



**Cyfoeth  
Naturiol  
Cymru  
Natural  
Resources  
Wales**

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**Eich cyf/Your ref:** 2013/00335/FUL

**Dyddiad/Date:** 1 July 2013

Annwyl Syr/Madam / Dear Sir/Madam

**DRILL AN EXPLORATION BOREHOLE TO TEST FOR CONVENTIONAL GAS RESERVES IN THE DEVONIAN, LAND ON THE WEST SIDE OF THE ROAD LEADING FROM LLANCARFAN TO BONVILSTON.**

*From 1 April 2013, NRW brought together the work of the Countryside Council for Wales (CCW), Environment Agency Wales and Forestry Commission Wales, as well as some functions of Welsh Government. Our purpose is to ensure that the natural resources of Wales are sustainably maintained, used and enhanced, now and in the future.*

Thank you for referring the above planning consultation to Cyfoeth Naturiol Cymru / Natural Resources Wales, which we received on 23 April 2013.

**Planning Proposals**

We note that the proposed development is for the drilling of a single vertical exploration borehole only, specifically to target gas (methane) in the Carboniferous, Devonian and Silurian aged rocks. Our understanding is that this development will involve samples being tested as part of this exploration process. The proposed development does not involve any hydraulic fracturing. Should exploration demonstrate positive results then the applicant Coastal Oil and Gas Limited intends to submit a further and separate planning application to extract and utilise methane as a clean energy source for the local area or for electrical generation; and Natural Resources Wales will be consulted on these proposals as part of the planning application process.

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Croesewir gohebiaeth yn y Gymraeg a'r Saesneg  
Cont/d..

Correspondence welcomed in Welsh and English

Notwithstanding the submitted documents and details therein, Natural Resources Wales has no objection to the development as submitted, subject to the inclusion of the following conditions in any planning permission granted. Our requests for conditions are also aimed at securing detailed proposals. These conditions are listed under the relevant titles below. We also provide additional advice.

### **Water Management Matters**

Our primary concern in relation to the proposed exploration activity is that pollution prevention controls are deployed in respect of key areas, including the management of surface water within the site compound area and access route, protection of controlled waters especially groundwater and management of drilling slurry and waste arisings.

#### Surface Water Protection

Comments made in Section 8.9 refer to Surface Water Protection. The purpose of a cut off ditch and submerged sealed interceptor tank is to prevent contaminated water from leaving the proposed development site. We seek clarity and confirmation from the applicant on the following matters;

- a) How will this system will work effectively in view of the existing site ground levels and that the site surface is largely covered by a concrete slab?
- b) What will the supervisory regime entail for the proposed water management system?
- c) Are there emergency procedures in place in the event of a system failure or environmental incident?
- d) Comments made in Section 7.6, Access, suggest that a wheel wash facility may be provided. We agree that this facility would aim to ensure that no mud is taken onto the highway from traffic leaving the site. If this facility is installed, water from the wheel wash will need to be collected using a suitably designed collection system and disposed of in a licensed disposal facility. We seek confirmation from the applicant as to whether this facility will be implemented. Details of the parking area should be provided and agreed, including surfacing material and means of drainage.

Should the Local Planning Authority be minded to approve the planning application then we request the following conditions be imposed with regard to the protection of controlled waters;

#### **Condition**

Full details of a scheme for the disposal of foul and surface water drainage shall be submitted to and approved in writing by the local planning authority and the approved scheme shall be fully implemented (as approved) prior to any drilling operations or site preparation taking place. The submitted scheme shall include;

- i. Proposals for the treatment and disposal of suspended solids from surface water runoff.
- ii. Details of any wheel wash facility and parking areas.
- iii. Supervisory regime and emergency procedures to be implemented where any failure results in pollution of controlled waters.

#### **Reason**

To prevent pollution to the water environment.

### Storage of Fuels, Oils and Chemicals)

The works (as approved) should also be carried out in accordance with our Pollution Prevention Guides, which are available through our website: <http://www.netregs.gov.uk/netregs/links/107968.aspx>. Our guide advises that any facilities for the storage of oils, fuels and chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The size of the bunded compound shall be at least equivalent to the capacity of the tank plus 10%. If there is multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank plus 10%. All filling points, vents and sight glasses shall be located within the bund. There shall be no drain through the bund floor or walls.

Comments made in Section 8.11 of the Supporting Information references the storage of oils or chemicals (including drilling fluids). We request a condition to be included to ensure that these measures are implemented as detailed in the Supporting Statement, unless otherwise agreed with the Local Planning Authority. We request the following condition;

#### **Condition:**

The storage of oils, fuels and chemicals including drilling fluids shall be implemented in accordance with details provided in Section 8.11 of the Supporting Information submitted with the planning application and retained in that state for the duration of the operations on the site, unless otherwise agreed in writing by the Local Planning Authority.

