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## **The black gold rush--is Gatwick the new Dallas?**

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**Environment analysis: Following the discovery of oil at Horse Hill in Surrey, Tim Pugh, a partner specialising in planning, environment and infrastructure and a member of the energy and oil & gas groups at Berwin Leighton Paisner, advises that despite the government having done its best to smooth the path towards a viable onshore oil and gas industry, wrinkles still remain.**

### **What is the background to this?**

On 9 and 10 April 2015, the BBC and terrestrial media were awash with reports of oil having been struck at Horse Hill, near Horley in Surrey--an address rapidly translated to Gatwick for ease of reference.

Representatives of UK Oil and Gas Investments (UKOG), a UK AIM quoted company, had just given interviews claiming to have found 100 billion barrels of oil (more than double those extracted from the North Sea) in the Weald beneath the south of England. Indications were given that the oil was present in naturally fissured rock formations from which the oil could be sucked without using the controversial hydraulic rock fracturing (fracking) technique. Shares in UKOG soared.

Since 10 April 2015, there have been clarifications. As of 15 April 2015 UKOG representatives were indicating a find of between 50 and 100 billion barrels in place in the ground, of which between 5% and 15% (a range of 2 billion to 15 billion barrels) were believed to be recoverable. This was, however, subject to caveats: that the volumes estimated should not be considered as either contingent or prospective resources or reserves; and that more work is needed to prove the commerciality of the find. Elsewhere, attention has been drawn to British Geological Survey's more conservative estimates of oil in place.

Irrespective of recent Gatwick-related excitement--the Weald has long been a focus for the UK's nascent onshore oil industry. Horley is less than 15 minutes rail journey from Balcombe, the site of Cuadrilla's controversial activities, and Horley is not far from Fernhurst where Celtique have been active or Oxsted, the site of Al Fayed's battle with Star Energy. Horse Hill itself even had its own protest camp in September 2014.

Several questions, the answers to which are familiar to oil and gas specialists and many in the legal community, are begged:

- o If a viable oil supply were found on the British mainland, could it realistically be extracted?
- o How would rights to any oil be allocated?
- o What would be the legal challenges to an onshore oil extraction programme?
- o Are there any laws that would stand in the way of setting up an onshore oil field?

These questions are essentially those which have exercised industry, government, environmental campaigners and local authority decision makers over recent years.

**If a viable oil supply were found on the British mainland, could it realistically be extracted?**

There is no doubt that oil supplies could and have been extracted on the UK mainland for well over a hundred years. A 2013 publication from the Department of Energy & Climate Change (DECC), 'The Hydrocarbon Prospectivity of Britain's Onshore Basins' comments:

'The productive or historically productive basins are: Wessex, Weald, West Lancashire, Cleveland, East Midlands oil province and the Midland Valley of Scotland...The productive basins have been explored for about 100 years and are now essentially at a mature stage of exploration. The average oilfield size is 2.1 million barrels (excluding Wytch Farm Oilfield)...[Wytch Farm] has reserves estimated to be in excess of 380 million barrels.'

Although these figures are many magnitudes smaller than the potential claimed (before being modified) for Horse Hill, BP and subsequently Perenco have been successfully operating the Wytch Farm Oilfield since its discovery in 1973.

The oil industry is experienced at operating onshore fields. Between 1980 and 1991, major organisations including BP, Shell, Amoco and Conoco were all actively undertaking onshore seismic exploration within the UK. Since then the torch has been carried (with the exception of BP's Wytch Farm operation--now in the hands of Perenco) predominantly by smaller companies. Those currently holding onshore licences from DECC (albeit that many are at exploration stage only and then in many cases for gas) include: Coastal Oil and Gas, Celtique, Cuadrilla, Magellan, Horse Hill Developments (holders of the Horley licence), Island, Edon Resources, Wingas, Europa, Perenco, UK Methane and Dart.

The degree to which extraction is realistic in any given case will depend on a range of considerations including:

- o land ownership or occupation rights for well heads, non-deep-level drilling, and any pipelines and accessways
- o availability of relevant consents (including planning permission and environmental permits over and above Petroleum Exploitation and Development Licences (PEDLs))
- o (where water injection is necessary to force oil to the surface or to fracture rock formations to release it) availability of water resources and waste water treatment facilities
- o availability of pipelines (or acceptability of traffic movements) for the purpose of transport of oil to collection and refinery facilities
- o (above all) the economics of extraction after allowing for overall costs and when compared with the wholesale price for crude oil, together with the availability of finance

### **How would rights to any oil be allocated?**

Rights to all hydrocarbons in the UK, including oil are vested in the Crown. Legal rights to explore for extract petroleum resources are licensed by the Crown through DECC via a system of PEDLs granted under the Petroleum Act 1998.

PEDLs are granted in licensing rounds granting either onshore or seaward licences. Applications under the current (14th) onshore round closed in October 2014 with licences to be granted later this year.

DECC has indicated that when PEDLs are granted they will include 'exclusive rights to search and bore for and get petroleum within the licensed area, in all the various stages of the full development cycle of oil and gas exploration, appraisal and eventually abandonment of the well'. The licence covers oil and gas whether conventional or locked into shale formations. Each licence is granted for a single block of 10km by 10km or for a part of such a block.

DECC does not grant licences to exploit individual strata (or split depths) within blocks. Nevertheless, in the event of competing bids for a single block (or part) with a focus on different strata, DECC has indicated that it may invite marriage of applications. Those awarded licences may apply to DECC for consent to depth split licences through the creation of sub-areas.

