



Woodbarn Farm, Broadford Bridge,  
West Sussex

**Statement of Community  
Involvement**

*Prepared on behalf of Celtique Energie Weald  
Ltd*



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# 1. Executive Summary

- In 2008 the Department of Energy and Climate Change (DECC) awarded Celtique Energie Weald Ltd (Celtique) four Petroleum Exploration and Development Licences (PEDLs) to explore for oil and gas in southern England.
- Celtique have identified a potential location for their first exploratory well site – named Broadford Bridge-1 – at Woodbarn Farm, Broadford Bridge. The company has submitted a planning application seeking permission to carry out well site construction and drilling activity to assess whether oil or gas production would be commercially viable.
- In June 2012, Celtique held a two-day public exhibition event at the Billingshurst Community and Conference Centre. Prior to the event, the following initiatives were carried out in order to maximise public attendance; sending invitation letters to 6,660 residents living within a three-mile radius of the proposed well site; writing letters to key stakeholders within the local community; and securing advertisement in the local newspaper.
- Prior to its public exhibition, Celtique held briefing meetings with the parliamentary representative for the site Nick Herbert, MP for Arundel & South Down; and West Chiltington Parish Council. Meetings were also offered to a number of local political representatives.
- A dedicated online consultation page was launched on Celtique's website to coincide with the public exhibition event. The page included dates and times of the exhibition events, contact details of how members of the public can get in touch with Celtique, and electronic copies of both the exhibition boards and the comment form.
- The two-day public exhibition event took place on Friday 22 June (3.30pm-8.00pm) and Saturday 23 June (12.30pm-5.00pm). On Friday 22 June, a preview event for key stakeholders (2.30pm-3.30pm) was also held in advance of the public exhibition. Comment forms were provided to allow attendees to comment on Celtique's proposals and share their views.



Approximately 155 people attended the exhibition, of which 38 completed comment forms over the course of the two days. A further 5 forms received in the weeks following.

- **35%** of respondents considered the **'visual impact of the drilling rig'** to be an important issue for Celtique to consider with regards to their proposals for Broadford Bridge-1; **'vehicle movements to and from the site'** was considered an important issue by **25%**; whilst **'protection of groundwater aquifers'** was considered to be an important issue by **22%**.
- Taking in consideration factors such as natural screening and distance from nearby properties, **58%** of respondents either 'strongly agreed' or 'agreed' that Woodbarn Farm would be an appropriate location for a temporary well site. A further **33%** neither agreed nor disagreed.
- **Reducing the UK's reliance on gas imports; promoting gas to complement renewable and mitigating climate change** all received the support of at least **70%** of feedback respondents.
- Following the public exhibition, **67%** of respondents indicated that they felt **'very informed'** about Celtique's proposals; **33%** of respondents felt **'somewhat informed'**.
- Celtique will continue to engage with and update the community and key stakeholders in the coming months ahead, following the submission of its planning application to West Sussex County Council.



## 2. Introduction

### 2.1. Introduction

Celtique Energie Weald Ltd. (“Celtique”) is a British oil and gas exploration company that has been operating since 2004 and is led by an experienced team who have worked in energy exploration and production for many years.

Celtique employs 30 members of full time staff and longstanding consultants covering specialist areas, and has currently \$85million of funding. The company’s head office is located in London. Further information on the company can be found on its website [www.celtiqueenergie.com](http://www.celtiqueenergie.com).

In 2008, Celtique and its joint venture investment partner Magellan Petroleum (UK) were awarded four licenses in southern England’s Weald area from the Department of Energy and Climate Change (DECC) to undertake exploratory drilling in the area. Detailed geological studies have indicated that there may be significant untapped reserves of gas or oil in this area.

Celtique is committed to open and transparent communication and consultation with local communities and appointed PPS Group to assist in the delivery of a community engagement programme. This report outlines the activities undertaken throughout this bespoke consultation process.

### 2.2. Background and Purpose of Community Engagement

The importance of pre-application engagement is recognised in the Government’s National Planning Policy Framework (NPPF), adapted in March 2012, which states that:

*“Early engagement has significant potential to improve the efficiency and effectiveness of the planning application system for all parties. Good quality pre-application discussion enables*



*better coordination between public and private resources and improved outcomes for the community.” (Section 188, page 45)*

In accordance with the NPPF, Celtique has undertaken a programme of early engagement with the local community, to ensure that the local community has the opportunity to inform the company’s proposals prior to the submission of the application. The consultation programme has sought to identify and resolve any issues or concerns raised by local residents, reflecting the Government’s Localism agenda, including its fundamental ambition to empower local communities.

