

**BRIEF - Statutory Consultees and the Infrastructure Bill  
For House of Commons stage**

*Updated 18 December 2014*

**Summary**

There is no statutory duty on local authorities to consult water companies on planning applications related to the exploration for and extraction of unconventional oil and gas. We are asking for an amendment to the Bill to place such a duty on local authorities. Water UK's members are unanimous in their support for this proposal.

Water UK represents all major statutory water and wastewater service supply organisations in England, Wales, Scotland and Northern Ireland. Our submission relates to the section of the Bill on the recovery of onshore oil and gas. Our members have a strong interest in this part of the Bill, as water and wastewater treatment are both crucial aspects particularly of the hydraulic fracturing process.

The three key reasons for having water companies as statutory consultees are:

- To ensure that water companies are involved early in the planning process, so they can work with operators to develop solutions that will work for all stakeholders – and satisfy their regulatory duties;
- Statutory inclusion in the process would enhance the confidence of regulators and the public by demonstrating that impacts on drinking water and drinking water sources will be fully taken into account;
- The Water UK and UK Onshore Operators Group (UKOOG) Memorandum of Understanding (see Appendix 1), while a model of good practice, has no legal status and no real consequences if not complied with, and in any event only applies to current members of UKOOG.

**The water industry's stance on unconventional oil and gas**

1. Water UK and our members have consistently taken a neutral stance on the development of shale and other unconventional oil and gas reserves in the UK. We acknowledge the risks of the country's growing dependence on imported gas and recognise the arguments for government policy on the extraction of unconventional oil and gas.
2. We also acknowledge that there are inherent risks associated with any activity of this type and scale which need to be fully understood, regulated and mitigated. We are trusted by both sides of this highly-charged debate.

3. We are working constructively with Government and stakeholders, including research, development and community engagement, and we have a Memorandum of Understanding (MoU) with UKOOG.
4. We want to help the Government deliver its policy on unconventional oil and gas, but we also have a duty to ensure the public water supply is protected and that there is public confidence in the process.
5. The hydraulic fracturing process will be heavily reliant on the water and wastewater services our members provide. It is essential to involve companies as much and as early as possible, so that companies can plan both for potential extra demand (in water-stressed areas such as the South East, this is crucial) and to consider solutions for removing untreated waste water safety.
6. A more detailed briefing note on our position on the extraction of unconventional oil and gas is in Appendix 2

**Why should water companies be statutory consultees on applications relating to unconventional oil and gas?**

7. While the Environment Agency (EA) has an important role in protecting water sources, its resources are stretched. Also, the EA would not necessarily contact water companies in relation to important information we require, for example the data needed to carry out of drinking water safety plan risk assessments.
8. Early engagement in the planning process will enable water companies to satisfy their regulatory duties and to work with oil and gas operators to develop solutions, such as how the water used for hydraulic fracturing will be treated to rid it of chemicals and Naturally Occurring Radioactive Materials (NORM).
9. Drinking water quality regulators in the UK have noted that hydraulic fracturing poses a potential emerging hazard for drinking water and require water companies to consider the impacts in regulatory risk assessments. Water companies as statutory consultees will give regulators confidence steps are in place to enable engagement. This is already the case in Scotland, where the regulator expects Scottish Water to be cognisant of all activity in its catchments and being involved in the planning process provides regulators with assurances of proactive engagement in the planning process

10. The statutory inclusion of water companies in the process would enhance public confidence by demonstrating that impacts on drinking water and drinking water sources are fully taken into account.
11. Our MoU with UKOOG has been recognised nationally and internationally as a model of good practise in cross-sector cooperation. One of the many reasons we formed this agreement was to take a step towards reassuring the public that two key players in the process would work together in the public interest, and that it would help water companies ensure the necessary protections for the public water supply.
12. However, the MoU is dependent on the tone and culture of cooperation set by the existing oil and gas companies and water companies. The MoU has no legal status and no real consequences if not fulfilled.

### **About Water UK**

13. Water UK represents all major statutory water and wastewater service supply organisations in England, Wales, Scotland and Northern Ireland. We work at national and European level for a strong water industry on behalf of our members and the interests of all our stakeholders. Our aims are to promote the highest levels of drinking water quality, an environmentally sustainable industry and a stable regulatory regime able to attract the investment which the industry needs. On behalf of our members, we engage with Defra and with other government departments and with the principal UK regulatory bodies - including Ofwat, the Environment Agency, the Drinking Water Inspectorate and their equivalents in Scotland, Wales and Northern Ireland.
14. We have been taking an active role in the understanding the risks of the development of unconventional oil and gas in the UK since around 2012. We have spoken at conferences and contributed to research projects and investigations. In addition the water industry, through Water UK's sister organisation UKWIR, has carried out a desktop research programme to investigate the impacts of the development of onshore oil and gas on water and waste water services. Copies of these reports can be made available to the Committee on request. The research has been used as the basis of Water UK's public policy position.

