

## Further information

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Welcome to the September 2014 edition of Quaystone, the newsletter from the construction and engineering team at Burgess Salmon. This month we focus on unconventional energy and the challenges facing those keen to develop shale gas in the UK. We also consider how these and other complex energy projects are likely to be procured.

## UK shale gas: The opportunities and hurdles



On 28 July the government launched the UK's 14th onshore oil and gas licensing round. The process will allow companies to bid for a licence to explore for shale gas. Supporters point to the possibility of years of secure, low cost energy and billions of pounds of tax and other revenues. However the process is very controversial and there are major commercial, technological, legal and socio/political hurdles to overcome before full scale shale gas production can start.

Critics were handed powerful ammunition when shale gas exploration in Lancashire was linked to minor earth tremors. That incident, in 2011, led to a suspension of exploration which has recently ended. At present the UK does not have a driven shale gas well and until further exploration and testing is carried out there is no certainty that it is commercially recoverable here. Successful bidders in the current licencing round will seek to answer that question.

The demands on, but opportunities for, the construction industry will be significant if the potential for shale gas is to be realised. That work will coincide with similar major expansion in the nuclear and renewable energy sectors so tough decision on the allocation of resources and funding will need to be made.

Proponents of shale gas point to its widespread exploitation in the US although the use of this technology has only become commonplace relatively recently. The UK is also a vastly different place to the US. For a start, our island is far more crowded which has significant implications for a technology which requires extensive road transport, huge quantities of water and exploits extensive subsurface deposits.

While there are undoubtedly lessons to be learned from the UK's conventional onshore oil and gas sector (there are around 2,000 onshore oil wells in

the UK) there are likely to be considerable advantages in studying analogous energy projects. Nuclear energy has for many years had to deal with the type of concerted and well-organised protest that shale gas is likely to face. Making a compelling case for shale gas may not be enough to persuade all of the doubters but it will be necessary to retain enough public support to maintain ongoing government backing. This will be key, particularly to advance the legislative changes that will be necessary (see article on trespass below). The recent expansion of offshore wind has been made possible by the amalgamation of offshore oil and gas expertise with more conventional civil and process engineering. The same is true of wave and tidal energy projects. As shale gas is an onshore technology it is likely to benefit from the consenting, access and grid connection lessons learned by the solar, biomass and onshore wind sectors.

One issue that shale gas developers will need to find a solution

to on their own is the massive water demand of the process, and the huge amounts of road traffic that generates. Water demand is so great that it would be no surprise to see water companies becoming involved in the consortia currently bidding for exploration rights. Treatment is also a major challenge as the process generates significant quantities of waste water which are likely to contain naturally occurring radioactive materials brought up from deep strata.

If the issue of trespass can be overcome then as shale gas extraction is not unduly site specific in the way that, for example, solar and wind most definitely are, sites can be situated to alleviate the access and water issues.

As there are very few experienced players in the market, and most of those are from the US, now is the time for the UK construction industry to gear up to make sure it gets its share of the market.

## Law of trespass

### The current position

If you are the owner of freehold property in the UK, you are entitled not only to rights at the surface of the land, but also - theoretically - right down to the centre of the earth.

If a party drills beneath freehold land without the consent of the landowner or a court order granting the necessary rights, then this could be a trespass (*Star Energy UK Onshore Ltd and Another v Bocardo SA [2009] EWCA Civ 579*).

Operators that hold a petroleum exploration and development licence (“**PEDL**”) can obtain statutory rights of access in circumstances where landowners refuse to grant access, or a landowner cannot be found, or where there are too many landowners to negotiate with. This is granted under section 7 of the Petroleum Act 1998, which in turn applies the process in the Mines (Working Facilities and Support) Act 1966 to enable the PEDL operator to acquire rights of access which are needed to allow him to exercise his licence.

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### The proposed changes

Given the government’s commitment to encouraging unconventional gas extraction, proposals are being consulted upon which would remove restrictions on underground access, and streamline the process for operators. The consultation, launched in May 2014, which closed on 15 August 2014, contains the following proposals:



- 1 Access:** The introduction of a right of underground access for companies extracting petroleum (including shale gas) or geothermal energy in land at least 300 metres below the surface. 3km deep wells are not uncommon, which can also extend 3km laterally.
- 2 Community compensation:** Payments to be made to local communities in return for the right of access. A consultation will consider whether these should be voluntary or compulsory.
- 3 Notification:** Operators that require access below 300 metres would comply with a voluntary notification system, to inform the local community of the access required.