Against this background, the objectives of this engagement strategy and programme are as follows:

- To meet the requirements for pre-application consultation on major planning applications as set out in the Planning and Compulsory Purchase Act 2004 and supporting guidance including West Sussex County Council’s Statement of Community Involvement and the Localism Act, the fundamental ambitions of which is to improve community involvement in development;
- To ensure that the local community, its elected representatives and key stakeholders are fully engaged in the plans at both the pre- and post-application stages; and
- To demonstrate how feedback has been incorporated in the revised proposals, and to explain why not, if it has not been.

### **2.3 West Sussex County Council’s Statement of Community Involvement**

West Sussex County Council’s revised Statement of Community Involvement (SCI), adopted in June 2012, is a comprehensive document that demonstrates their commitment to taking public consultation seriously. WSCC provides a series of guidance to assist developers in understanding the level of consultation required as part of their planning application to the county council. This understanding of the role of consultation is in line with PPS’s approach. According to WSCC’s SCI’s categorisation of the levels of engagement required, Celtique Energie’s application is considered a ‘major application’ and has therefore required the highest levels of engagement expected.



## **2.4 PPS and Community Engagement**

PPS is an independent communications company that specialises in community consultations relating to planning applications. PPS was one of the first companies to understand the need for consultation on planning applications and has become an expert at developing tailored programmes to ensure that its community consultations contribute positively to the planning process. PPS is an active member of both the Association of Professional Political Consultants (which promotes transparency and openness in public affairs consultancy, through the promotion of a strong ethical code) and the Consultation Institute, which helps all those engaged in public and stakeholder consultation to absorb and promote best practice.

PPS has developed an approach to consultation that reflects latest Government policy to ensure full and thorough local engagement within the planning process, as enshrined in the Localism Act 2011. PPS has acted on numerous community consultations on major planning issues up and down the country and across almost all development sectors. Additionally, we have assisted several local authorities in England on the drafting of their own SCIs, and north of the border we have advised the Scottish Executive on how consultation can be better incorporated into the Scottish planning system.



## 3. Programme

### 3.1 Introduction

The consultation and engagement activities undertaken by Celtique were designed to follow PPS's 'eight-point plan' that represents best practice consultation in planning:

- 1. Identify** Undertake a stakeholder identification exercise to identify all sections of the community who should be engaged, including 'hard to reach' groups. Consider stakeholder mapping.
- 2. Sign-off** Discuss the consultation and engagement plan with the local authority prior to implementation.
- 3. Notify and Inform** Notify all of those to be consulted through the appropriate and agreed channels and inform them of the proposals.
- 4. Consult** Consult with stakeholders through a variety of communications techniques determined by the specifics of the scheme, the local area and the local authority.
- 5. Measure** Measure and analyse the responses to the consultation process.
- 6. Respond** Use the ongoing consultation and engagement process to respond to feedback received.
- 7. Report and Publish** Prepare a report on the consultation process to be submitted with the planning application. Notify participants of the outcome of the consultation and publish your findings.





**8. Continuous Engagement** Post submission; continue a programme of engagement with stakeholders and the public as the proposals move through the planning process.



### **3.2 Meetings programme with stakeholders**

To ensure that the Minerals Planning Authority was satisfied with Celtique's approach to local engagement, Celtique met with officers from West Sussex County Council on 8 February 2012 to present a 'consultation methodology statement' that outlined its consultation programme in full and receive their feedback.

Prior to its public consultation event, Celtique offered briefing meetings to a number of local stakeholders to introduce itself as a company and outline its proposals for the site. Meetings were subsequently held with the following:

- Nick Herbert, MP for Arundel & South Downs, on 18 May 2012; and
- West Chiltington Parish Council on 12 June 2012.

Celtique will continue to offer and seek where appropriate meetings with local stakeholders throughout the post-submission phase of the application.

### **3.3 Distribution**

Prior to the public exhibition event, an assessment was carried out to establish a suitable distribution area for invitation letters to be sent out to residents local to Celtique's proposed site. It was decided that a 3-mile radius from the proposed site would be sufficient; over 6,000 invitation letters were delivered to local residents living within the designated distribution area, between 12-14 days prior to the first exhibition date.

