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Dear Ms Woodfield

**Planning application for Celtique Energie Weald Ltd, Land south of Boxal  
Bridge, Northup Field, Wisborough Green, West Sussex, RH14 0DD  
Reference: WSCC/083/13/KD**

Thank you for consulting Public Health England (PHE) on the above planning application on 15<sup>th</sup> May 2014. It is understood that the application is for the installation of a well and associated infrastructure, for the drilling of a vertical borehole and contingent horizontal borehole for the exploration, testing and evaluation of hydrocarbons for a temporary period. An Environmental Impact Assessment has been undertaken for the development. It is explicit in the application that the applicant does not seek permission to undertake hydraulic fracturing under this planning application. It is understood that any hydraulic fracturing would require separate planning permission.

**Site location and identification of sensitive receptors**

The proposed site lies between the villages of Wisborough Green approximately 1.2 km to the south east, and Kirdford approximately 1.8 km to the west. It is a predominantly rural area with few residential properties within 500 m of the site perimeter. The nearest residential properties to the site are on Kirdford Road, which include Old Helyers Farm which has an equestrian business. The nearest residential receptor is approximately 350 m north west of the site boundary. There are some additional properties along Kirdford Road, which are further from the site. There are no other potentially sensitive receptors within the area such as schools, hospitals or care facilities within approximately 500 m of the site. The site is not subject to any international, national or local designations and there are no Air Quality Management Area (AQMA) and Public Rights of Way (PROW) on the site.

## Releases to atmosphere

The applicant has identified the potential sources of atmospheric pollution from the development proposal. These include point sources (use of diesel generators and potential gas flaring) and fugitive releases (increased road traffic and dusts) during the construction, operation and decommissioning of the site. The key contaminants of concern identified in the application are nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub>).

Modelling of the releases has been undertaken to assess their impact on local air quality. Predicted environmental concentrations have been calculated by adding the calculated emissions from the site to the reported background level of pollutants in the surrounding area. The modelled levels indicate that the local air quality will not be significantly affected by the proposed development and associated operations including consideration of emissions from traffic and the levels of the PM<sub>10</sub> and NO<sub>2</sub> will remain within the applicable air quality standards. The site is not in an air quality management area.

The applicant has used national pollution figures and maps published by Defra to illustrate the air quality baseline when modelling the impact of the proposed facility. The planning authority may wish to request that the applicant undertakes baseline environmental monitoring for NO<sub>2</sub> and PM<sub>10</sub>. The results of such monitoring could be then be compared to monitoring results during operations to provide an accurate assessment of air quality impacts due to the proposed operations.

The applicant does not include discussion on the potential for fugitive release of volatile organic compounds (VOC) into atmosphere either as a result of fugitive release from the borehole or as a result of incomplete combustion during flaring of any gas that is encountered. The planning authority may wish to request that the applicant considers the potential for impacts from VOCs and other combustion emissions and undertakes baseline air quality monitoring for VOCs and associated emissions. The results of such monitoring could be then be compared to monitoring results during operations to provide an accurate assessment of air quality impacts due to the proposed operations.

## Releases to Surface Waters and Groundwater

The applicant has identified the potential for point source and fugitive releases to ground and surface waters. Consideration of the risks to controlled waters is split into: potential emissions of contaminants to surface waters on the site, and potential risks from emissions of contaminants in subterranean areas. Risks relating to flooding on this development have been assessed as insignificant and not further consideration is made of flooding risks. The planning authority may wish to review the outcomes of the applicants flood risk.

Risks on the surface are identified as being as a result of spillage of fuels or drilling muds onto permeable ground/surfaces. This risk is mitigated by the use of non-permeable materials to construct the drilling pad. The pad's surface will be formed of crushed concrete underlined with an impermeable membrane which drains to an

impermeable sump. The planning authority may wish to confirm that the drilling pad and associated storage/bunding is of sufficient capacity to contain any surface spills.

The ground water risk relates to the potential for contamination of upper land strata with hydrocarbons during the extraction of oil or gas and other operations. This risk is mitigated by the lining of the borehole to prevent migration of hydrocarbons into the upper layers of ground. The applicant states that there are no major aquifers present in the land beneath the site and there is no local reliance on groundwater for water supplies. This is supported by the indication that there are currently no licensed groundwater abstractions within 2 km of the site boundary. However it is unclear how far the proposed horizontal drilling will extend beyond the site boundary. It is possible that the drilled area may extend beyond 2 km from the site boundary.

The applicant states that the land has always been undeveloped farmland since the earliest Ordnance Survey map of 1879. It could be inferred from this that any aquifer underlying the site would be free of any hydrocarbon contamination. The planning authority may wish to request that the applicant undertakes groundwater monitoring for hydrocarbons and other potential contaminants associated with drilling operations (such as chemicals in drilling muds) to provide an accurate baseline. The results of such monitoring could be then be compared to monitoring results during and post operations to provide an accurate assessment of any impacts due to the proposed operations.

#### Nuisances: Dust, Noise, Light & Odour

The applicant has included risk assessments for potential impacts due to dust, noise, odour and light nuisances. The overall assessment is that the risks of nuisance to local residents will be low.

However given the nature of the proposed operations it is recommended that the planning authority discuss the potential for the prospective operations to cause nuisance with the environmental health department of the local authority.

#### Incidents/Accidents Hazards & Risks

The applicant has identified that accidents and incidents on the site have the potential to cause releases of contaminants into the environment. The planning application includes some references to the mitigation of accidental releases but does not include a specific accident management plan. It is anticipated that the site operator will be required to obtain an environmental permit for the proposed development. It would be expected that such a permit should include a comprehensive accident management plan to mitigate the severity and likelihood of accidental releases.

#### Summary

The applicant has stipulated throughout the application document that they seek planning permission for conventional oil and gas exploration only and are not seeking permission at this stage for hydraulic fracturing. It is PHE's understanding

that a separate planning application will be required should hydraulic fracturing be proposed on the site.

Although onshore oil and gas extraction and related activities have the potential to cause pollution to air, land and water, the currently available evidence indicates that the potential risks to public health from exposure to the emissions associated with such extraction are low if the operations are properly run and regulated.

PHE anticipates that the proposed activity would be required to obtain an Environmental Permit from the regulator that will set out the requirements for the operation of the site so that any emissions from the site will not be significant and will not impact on public health.

As such based solely on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from potential emissions associated with the proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.

PHE would like to suggest that:

- Baseline environmental monitoring is needed to better assess the impact the on the environment from any development
- The planning authority consult the local authority environmental health department for matters relating to impact upon human health of contaminated land; noise, odour, dust and other nuisance emissions
- The planning authority considers matters relating to on and off site impacts in relation to the storage and management of wastes generated from the proposed development
- The planning authority considers matters relating to on site impacts arising from the potential for flooding
- The planning authority also consult the Director of Public Health for matters relating to wider public health impacts

Any additional information obtained by the planning authority in relation to these comments should be sent to PHE for consideration. Such information could affect the comments made in this response.

Yours sincerely



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**CC: Kent, Surrey and Sussex PHE Centre  
Public Health Department, West Sussex County Council**