#### **Reason:**

Protection of the water environment is a material planning consideration and development proposals should ensure that new development does not harm the water environment. In this case the proposal poses a potential threat to water quality because of the storage of potentially polluting materials on site and the associated risks with leaks and spillages.

### Method Statements

Should the Local Planning Authority be minded to approve the planning application then we request the following condition be imposed with regard to protection of controlled waters;

#### **Condition**

Prior to any drilling taking place, detailed method statement(s) for the drilling operation, to include methods to minimise the risk of loss of drilling fluid to ground water resources during the drilling process and monitoring for any loss of drilling fluid, as well as measures for the collection and disposal of spilt drilling fluid, shall be submitted to and approved in writing by the local planning authority. Thereafter the development shall be carried out in accordance with the approved method statements and unless otherwise agreed in writing with the Local Planning Authority. All operations shall be carried out in accordance with approved details.

#### **Reason**

The construction phase of any proposed development poses potential risks to controlled waters, specifically diffuse pollution to the water environment arising from ground works.

Additional method statements may also be required by the applicant and therefore we request the following condition;

**Condition**

No development shall take place until a method statement(s)/construction environmental management plan shall be submitted to and approved in writing by the local planning authority. Thereafter the development shall be carried out in accordance with the approved method statement(s)/ construction environmental management plan and unless otherwise agreed in writing with the Local Planning Authority. All operations shall be carried out in accordance with approved details.

**Reason**

The construction phase of any proposed development poses potential risks to controlled waters, specifically diffuse pollution to the water environment arising from ground works.

In submitting this method statement(s) the applicant may also refer to;

- The construction of the compound and borehole;
- The type and nature of material to be imported and/or stored on site in more detail.
- Construction methods.
- Any necessary pollution prevention methods.
- The loading and unloading of plant and materials.
- Measures to control the emission of dust and dirt during construction; and
- A scheme for recycling/disposing of waste resulting from demolition and construction works.
- A detailed programme and timing of works.
- Information on the persons/bodies responsible for particular activities associated with the method statement. This should demonstrate they are qualified for the activity they are undertaking.
- Aftercare and maintenance arrangements.

Any changes to these components require the express written consent of the local planning authority.

We note that the proposal is temporary in nature whereby drilling will take place 24 hours per day, over 8 weeks; and testing of gas will continue over a 36 week period. We note that the site will be manned at all times (Section 8.6) and should development proceed, it would be useful for us to have a more detailed timetable of works and a list of contacts at the site. We would like to make arrangements with the operator to visit the site, prior to and during construction activities. This usually involves visiting the site at the time of preparation works and at the time of drilling/testing. Our Environment Management Officer will discuss site works and pollution prevention measures in more detail and as considered relevant. Please contact our Environmental Management Officer (Mr Jeff Edwards, Senior Environment Officer, Ely and Taff Environment Management Team Tel. 029 20245017; Email: Jeffrey.Edwards@cyfoethnaturiolcymru.gov.uk) to make arrangements.

## **Pollution Prevention Guidance and Regulatory Position Statements**

The works (as approved) should also be carried out in accordance with our Pollution Prevention Guides, which are available through our website:<http://www.netregs.gov.uk/netregs/links/107968.aspx>.

We also direct the applicant's attention to the following Regulatory Position Statements, which are relevant to the proposed development;

- Civil engineering activities involving grouts or other media for the purpose of sealing or ground stabilisation: [http://www.environment-agency.gov.uk/static/documents/Business/MWRP\\_RPS\\_108\\_Grouting\\_media.pdf](http://www.environment-agency.gov.uk/static/documents/Business/MWRP_RPS_108_Grouting_media.pdf)
- Managing concrete wash waters on construction sites: good practice and temporary discharges to ground or to surface waters: [http://www.environment-agency.gov.uk/static/documents/Business/MWRP\\_RPS\\_107\\_Concrete\\_washwaters.pdf](http://www.environment-agency.gov.uk/static/documents/Business/MWRP_RPS_107_Concrete_washwaters.pdf)

## **Localised Drainage Matters – Surface Water Flooding**

The applicant is informed that under the requirements of Section 23 of the Land Drainage Act 1991, the prior Ordinary Watercourse Consent of the Local Lead Flood Authority (LLFA) is required for the erection of any mill dam, weir or other like obstruction to the flow of an ordinary watercourse or raise or otherwise alter such an obstruction; or erect any culvert that would be likely to affect the flow of any ordinary watercourse or alter any culvert in a manner that would be likely to affect any such flow.

## **Ecological Matters**

Comments made in Section 8.16, Ecology, of the Supporting Information identifies that a habitat walkover survey has been submitted with the application. The submitted ecological assessment comments that the proposed works, which involves drilling for a maximum of three months, will have no long term impact on the site and the habitat should recover post disturbance.