Separate letters were also sent to key stakeholders inviting them to the exhibition preview event, which took place on Friday 22 June, 2.30pm-3.30pm, prior to the public exhibition. Key stakeholders invited to this preview event included members from West Sussex County Council, Horsham District Council, Billingshurst Parish Council and West Chiltington Parish Council.

### 3.4 Media

In order to raise awareness about the public exhibition event beyond the letter distribution area, a quarter page tabloid newspaper advert was placed in the West Sussex County Times (WSCT) two weeks prior to the first exhibition event. With a weekly circulation of 19,501, it was decided that placing an advert in the WSCT would be an effective method of raising awareness of the exhibition event.

### 3.5 Public Exhibition

Public exhibition events took place at the Billingshurst Community & Conference Centre on:

- Friday 22 June, 3.30pm-8.00pm (preview event, 2.30pm-3.30pm)
- Saturday 23 June, 12.30pm-5.00pm.

The exhibition, which was attended by more than 150 people, consisted of 25 information boards, which displayed information including; details regarding the company and its proposals; the environmental impact assessment undertaken; the geological composition at the Woodbarn Farm site; and the drilling process that would be used during exploration. Information displayed on the exhibition boards was reproduced in the form of a compact brochure, and made available for consultees to take away with them from the event.



Comment forms were also made available, so as to allow attendees to share their thoughts and leave their comments. A number of attendees submitted completed forms immediately following the event; for those who chose to complete their forms at home, a return address was printed on each form, and it was explained that consultees had until 3 July 2012 to return their completed forms.





### **3.7 Consultation website**

In order to keep local residents updated about Celtique's Broadford Bridge-1 proposals, a consultation page was established on the company's website: <http://www.celtiqueenergie.com/woodbarnfarm>. An online copy of exhibition boards and the comment form were made available to download; this ensured that those who were unable to attend the exhibition event were still informed about the proposals and given the opportunity to submit their feedback.

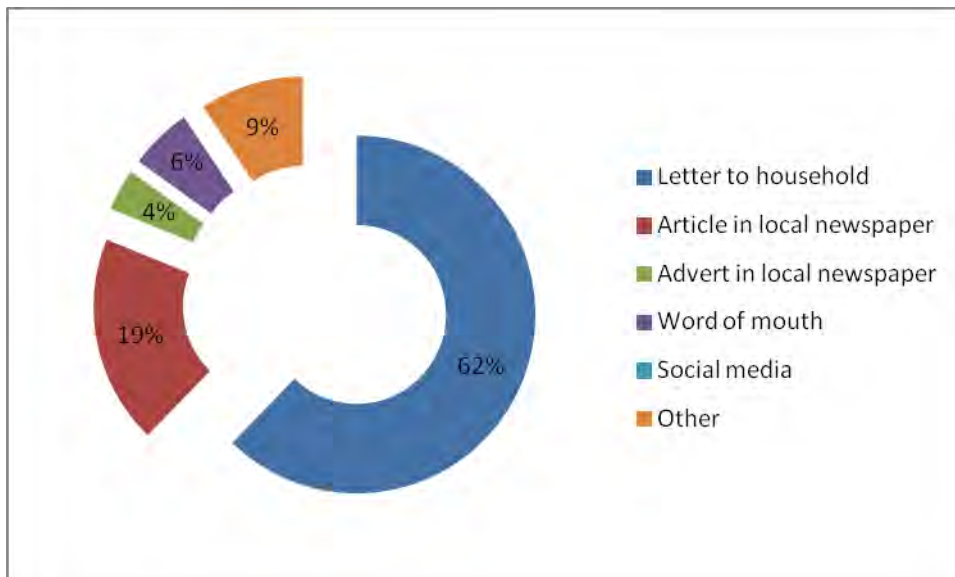
### **3.8 Community information line and email address**

A dedicated community information line (9am-5.30pm, Monday to Friday) and consultation email address ([consultation@celtiqueenergie.com](mailto:consultation@celtiqueenergie.com)) were both set up in order to deal with enquiries from members of the public, and answer any questions about Celtique and its Broadford Bridge-1 proposals. A total of 17 enquiries have been received via the community line or e-mail thus far, focusing predominantly on the location of the site and requesting a copy of the exhibition boards from the public consultation. A log of these enquiries has been provided in the appendix to this SCI.

