

Conceptual Alternative Sites Selection Study of the Weald Basin on behalf of UK Oil and Gas Investments PLC

Barton Willmore, the specialist energy planning and environmental consultant, has completed an independent study for UK Oil & Gas Investments PLC (UKOG) that investigates the siting of potential drilling and production facilities over its licences and areas of interest in the Weald Basin area of South East England that could be used to develop the Jurassic tight limestone oil play, established by the recent Horse Hill-1 drilling, in the event it is demonstrated to be technically and commercially feasible.

The objective of the study was to investigate, at a conceptual level, whether potential sites necessary to develop a significant Jurassic tight oil resource could realistically be located in places that would provide minimal impact on the environment of the Weald.

Barton Willmore's study concludes, at a conceptual level, that there are a large number of potential locations where drilling and production sites could be located, outside of sensitive environmental designations including National Parks and Areas of Outstanding Natural Beauty (AONB). Whilst historic onshore oil and gas developments have proved that drilling and production activities can be carried out in sensitive locations, for example Wytch Farm in the Dorset AONB and Ebberston Moor in the North York Moors National Park, the Weald Basin covers a broad geographical area meaning there are more opportunities to locate operations outside of nationally designated sites whilst also meeting technical requirements. This desktop based conceptual study represents a first "sift" of sites using the methodology identified below, and is undertaken before a more detailed assessment of the planning, environmental and technical suitability of potential sites is carried out, to identify a shortlist of preferred sites.

Study Methodology

The study sought to identify sites that could be used in a conceptual development of individual well pad and production processing facility sites within the overall Jurassic tight oil play of the Weald. The size of individual sites was determined as 4-8 acres to accommodate the low impact conceptual drilling and production facility developed by Xodus Group in their 'Jurassic tight oil development study', as previously reported by UKOG.

As there is no adopted guidance, regulations or legislation in the UK for identifying and selecting onshore oil and gas sites, through industry experience Barton Willmore has developed a comprehensive and systematic proprietary 'environmentally-focussed' methodology for identifying potential sites. This methodology has been used successfully elsewhere onshore in the UK, to locate wells and facilities for a large number of clients including Egdon Resources, Celtique Energie and Infrastrata.

As oil and gas resources can only be developed where they naturally occur, the study used Geographical Information Systems (GIS) to locate areas of identified geological interest in the subsurface before mapping the planning and environmental constraints at the surface. Environmental constraints for this study included the identification of environmentally sensitive sites including National Parks and AONB, residential properties, villages and urban areas, and inaccessible locations that are not in proximity to the major road network. The areas of land which fall outside these constrained areas were then identified as potential site locations to ensure any significant effects of the proposed development on the built and natural environment are minimised.

The study has focused primarily on searching for previously developed land, co-locating with existing "brown field" industrial, minerals and waste sites, including disused factories, airfields/airports, quarries and sewage treatment works, government land (such as Ministry of Defence), identifying existing woodland clearings and identifying sites adjacent to main roads away from urban areas. As a conceptual desk based study, no physical site inspections were made as these would be carried out once a second sift of sites has been undertaken and a shortlist of preferred sites has been

identified, following further in-depth analysis and assessment of planning, environmental and technical suitability.

The need for localised environmental assessments will be agreed with the relevant Mineral Planning Authority and undertaken by professionally qualified and suitably experienced consultants, to ensure any environmental effects are designed out or mitigated for in accordance with planning policy and best practice guidance.

The environmental focus of this study and in the site selection methodology illustrates UKOG's commitment to embedding environmental protection from day one, across all their developments and operations, whilst working to develop the domestic energy security that the UK needs.

About Barton Willmore

Barton Willmore is one the UK's largest planning practices, specialising in the planning, design and environmental assessment of energy projects from eleven regional offices.

Barton Willmore's specialist energy team advises investors and operators in the oil and gas, renewable energy, power generation and transmission sectors.

Recent projects include the development of an exploration well in Holmwood, Surrey, on behalf of Europa Oil & Gas, to establish the potential for oil and/or gas reserves. In July 2015, Barton Willmore obtained planning permission for the development of the Preesall Underground Gas Storage Facility Project on the east side of the Wyre Estuary in Preesall, Lancashire, on behalf of Halite Energy. The project will be used to store and extract gas from local underground salt caverns and would be a response facility, with gas entering the national system in response to demand.

Barton Willmore has also secured planning permission for the development of an onshore to offshore exploration well on Walney Island in Cumbria on behalf of Nautical Petroleum, an 11km gas pipeline, processing facility and national transmission connection in the North Yorkshire on behalf of Moorland Energy and a number of exploration and appraisal well sites across the UK for various clients including Egdon Resources, Newton Energy, Infrastrata and Dart Energy. More details on Barton Willmore and their energy projects can be found on their website:

<http://www.bartonwillmore.co.uk/energy/>