Shale gas extraction requires significant horizontal drilling (unlike, in the main, conventional oil and gas), with wells being used intensively, and a number of lateral excavations made during their lifetime. The ability of operators to access resources which may be outside the footprint of the original well site is therefore vital. These proposals are also designed to remove the risk of ‘ransom strips’ being used to prevent commercial exploration.

Once the consultation is completed the Infrastructure Bill will include provisions to clarify and streamline the underground access regime.

# Procuring complex infrastructure projects in the UK



Complex infrastructure projects in the UK are generally procured using contracts based on standard forms, rather than by using entirely bespoke agreements. Given the technical and highly complex nature of these projects, and often the equally complex funding and payment structures, heavy amendment to these standard forms is not unusual.

For complex infrastructure projects in the UK arguably the most common standard form contracts are NEC3 and FIDIC (although IChemE is also often used for energy and other process plant projects).

## Getting the procurement strategy right

The choice of procurement strategy is dictated by a number of factors: developer preference and sector trends are a major driver, as is the requirement to make a project “fundable”. Starting with the right contract form is also key in helping the parties accurately and efficiently capture their commercial agreement.

## FIDIC

FIDIC produced its “new” suite of contracts in 1999 (and has subsequently published a number of new or revised contract forms since then). Originally seen as the contract of choice for international construction projects, FIDIC has become increasingly popular in the UK for complex energy projects, even where there is no international involvement. It is not difficult to see why:

the FIDIC contracts contain well-developed testing and commissioning regimes, giving the parties a good framework for specifying and measuring the performance of the works and penalising/rewarding performance;

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- the FIDIC contracts are clearly drafted, easy to read and are broadly speaking employer-friendly, making them attractive to funders;
- European and international contractors (who will often be involved in significant elements of these projects) are used to operating under FIDIC contracts. Using FIDIC can, therefore, save significant time in negotiation.
- FIDIC terms (with appropriate amendments) are well suited to the multi-contracting procurement strategies that we are increasingly seeing on these types of project.
- FIDIC drafting is pervasive across the energy sector and a large number of bespoke contracts used by contractors and employers have their roots in FIDIC standard forms or borrow FIDIC concepts.

## NEC3

NEC3 has been gaining significant traction over the last few years, particularly in the realm of public sector infrastructure projects where the forms have received government endorsement. This

*continued*

# Procuring complex infrastructure projects in the UK *continued*

has seen NEC3 become the contract of choice on landmark projects including the London Olympics, Crossrail and works commissioned by the Nuclear Decommissioning Authority.

The approach of NEC3 is significantly different to most other standard forms of contract, not least FIDIC. It endorses a collaborative approach and has detailed and prescriptive project management mechanisms to deal with project risks. The intention, to anticipate and manage risks as and when they arise, is laudable but it requires considerable buy in from both parties and a well-resourced project manager with experience of NEC3 to work effectively. If these are in place then the benefits of NEC3 include:

- Encouraging the appointment, and active participation, of an experienced project manager for the whole of the works.
- An early warning mechanism which encourages the parties to share information sufficiently early to allow them to agree effective solutions during the works.
- Deemed acceptance or loss of opportunity to make claims if certain procedural steps are not followed, encouraging both parties to adhere to the management protocols.

However, the administrative burden of the contract, from commencement date to completion, should not be underestimated. The unique language of NEC3 and its unconventional structure also makes it less attractive for projects that are likely to need significant input from contractors from outside the UK.

## Nuclear – FIDIC vs NEC3

The popularity of NEC3 for major projects in the nuclear sector, which owed much to the support given by the Nuclear Decommissioning Authority,

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may be on the wane with the advent of UK’s nuclear new build programme. Whilst NEC3 will continue to be used for many elements of such extensive construction projects, we are seeing FIDIC based contracts selected for a growing proportion of nuclear works packages, and in particular those located on the nuclear site itself. The FIDIC terms will no doubt be mirrored in sub-contracts throughout the supply chain.

## Looking ahead

The domestic use of FIDIC is likely to increase in the coming years as the UK continues to increase investment in the next wave of infrastructure. This may start to eat into the share of the market established by NEC3 over the last decade or so, with the battle ground likely to focus on energy infrastructure projects. Both contracts are well suited for use on both conventional and non-conventional energy projects but which is most appropriate will need to be decided on a project by project basis. The domestic supply chain should become familiar with both to be able to make the most of imminent opportunities in the major projects and infrastructure sector.

## Team news

We are pleased to welcome Lauren Luscombe to our team. Lauren joins us from Ashfords and specialises in both contentious and non-contentious construction law. We have also recently said goodbye to Rob Gout who left to take up an in-house role at the Department for Education. Our team now has a complement of 19 construction law specialists.



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