## 4. Feedback Analysis

A total of 43 completed comment forms were received by PPS following Celtique's public exhibition events which took place on Friday 22 June, 3.30pm-8.00pm (preview event, 2.30pm-3.30pm) and Saturday 23 June, 12.30pm-5.00pm. The comment forms were designed to help identify the local community's views on Celtique's proposed Broadford Bridge-1 exploratory well site at Woodbarn Farm and enable Celtique to address any concerns prior to the submission of its planning application.

### 4.1 How did you find out about today's public exhibition?



The majority of those who provided feedback indicated that they had found out about the exhibition via a letter to their home (62%).

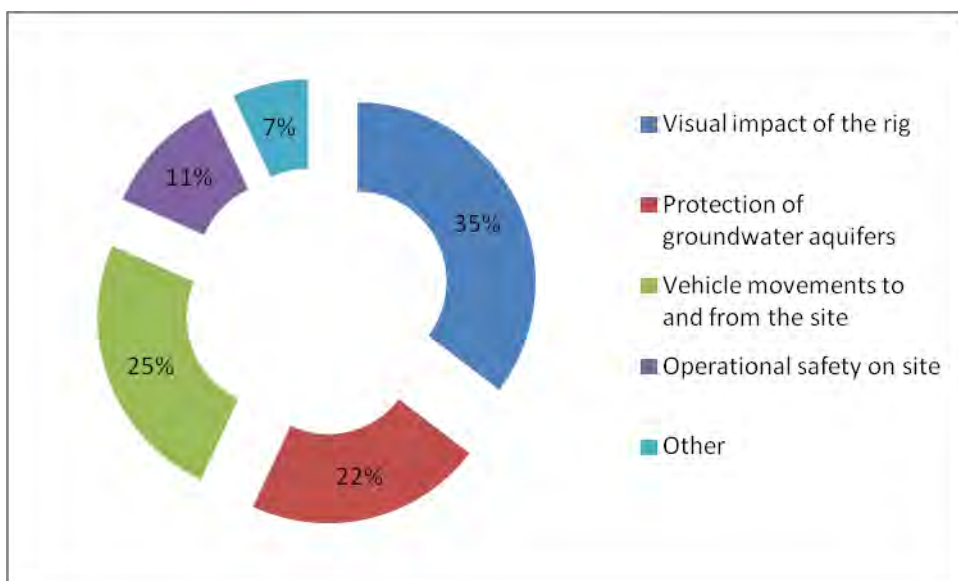
19% of respondents indicated that they had learned of the public exhibition via a recent article in West Sussex County Times, whilst 4% had been prompted by the accompanying advert.

6% of those who provided feedback explained that they had heard about the event through word of mouth.

Five respondents (9%) were informed of the event through ‘Other’ means, which included the following;

- Two respondents (attending the exhibition on Friday 22 June) just so happened to be attending a school art exhibition that was concurrently taking place at the Billingshurst Conference and Community Centre;
- Two respondents were informed through their local Parish Council; and
- Another respondent attended after an invitation letter was received at her father’s house.

#### 4.2 What do you think are the most important issues for Celtique to consider as part of its temporary well site application?



As the diagram above indicates, the top three issues for respondents included;

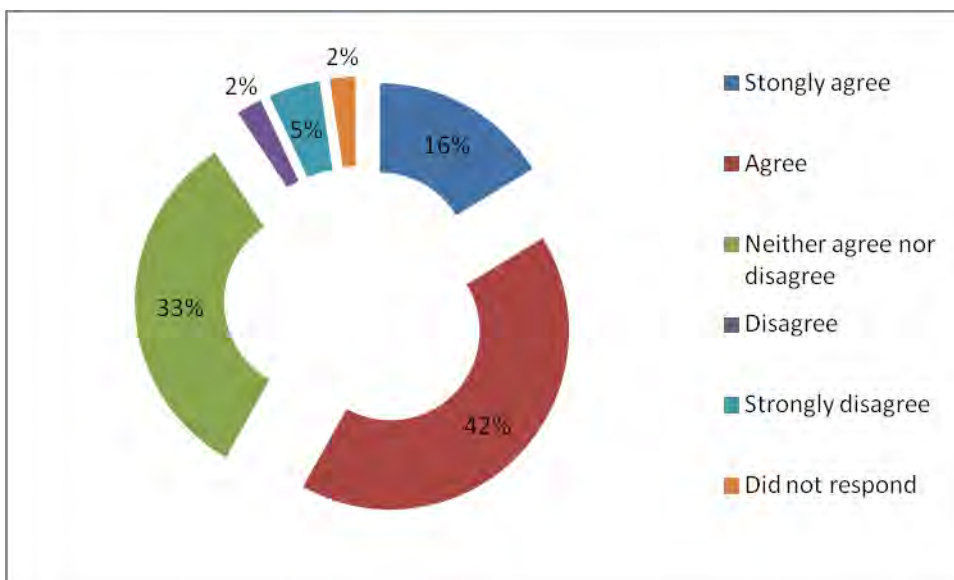
- Visual impact of drilling rig (35%)
- Vehicle movements to and from the site (25%)
- Protection of groundwater aquifers (22%)