## **Provision and Management of a Buffer Zone**

We would also request that a five metre wide buffer zone (minimum) is maintained between the hedgerows and the proposed works, which is secured through an appropriately worded condition. We request the following condition;

**Condition:** No development shall take place until a scheme for the provision and management of buffer zone between the hedgerows and the proposed works shall be submitted to and agreed in writing by the local planning authority. Thereafter the development shall be carried out in accordance with the approved scheme and any subsequent amendments shall be agreed in writing with the local planning authority.

## **Reasons:**

Planning Policy Wales requires that planning decisions should promote approaches to development which “create new opportunities to enhance biodiversity, prevent biodiversity losses, or compensate for losses where damage is unavoidable” (paragraph 5.2.8). Article 10 of the Habitats Directive also stresses the importance of natural networks of linked corridors to allow movement of species between suitable habitats, and promote the expansion of biodiversity. Such networks may also help wildlife adapt to climate change.

The scheme may include the following elements;

- Plans showing the extent and layout of the buffer zone.
- Demonstrate how the buffer zone will be protected during development and be free from built development including lighting.
- Details of any footpaths and fencing.
- Details of any new habitat created on site or details of any proposed planting scheme (for example, native species, local provenance).
- Details of management responsibilities and maintenance schedules.

It is not clear whether a new access is required, which will involve the removal of part of a roadside hedge. Such work should be carried out in later autumn or winter months to avoid disturbing any breeding birds. In addition, suitable mitigation should be provided for any hedgerow removal.

#### Lighting

Comments made in Section 8.8 Lighting at Night, also inform us that lights will be used at night of no more than 3 metres in height. The lighting will be positioned to cause no disturbance to wildlife within the adjoining vegetation. We therefore request that the following condition is included should your Authority be minded to grant planning permission;

#### **Condition:**

Any lighting shall be in accordance with details previously submitted to and approved in writing by the local planning authority.

#### **Reasons:**

To ensure no disturbance to wildlife.

As part of our requested conditions, we would ask the applicant to confirm that the hedgerows bordering the application site remain unlit.

Please note that we have not considered possible effects on all species and habitats listed in section 42 of the Natural Environment and Rural Communities (NERC) Act 2006, or on the Local Biodiversity Action Plan, or other local natural heritage interests. To comply with your duty under section 40 of the NERC Act, local planning authorities must have regard to purpose of conserving biodiversity and your decision should take account of possible adverse effects on such interests.

We would be pleased to discuss with you, the wording of conditions as requested by us to ensure that the development is suitably controlled through the planning permission if granted by your Authority.

#### **Restoration Requirements**

Comments made in Section 8.17 of the Supporting Statement explain that if the borehole is unsuccessful it will be formerly abandoned, being restored to a condition similar or better prior to commencement of the work. We welcome the reference to our guidance and agree that the borehole should be sealed in accordance with our published best practice guidelines 'Decommissioning Redundant Boreholes and Wells' (2012).

It is also proposed that once the testing is completed the site will be restored to its original condition or a future planning application for production will be submitted to your Authority for determination. We would therefore request the following condition be included in any planning permission granted;

**Condition** Within three months of the completion of drilling and testing of operations, all plant, machinery, buildings and the bund compound shall be removed from the site and the site shall be restored in accordance with the details to first be agreed in writing with the local planning authority.

**Reason**

To ensure the site is restored to a condition similar to or better than prior to commencement of work.

As part of this condition, we would trust that any further details for the restoration of the borehole are submitted by the applicant and should proposals differ from our best practice guidance then we would expect to be re-consulted.

**Additional Regulatory Advice for the Applicant (separate to planning permission)**

Notice of intension to construct or extend a boring for purpose for searching for or extracting mineral Form WR11

Prior to the commencement of any works under Section 199 of the Water Resources Act 1991, the applicant should submit a "Notice of intension to construct or extend a boring for purpose for searching for or extracting mineral" (Form WR11). The applicant must submit to us a completed WR11 form to provide additional information on the methods of drilling and casing to be employed at this location.

We will either agree and accept the Form WR11 or issue a Conservation Notice (Form WR12). A Conservation Notice will require the applicant to "undertake measures for conserving water" for resources (quantity) and/or quality and may include monitoring of sensitive water features. The Form WR11 should be submitted in a timely manner to allow agreement or issuing of the Conservation Notice. Form WR11 covers the details of the method of construction and disposal of water. Failure to notify us of intension for drilling works is a criminal offence.

An agreement of Form WR11 or Conservation Notice is not an Environmental Permit to discharge water.