### **Contact details**

Dr Jim Marshall, Policy and Business Adviser  
Water UK  
3<sup>rd</sup> Floor, 36 Broadway, London, SW1H 0BH  
[jmarshall@water.org.uk](mailto:jmarshall@water.org.uk)  
07920 752344, 0207 344 1824

## **Appendix 1: Memorandum of Understanding (MoU) between UKOOG and Water UK**

**Final– 26/11/2013**

### **Overall intent**

This MoU, being non-legally binding, sets the framework through which members of each organisation will engage and cooperate to ensure that any development of onshore oil and gas through hydraulic fracturing takes place in such a way that minimises impacts on water resources and the environment.

It is not to be taken as indicating either support or opposition by Water UK or its members to the exploitation of shale gas or other onshore oil and gas reserves.

### **The parties**

The UK Onshore Operators Group (UKOOG) represents the onshore oil and gas operators to ensure open and transparent communications between industry, stakeholder groups and the communities in which they operate

Water UK represents water and waste water operators in the UK at a national and European level. Water UK is funded by its members to influence public policy and opinion to ensure a strong water industry in the interests of all stakeholders. Water UK does not have a remit to act in the eventuality of dispute at a local level

### **Background**

Water is central to the process of onshore oil and gas exploration and production from the water needed to carry out the fracturing to the handling and removal of flowback and produced water.

UKOOG recognise that water companies are key stakeholders as well as potential supply chain service providers. Water UK have reviewed the risks involved in the process and acknowledge that, properly enforced, the regulatory framework in the UK should offer sufficient protection.

Water companies have a statutory duty to assess current and future risks to water quality and water resources in Drinking Water Safety Plans and Water Resource Management Plans. These plans are typically reviewed every 5 years, and can link to company investment strategies. As with any type of development, shale gas will be assessed as part of these plans.

Notwithstanding the statutory and regulatory duties to comply with environment and planning requirements governed by the EA and local authorities, UKOOG and Water UK will expect their members to enter into dialogue as early as possible to identify and resolve potential issues around water or waste water service availability. Key areas of interest for these discussions will include:

- Baseline monitoring requirements to assess impacts on the quality and quantity of local water resources;
- Plans relating to site water management, especially in relation to water reuse to improve understanding of local impacts;
- Shale gas company development plans including scenarios for expansion of exploration and development within a local area and what this means for short and longer-term demand for water at specific locations;
- The expected volumes and chemical and biological composition of waste water as well as preferred disposal routes.

This dialogue will allow water and waste water service providers to make informed decisions about potential solutions, as well as risks and any mitigation measures required to ensure that the provision of services to shale gas companies does not adversely impact water resources or the natural environment more generally.

## **Signatures**

For Water UK

**Pamela Taylor**  
Chief Executive

For UKOOG

**Ken Cronin**  
Chief Executive Officer

**Impacts of the exploration for and extraction of unconventional oil and gas on water and waste water service providers**

*Water UK and its members do not support or oppose the exploitation of unconventional oil and gas. This position paper outlines our understanding of possible impacts on water and waste water services.*

*As with any activity of this nature there are inherent risks. Evidence suggests that these risks can be mitigated given proper enforcement of regulations, primarily by environmental and health and safety regulators.*

**Introduction**

The UK water industry acknowledges the risks of the country's growing dependence on imported gas and recognises the arguments for government policy on the extraction of unconventional oil and gas. The UK water industry also acknowledges that there are inherent risks associated with any activity of this type and scale which need to be fully understood, regulated and mitigated.

A research programme commissioned by the water industry (UKWIR<sup>i</sup>) provides more information to water companies on the likely demands for water during the exploration and extraction process; the impacts on water quality arising from chemicals associated with the process as well as the process itself; and the challenges of removing and treating wastewater.

The research concludes that there are inherent risks associated with exploration and extraction of unconventional oil and gas but that with proper regulation these risks can be mitigated.

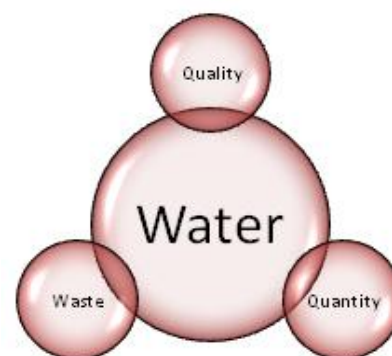
**Regulatory framework**

There is a robust framework of planning, environmental permitting and health and safety regulation in place in the UK. A petroleum exploration and development licence (PEDL) is required along with drilling consents, environmental permits and planning permission in order to drill or fracture a shale gas well. This regulatory framework provides a firm foundation from which to manage the possible risks to water from shale gas exploration and production.