Fewer respondents were concerned with operational safety on site (11%).

Nine respondents (7%) identified 'other' issues that were not listed on the comment form, these included;

- Noise concerns
- Lighting/light pollution
- Ensuring HGV drivers travel along a designated access route to and from the site;
- Ensuring HGV wheels are cleaned
- Additional traffic movements
- Wildlife concerns
- Operational hours

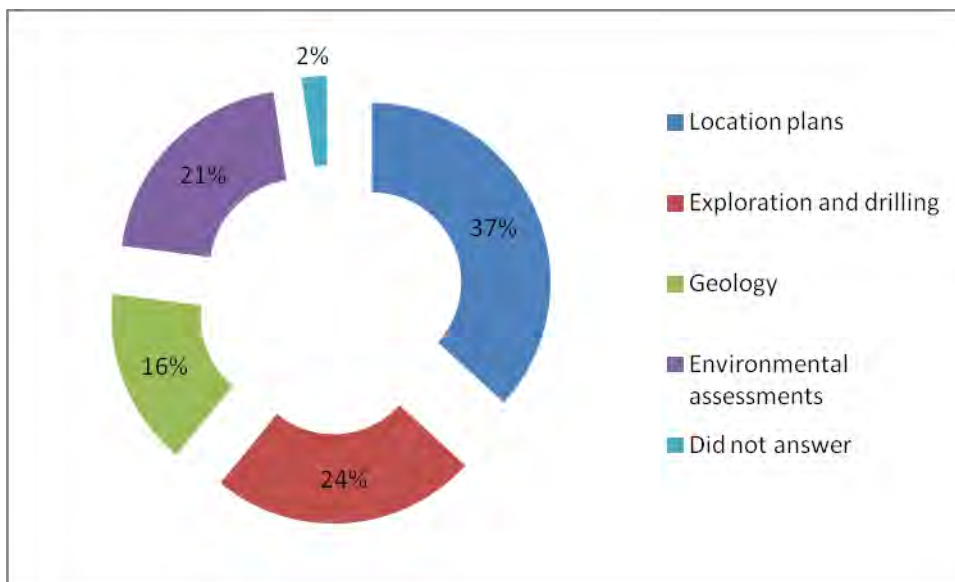
**4.3 Taking into consideration factors such as natural screening and distance from nearby properties, do you agree that Woodbarn Farm is an appropriate location for a temporary well site?**



When taking into account factors such as natural screening and distance from nearby properties, the majority of consultees responded positively to Celtique's proposals; 16% (seven respondents) agreed

strongly that Woodbarn Farm would be an appropriate temporary well site location, whilst 42% (18 respondents) agreed. 5% (two respondents) expressed a strong disagreement with the suitability of Woodbarn Farm as an appropriate location, whilst 2% also disagreed. A significant proportion of respondents (33%) neither agreed nor disagreed with the suitability of Woodbarn Farm as an appropriate location, whilst 2% (one respondent) did not know.