### **What would be the legal challenges to an onshore oil extraction programme in the UK?**

Apart from the practical considerations mentioned earlier, the main legal challenges to an onshore extraction programme in the UK are:

- o ensuring valid grant of PEDLs under the 14th onshore round--opponents of continuing use of fossil fuels generally or local exploration for or exploitation of fossil fuels in particular; or even unsuccessful licence applicants may seek to challenge grant of licences through the courts--this legal risk may make securing finance difficult or more expensive
- o securing planning permissions from local planning authorities, for whom the political disadvantages of granting permissions may (however wrongly) outweigh other considerations when decisions come to be made
- o securing land rights (including rights to interfere with others mineral extraction rights) to drill at levels above 300 metres below ground level (Infrastructure Act 2015 (InA 2015) grants rights to holders of PEDLs to enter and use land below this level)
- o the protected area and protected groundwater area provisions of InA 2015 and controls under the Habitats and Wild Birds Directives

### **Are there existing laws that would prevent or interfere with setting up an onshore oil field?**

Before InA 2015 was passed, existing trespass laws looked set to frustrate low level access and below ground directional drilling. Unless tapping into a conventional well directly beneath the well, directional drilling is necessary. Under UK law, land rights (in theory at least) extend from the firmament above to the core of the earth below. On this basis, owners of land would, absent compulsory purchase, have been able to seek injunctions to prevent deep level drilling operations, fracturing over indeterminate distances or leaving fracking materials below ground. InA 2015 has now granted holders of PEDLs a range of drilling and fracking related rights levels below 300m beneath the surface.

Nevertheless, despite the government having done its best to smooth the path towards a viable onshore oil and gas industry, wrinkles still remain. These are the sort of built environment protections that would affect any major development but the more controversial the form of development, the more mischief they may cause.

### **PEDLs**

First and foremost, there was a price to pay for overcoming back-bench rebels, securing full coalition support and enough opposition support to enable InA 2015 deep level drilling rights to be enacted. Consents to drill and to establish exploratory wells are vital first stages under PEDLs and exist in parallel with requirements for planning consents and environmental permits. The price was a set of restrictions on DECC's ability to approve well consents under PEDLs unless particular criteria are met.

The restrictions apply specifically to hydraulic fracturing activities (which in turn require use of minimum volumes of liquid). They would not apply if one could simply suck oil from a well but the indications so far suggest that UK locations where that would be possible are few and far between.

If the fracking-related restrictions bite:

- o fracking may not take place at all within 1,000 metres of the surface
- o well consents may not be granted at all where drilling would take place in 'protected areas' or 'protected groundwater areas'

During the course of parliamentary debate, it was clear that the original intention was that protected areas should include national parks, areas of outstanding natural beauty (AONBs), world heritage sites, European protected habitats sites and sites of special scientific interest, and that protected groundwater areas should include groundwater protection zones.

The original intention was rapidly revisited when Greenpeace published data suggesting that some 45% of the 931 licensing blocks for the purpose of the 14th onshore licensing round would have at least 50% of their

areas falling within areas of outstanding natural beauty, national parks, sites of special scientific interest or groundwater protection zones.

What is meant by 'protected areas' and 'protected groundwater areas' has, by a political fudge, been left to be defined in post-election regulations to be put in place by the end of July 2015.

### **Planning permissions and environmental permits**

In addition to the above well consent restrictions, and irrespective of whether a proposal would involve fracking, planning policy and Habitats and Wild Birds Directive provisions restrict grants of permission and/or environmental permits in particular areas. Thus, under planning policy the National Planning Policy Framework and related Planning Policy Guidance stipulate that for major development, 'planning permission should be refused in National Parks, the Broads and Areas of Outstanding Natural Beauty except in exceptional circumstances and where it can be demonstrated they are in the public interest'. Similar planning policy protections are given to European protected habitat sites and to world heritage sites.

Moreover, there are very stringent controls under the Habitats and Wild Birds Directives themselves. These would preclude grant of planning permission or environmental permits for operations which would damage the integrity of a protected habitat unless it can be demonstrated both that

- o there are no alternatives, and
- o that there are imperative reasons of overriding public interest

The bar on this hurdle is set high.

### **What are your predictions for future developments?**

In a densely populated country, with an active environmental protest lobby and many areas subject to designated landscape, groundwater, nature conservation or heritage protections, establishing a viable onshore oil industry will not be easy. It will remain particularly difficult for as long as oil prices remain low.

Nevertheless, for the foreseeable future, the UK government has an absolutely vested interest in ensuring that UK oil and gas can be extracted onshore and offshore efficiently and economically. Tax revenues and economic confidence flowing from oil and gas are vitally important.

Steps have been taken by government to make the path to exploiting and extracting recoverable resources as smooth as is consistent with meeting stringent environmental controls. These controls will be vitally important to achieving a social licence for activities over which environmentalists loudly voice concerns. Even so, the nervousness about fracking pervading popular consciousness will be difficult to displace.

Which takes us back to Gatwick. The way in which the Horse Hill 'find' was announced focussed on the oil discovered being recoverable simply by sucking it from a reservoir in a naturally fissured rock formation. The implication was that fracking would not be required. If that were correct, the find were outside the various forms of protected area and a path could be navigated around the range of fracking related restrictions, the future would look rosy. One might expect the find to be exploitable more quickly, efficiently and economically--a pathfinder for non-contentious conventional oil extraction from the Weald. It remains to be seen whether those who rushed to invest in black gold at Gatwick will find their optimism justified.

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*Interviewed by Kate Beaumont.*

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