Further information on the regulatory frameworks in the UK can be found on the website of the Office of Unconventional Oil and Gas<sup>ii</sup>.

## Risks

The impacts of shale gas on water and waste water service providers can be considered in three broad categories – water quality, water quantity and wastewater management.



### 1) Water quality

The process poses possible risks to the quality of the water environment, particularly groundwater. Sources of contamination include:

- the surface spillages of chemicals, diesel and other materials at a drilling site;
- poor well design and construction with subsequent failure;
- and the hydraulic fracturing process, including the use of biocides and chemical friction reducers in fracturing fluid.

A 2012 report by the Royal Society and Royal Academy of Engineering<sup>iii</sup> concludes that risks can be managed given a properly implemented and enforced regulatory framework. In particular it concludes that the probability of well failure is low if it is designed, constructed and abandoned according to best practice and that the risk of fractures propagating from shale formations to reach overlying aquifers is very low. In addition, chemicals added to the water to enable fracturing to take place (for example biocides and friction reducers) are subject to approval by environmental regulators and should be classified as non-hazardous.

A greater risk would appear to be from surface spillages of chemicals and other materials. It is therefore important that on-site storage of chemicals is managed by proper site practices. The report published by Public Health England<sup>iv</sup> considers these specific risks and concludes that “*good on-site management and appropriate regulation of all aspects....are essential to minimise the risk to the environment and public health*”.

### 2) Water quantity

The extraction process uses pressurised water to hydraulically fracture the gas-bearing shale strata. The quantities of water needed to do so vary by site but can reasonably be expected to be in the region of 10 to 20 Ml per fracture. Such a demand, whilst not being nationally significant, could have an impact on local water resources.

This demand may be met from a number of sources including from the public water supply, from direct abstraction, from water transported by tanker from other areas or from recycling and reuse of treated flowback or produced water.

The pressure on local water resources will depend in part on the pace and extent of the extraction process, although the potential to reclaim and reuse large proportions of water from each site promises to reduce the risks to local water resources.

Where water is in short supply there may not be enough available from public water supplies or the environment to meet the requirements for hydraulic fracturing. Oil and gas operators are therefore encouraged to engage with water companies as early as possible to ensure their needs can be met without reducing the security of supply to existing customers.

### **3) Wastewater management**

Waste water companies may also be asked to accept discharge of effluents recovered from the process for treatment at waste water treatment works. This water will contain a proportion of the fluids used initially to aid fracturing, high concentrations of salinity (TDS) and potentially low amounts of naturally occurring radioactive material (NORM).

The feasibility of treating this water at a municipal wastewater treatment works will depend on the volume and concentration of the wastewater in relation to the size of the treatment works and the concentrations of NORM present.

It is unlikely that the standard wastewater treatment works will be able to manage waste water from unconventional oil and gas.

### **Engagement and dialogue**

The water industry believes that timely and constructive consultation and engagement by operators and regulators is essential to aid planning.

These discussions will be key to understanding water and wastewater services requirements in the short and longer term, as well as helping to identify and resolve potential issues.

Key areas of interest for these discussions will include:

- The extent of baseline monitoring being proposed to assess impacts on the quality and quantity of local water resources;
- Plans relating to site water management, especially in relation to water reuse to improve understanding of local impacts;



- Shale gas company development plans including scenarios for expansion within a local area and what this means for short and longer term demand for water at specific locations;
- The expected volumes and chemical and biological composition of waste water as well as preferred disposal routes.

This dialogue will allow water and waste water service providers to make informed decisions about potential solutions, as well as risks and any mitigation required, to ensure that the provision of services to shale gas companies does not adversely impact water resources or the natural environment more generally.

### **Statutory consultees**

To reinforce and underpin this dialogue Water UK urges government and devolved administrations to consider introducing legislation to ensure that water undertakers in the UK are statutory consultees in the planning process for onshore oil and gas exploration and development.

This would ensure that water companies receive vital information about proposed extraction sites and would give time to engage with regulators and gas licence holders to ensure that development plans are fully understood, the associated risks are addressed and that the protection of water resources and the environment are considered as a priority

### **Dr Jim Marshall**

Policy and Business Adviser, Water UK

*Version 5 –3 June 2014*

---

<sup>i</sup> <http://www.ukwir.org/site/web/content/home>

<sup>ii</sup> <https://www.gov.uk/government/publications/regulatory-roadmap-onshore-oil-and-gas-exploration-in-the-uk-regulation-and-best-practice>

<sup>iii</sup> [http://royalsociety.org/uploadedFiles/Royal\\_Society\\_Content/policy/projects/shale-gas/2012-06-28-Shale-gas.pdf](http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/projects/shale-gas/2012-06-28-Shale-gas.pdf)

<sup>iv</sup> [http://www.hpa.org.uk/webc/HPAwebFile/HPAweb\\_C/1317140158707](http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317140158707)