforded the same protection as Natura 2000 sites under current Government policy (see above).

1.22. All terrestrial Natura 2000 and Ramsar sites in England and Wales are also designated as SSSIs.

1.23. The current Habitats Regulations Assessment consultation for the 14th Licensing Round<sup>13</sup> proposed that conditions be attached to some licences following the outcome of an ecological assessment of each block for which a licence application has been taken forward. The conditions will prohibit certain activities at or near the surface within the areas of the block that are European site(s)<sup>14</sup>, in order to prohibit activities that would cause an Adverse Effect on Integrity (AEOI) from taking place in the licensed area to ensure that there will be no AEOI on European sites.

### Proposed Changes to Petroleum Exploration and Development Licences (PEDLs)

1.24. The proposed changes are to be applied to both new and existing licences:

- **For new licences:** The Government proposes to insert into any new PEDL a condition which prevents “associated hydraulic fracturing”, as defined in 4B(1) of the Petroleum Act 1998, from taking place from new and existing wells that have been drilled at the surface in specified protected areas. The introduction of this condition would be consistent with section 4(1)(e) of the Petroleum Act 1998, which enables a PEDL to be granted with modified model clauses in any particular case. The Government proposes that the licence condition would adopt the definition of specified protected areas as set out in paragraph 1.21 above in order to restrict where surface activities can take place. This condition would be inserted into any new PEDL awarded under the 14<sup>th</sup> onshore licensing round.
- **For existing licences:** The Government will set out a policy statement indicating that the Secretary of State is not minded to grant consent for any programme which includes “associated hydraulic fracturing”, as defined in 4B(1) of the Petroleum Act 1998, from new or existing wells that have been drilled at the surface in specified protected areas. Again, it is proposed that the policy statement will adopt the definition of specified protected areas as set out in paragraph 1.21 above in order to restrict where surface activities can take place.

1.25. In terms of enforcement, checks for both new and existing licences would be carried out under the programme on an individual basis.

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<sup>13</sup> See <https://www.gov.uk/government/consultations/habitats-regulations-assessments-of-14th-onshore-oil-and-gas-licensing-round>. The consultation closes on 29 September 2015.

<sup>14</sup> For the purpose of the Habitats Regulations Assessment consultation for the 14th Licensing Round, the term “European site” also includes sites listed or proposed under The Convention on Wetlands of International Importance, called the Ramsar Convention, and possible/proposed SPAs and candidate SACs as UK planning policy accords the same level of protection to these sites.

## Purpose of the Consultation

- 1.26. This consultation invites views on the impact of the proposed restriction on development in specified protected areas. It sets out how the restrictions are proposed to be imposed through changes to new and existing Petroleum Exploration and Development Licences. It is seeking in particular evidence relating to the impact the changes will have on existing and new licence holders, and on the specified protected areas.
- 1.27. Furthermore, the consultation invites views on the proposal to apply the surface restriction to the following specified protected areas: National Parks, the Broads, Areas of Outstanding Natural Beauty (AONBs), World Heritage Sites, Source Protection Zones 1, Sites of Special Scientific Interest, Natura 2000 areas and Ramsar sites. All these sites are already afforded strong protections by the existing regulatory and planning system. However, recognising that surface activities are of greatest public concern, the Government is minded to apply the proposals to all of these sensitive areas.

## Consultation questions

### Consultation Question 1

1. **Do you agree with the proposed approach to restricting surface developments in specified protected areas ((National Parks, the Broads, Areas of Outstanding Natural Beauty (AONBs), World Heritage Sites, Source Protection Zones 1, Sites of Special Scientific Interest, Natura 2000 areas and Ramsar sites) through licence conditions? Do you agree with the scope of the restrictions to be applied in England? Please give reasons.**  
Please specify whether your response relates to new or existing licences or both.

### Consultation Question 2

2. **What would the impact(s) be on new and existing licensees if the proposals were adopted?**  
Please provide evidence where possible, and specify whether your response relates to new and/or existing PEDLs.

### Consultation Question 3

3. **Does existing regulation provide sufficient protection for the areas in which we are proposing to restrict surface developments? If not, what would be the additional benefit if the proposals were adopted (e.g. in terms of environment, heritage, landscape value, economic impacts)?**  
Please provide evidence where possible.

# References and links

## Legislation, regulations, policy and guidance referred to in the consultation

- Infrastructure Act 2015, <http://www.legislation.gov.uk/ukpga/2015/7/contents/enacted>
- Petroleum Act 1998, <http://www.legislation.gov.uk/ukpga/1998/17/contents>
- Petroleum Licensing (Exploration and Production) (Landward Areas) Regulations 2014 (SI 2014/1686), <http://www.legislation.gov.uk/uksi/2014/1686/contents/made>
- The Conservation of Habitats and Species Regulations 2010 (SI 2010/490), <http://www.legislation.gov.uk/uksi/2010/490/contents/made>
- The National Planning Policy Framework and Planning Practice Guidance, <http://planningguidance.planningportal.gov.uk/>

## Draft regulations, policy announcements and consultations referred to in the consultation

- Draft Onshore Hydraulic Fracturing (Protected Areas) Regulations 2015, [http://www.legislation.gov.uk/ukdsi/2015/9780111137932/pdfs/ukdsi\\_9780111137932\\_en.pdf](http://www.legislation.gov.uk/ukdsi/2015/9780111137932/pdfs/ukdsi_9780111137932_en.pdf).
- Government defines Protected Areas for shale developments (16 July 2015), <https://www.gov.uk/government/news/government-defines-protected-areas-for-shale-developments/>
- Consultation on Habitats Regulations Assessments of 14th onshore oil and gas licensing round, <https://www.gov.uk/government/consultations/habitats-regulations-assessments-of-14th-onshore-oil-and-gas-licensing-round> (The consultation closes on 29 September 2015).

## Overview maps of protected areas

- For National Parks, AONBs, SSSIs and European sites see <http://magic.defra.gov.uk/MagicMap.aspx>
- For World Heritage sites see <http://whc.unesco.org/en/statesparties/gb>
- For groundwater protection zones, see <http://apps.environment-agency.gov.uk/wiyby/37833.aspx>

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