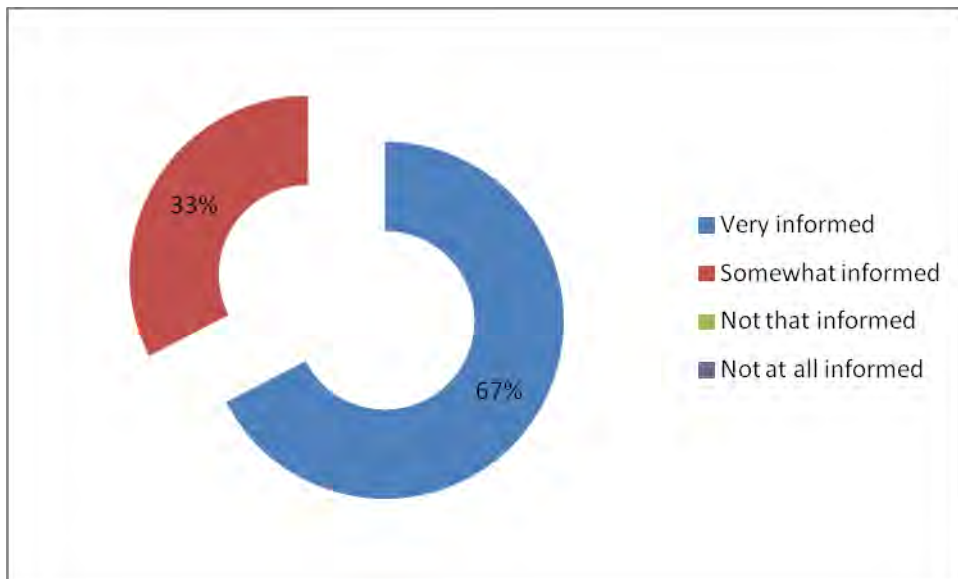
#### 4.4 Thinking about what you have seen here today, what sections of the public exhibition have you found most informative?



The largest proportion of respondents (37%) indicated that the section detailing the location plans of Celtique’s proposed site was the most informative aspect of the exhibition; 24% (21 respondents) found that the exploration and drilling information had been the most informative; 21% (18 respondents) expressed their view that details concerning the environmental assessment had been the most useful. Fewer respondents (16% or 14) felt that the geological information had been the most informative, whilst 2% of consultees (two respondents) did not provide an answer.



#### 4.5 How better informed about Celtique's proposals are you after today's event?

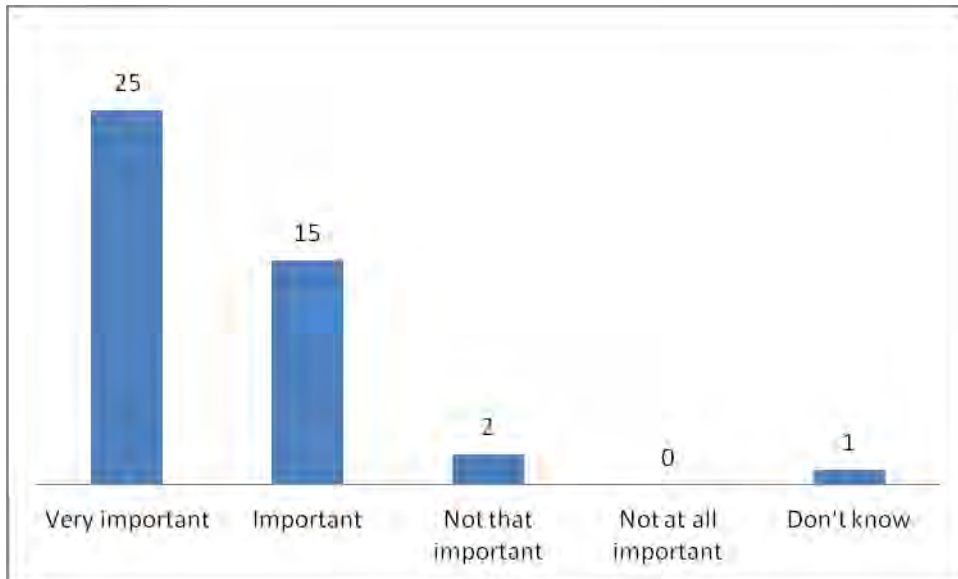


Following Celtique's public exhibition, 67% (29 respondents) of those who provided feedback indicated that they felt 'very informed' about the company's proposals. The remaining 14 respondents (33%) indicated that they had been somewhat informed. Not one respondent indicated that they had left the exhibition feeling ill informed.

