



Department
of Energy &
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Your ref: LCC/2014/0096/ASP/ASP
LCC/2014/0101/ASP/ASP

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Dear Mr Browne

**Planning applications LCC/2014/0096 (Preston New Road)
and LCC/2014/0101 (Roseacre Wood)**

You invited comments on these applications. It is of course for the planning authority to determine whether the applications should receive permission or not, and DECC has no comments on those questions. But the following comments on relevant aspects of DECC's regulatory role may be helpful in considering the applications.

The surface sites in question fall within the area of petroleum licence EXL269, which is owned by Cuadrilla Elswick Limited, Elswick Energy Limited, Elswick Power Limited, Warwick Onshore Exploration Limited and Altwood Petroleum Limited. The operator is Cuadrilla Elswick Limited. The areas shown in the documents as the maximum extent of underground drilling in each case lie partly in EXL269 and partly in PEDL 165, which is owned by Cuadrilla Bowland Limited, Bowland Resources Limited, Lucas Bowland (UK) Limited, Lucas Bowland (No 2) Limited and Bowland Resources (No 2) Limited. The operator is Cuadrilla Bowland Ltd. The licences give exclusive rights within their areas for exploration, boring for and getting of petroleum, but do not waive any other legal requirement applicable to these activities, including requirements for planning permission. Copies of the licences can be inspected here:
https://www.oq.decc.gov.uk/web_files/recent_licences/oqlicences.htm

As the activities proposed include hydraulic fracturing for shale gas, DECC has required the operator to produce Environmental Risk Assessments taking account of guidance to the industry published by the Department on 24 April 2014. (The requirement and the guidance in turn flow from the recommendations of the Royal Academy of Engineering and the Royal Society in their report on the hazards of hydraulic fracturing for shale gas, published in June 2012.) The operator has prepared

and published appropriate assessments before making these applications, see http://cuadrillaresources.com/wp-content/uploads/2014/06/PNR_ERA.pdf and http://cuadrillaresources.com/wp-content/uploads/2014/06/RW_ERA.pdf

The activities for which permission is sought include the drilling of certain wells, which require the Secretary of State's consent under the terms of the licence. Before giving any such consent, DECC will check that the proposed well is effectively targeted in terms of exploring and testing the potentially oil- or gas-bearing formations thought likely to be encountered. DECC will also check that the operator has sufficient funds for the expected cost of the operations; and that the operator has appropriate insurance for the potential liabilities of the proposed operations.

As the activities proposed at each site include high-volume hydraulic fracturing, DECC will require the implementation of the measures to mitigate seismic risk announced in December 2012 and further detailed in the best practice guidance for shale well operations published in February 2013 by the UK Onshore Operators Group. This will require submission to the Department of detailed Hydraulic Fracturing Programmes (HFPs) for each well to be hydraulically fractured, including

- a depth structure map with an assessment of faulting and formation stresses in the area;
- information on local background seismicity;
- an assessment of the risk of induced seismicity;
- plans for monitoring seismic activity before, during and after operations, and for monitoring the growth of fractures during operations;
- summary of the planned operations, including perforation stages, pumping pressures and volumes;
- proposed measures to mitigate the risk of inducing earth tremors, to include a real-time "traffic light" scheme" which will define actions to be taken at pre-defined levels of detected seismic activity.

At the present time, DECC takes the view that the "red light" level, at which operations should be suspended pending full review of the implications of the data, should be set at a seismic magnitude of 0.5. But this level may in future be varied, or different criteria applied, in the light of developments in the understanding of the extent and nature of seismic hazards from hydraulic fracturing of shale and of developments in monitoring methods.

Much of this information is already set out in the Environmental Statements submitted by the applicant in support of his applications, but DECC will require the submission of fully detailed HFPs, taking account of further information including geological information obtained from the drilling of the vertical section of the wells, before fracturing operations are commenced. DECC will subsequently monitor the conduct of fracturing operations in accordance with the HFPs. DECC has reviewed the relevant information published in Appendix L to the ES, and considers that this information addresses the topics of interest and is likely, subject to integration of the further information mentioned above, to form the basis of acceptable HFPs.

The documents indicate that the applicant proposes to flare gas during the initial testing phase. This requires the consent of the Secretary of State under the Energy Act 1976, but as there will be no pipeline offtake or other economic use of the gas at the time of initial testing, DECC would expect to give that consent. Any venting is also subject to DECC consent – DECC's policy is that any venting of gas should be reduced to the technical minimum.

DECC's standard online drilling consent allows 96 hours of testing. The documents indicate that the applicant may wish to test for a longer period, which will require an application to DECC for a paper-based Extended Well Consent. DECC will expect the operator to minimise flaring during the period of any Extended Well Consent, in accordance with the Department's policy that flaring should be reduced to the economic minimum. We note that the applications include works to enable pipeline connections to be made to natural gas distribution networks.

The activities for which permission is sought potentially include site restoration, implying decommissioning (abandonment) of the wells. Abandonment of any well requires the Secretary of State's consent under the terms of the licence. Before giving these consents, DECC will check the completeness of the well data in the interests of future access should that ever be required.

These comments refer only to DECC's regulatory activity, and do not imply that DECC is the sole regulator on any of these matters.

Yours faithfully,
[REDACTED]

Oil and Gas Licensing Policy,
Energy Development Unit.