Licence to Abstract

We also note from comments made in Section 8.1 of the Supporting Information that the developer intends to undertake 'pump tests to indicate the permeability and suitability of the strata...' The abstraction of groundwater for this purpose is currently exempt from requiring a licence from the Environment Agency, provided the water is not used for any other purpose prior to being discharged, for example;

- Dust suppression
- Gas extraction
- Use in process

If the developer intends to use the water prior to its discharge an Abstraction Licence may be required. Please be aware that there is no guarantee that a licence will be granted because this is dependent on available water resources and existing protected rights. The process can take up to 6 months so it would be prudent to make an application far enough in advance of any proposed pumping.

Comments made in Section 8.10 of the Supporting Information references a 'Ty Dra' borehole located 1.82km from the site, which was drilled by the National Rivers Authority (NRA) in 1994. Please be aware that this is not a Natural Resources Wales owned groundwater level monitor point but appears to be a private abstraction the details of which were provided to the NRA at the time of drilling by the company who drilled the borehole.

In addition to the two boreholes referenced in the supporting information consideration should also be given to the presence of other private water supplies which may be in the vicinity of the site. Consideration should be given to the presence of private water supplies which may not be on the British Geological Survey's (BGS) register. The Environmental Health department at the Local Authority are responsible for maintaining a register of these supplies. If the results of exploration are favourable we would advise that any boreholes identified are included in a monitoring programme as part of a future application for an Environmental Permit because part of exploitation of gas reserves will need to be supported by baseline water quality information.

#### Environmental Permit

Under the Environmental Permit (England and Wales) Regulations 2010 a permit (Water Discharge or Groundwater Activities) may be required for the discharge of water from the site. Please contact the Permitting Support Centre on 03708 506506 to discuss these requirements.

#### Waste Management Matters

We provide the following waste management advice for the applicant's attention;

As a suggestion, we would encourage the applicant to produce a Waste Management Plan. The objectives of the Plan will be;

- To prevent or reduce production of extractive waste, and its harmfulness;
- Encourage recovery of waste where possible, and to ensure short- and long-term safe disposal.

As part of this Waste Management Plan, characterisation of wastes relevant to their operations, plans for closure, details of any waste gas and proposals for flaring and venting may need to be included. Any post use drilling muds are a notoriously difficult waste to dispose of/recover, especially those composed of bentonite clay. It is advised that an output for this waste be sourced, prior to its generation on site. All liquid and solid wastes must be safely contained and disposed of by an authorised contractor.

In addition;

If any controlled waste is to be removed off site, then site operator must ensure a registered waste carrier is used to convey the waste material off site to a suitably authorised facility. We note that drilling cuttings will be placed in a skip and disposed of at a licensed facility.



The Duty of Care regulations for dealing with waste materials are applicable for any off-site movements of wastes. The developer as waste producer therefore has a duty of care to ensure all materials removed go to an appropriate licensed disposal site and all relevant documentation is completed and kept in line with regulations.

If any waste is to be used on site, the applicant will be required to obtain an appropriate exemption or authorisation from us. We are unable to specify what exactly would be required if anything, due to the limited amount of information provided.

More specific advice on waste matters is available from our website at [www.environment-agency.gov.uk/subjects/waste](http://www.environment-agency.gov.uk/subjects/waste). Alternatively; if the applicant requires further advice, then please contact our Environmental Management Officer (Mr Jeff Edwards, Senior Environment Officer, Ely and Taff Environment Management Team Tel. 029 20245017; Email: [Jeffrey.Edwards@cyfoethnaturiolcymru.gov.uk](mailto:Jeffrey.Edwards@cyfoethnaturiolcymru.gov.uk)).

### **Minor Comments**

Section 4 on Unconventional Gas makes reference to shale gas. Is this correct given that the planning application is for exploration of methane gas?

Comments made in Section 7.6, Access, of the Supporting Information references to the use of two drillings rigs and that 'the second drilling rig will set up over the borehole and drill and samples the coal measures'. This appears to be a typographic error as coal measure will not be present at this location.

### **Future Liaison and Contacts**

We look forward to having continued dialogue with you on this proposal and in regard to environmental matters. We would be pleased to discuss the wording of conditions as suggested and requested above in order to ensure that the development is suitably controlled through the planning permission if granted by your Authority. Natural Resources Wales would also request that should the applicant submit details in discharge of such conditions; or propose alternative methods or schemes then these details are submitted to, and approved in writing by, the local planning authority, in conjunction with ourselves.

Should the developer require any consents/permits from Natural Resources Wales then application forms should be submitted to us as soon as possible and in advance of development because this may take several months to determine.

We trust these comments are clear and helpful in your consideration of the planning application. However, if it would be helpful to meet with you to discuss any of the above issues further, please contact us.

Yn gywir / Yours faithfully

JWalters

**Mrs Jackie Walters**  
**Technical Specialist Planning Liaison**

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cc Coastal Oil and Gas Limited