## 4.6 Issues

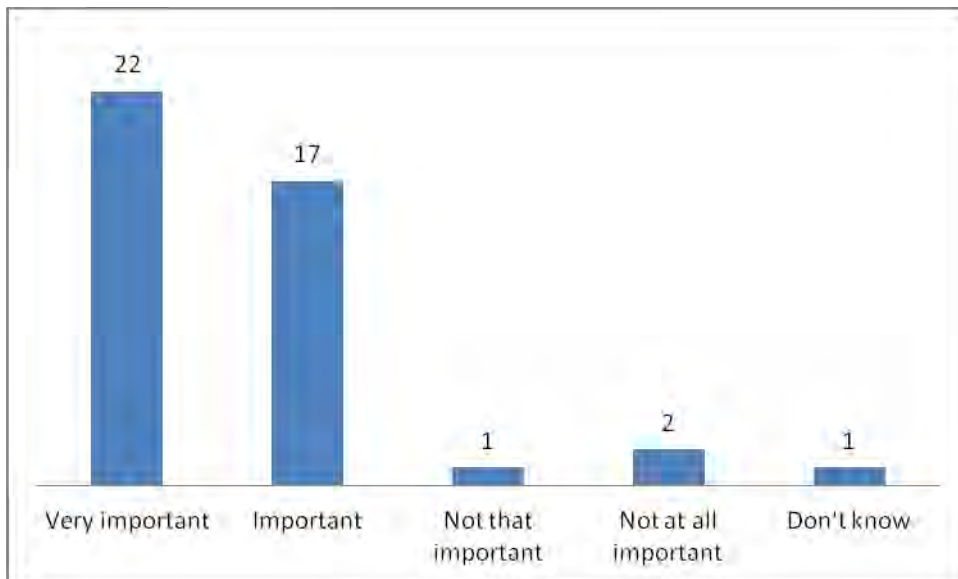
As part of its feedback process, Celtique asked consultees to consider the importance of the following current issues associated with UK energy:

### (a) Reducing the UK's reliance on gas



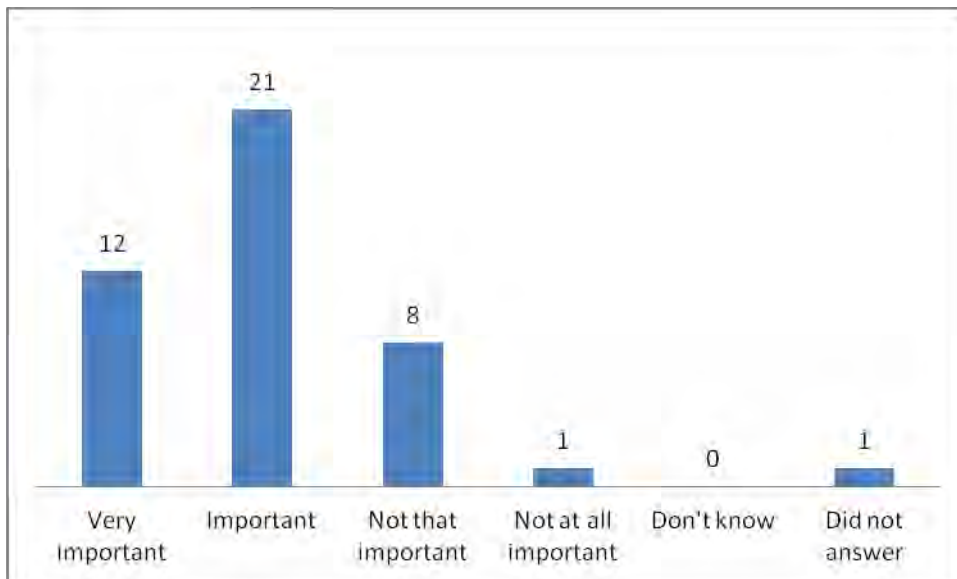
The vast majority of respondents placed a high level of importance on the need to reduce the UK's reliance on gas imports; more than half the number of respondents providing feedback (58%) felt that the need to reduce UK reliance on gas imports was 'very important', whilst a further 15 respondents (35%) also felt agreed that this was 'important'. Only two respondent (5%) suggested that this issue was 'not that important', whilst another respondent did not know.

**(b) Promoting the use of natural gas to complement renewable energy sources**



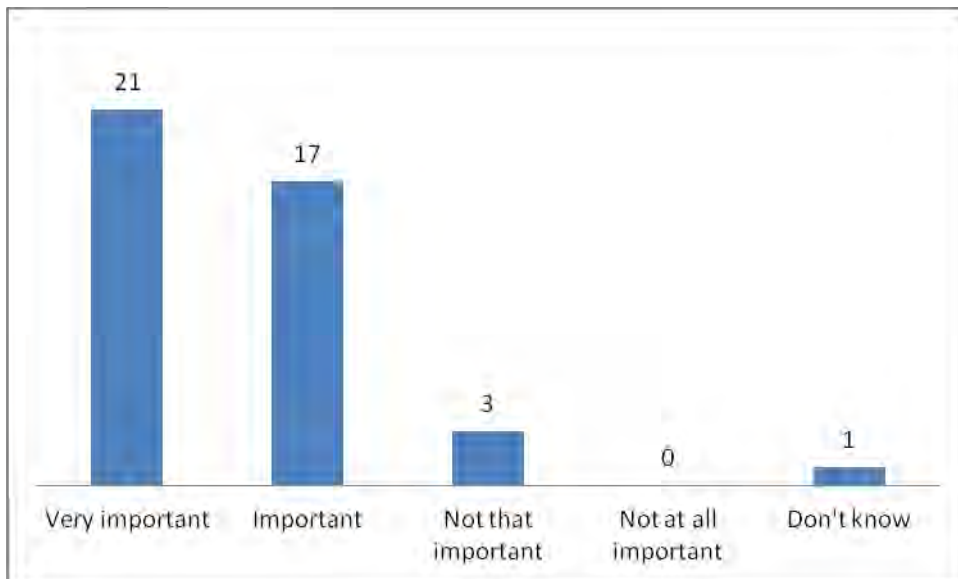
Regarding the need to promote the use of natural gas to complement renewable energy sources, 51% (22 respondents) indicated that this was 'very important'. 17 respondents (40%) believed the need for natural gas to complement renewable energy sources was 'important', whilst a lower proportion of consultees (5%) believed this need was 'not at all important'. One respondent (3%) was unsure whether the need to promote the use of natural gas to complement renewable energy was important or not.

**(c) Mitigating climate change by supporting renewable technologies**



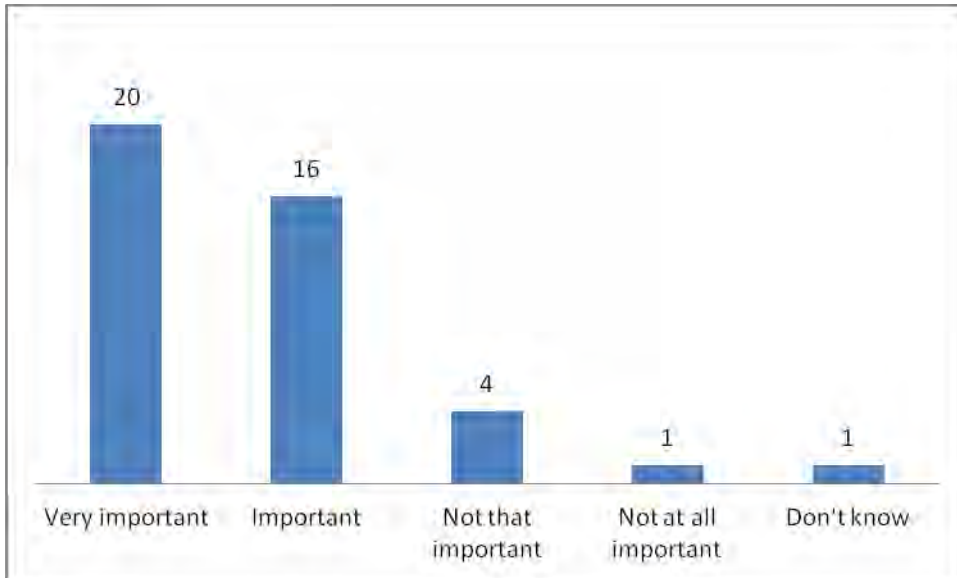
49% (21 respondents) placed a certain degree of importance regarding the need to mitigate climate change by supporting renewable technology; 28% (12 respondents) indicated that they felt that the need to mitigate climate change was 'very important'. Some respondents placed a lesser emphasis on the importance of mitigating climate change through support for renewable technologies; 19% (eight respondents) believed the need was 'not that important', whilst 2% (one respondent) believed the need for 'not at all important'. 3% (one consultee) did not provide an answer to the question.

**(d) Supporting community initiatives if the site becomes a producing well**



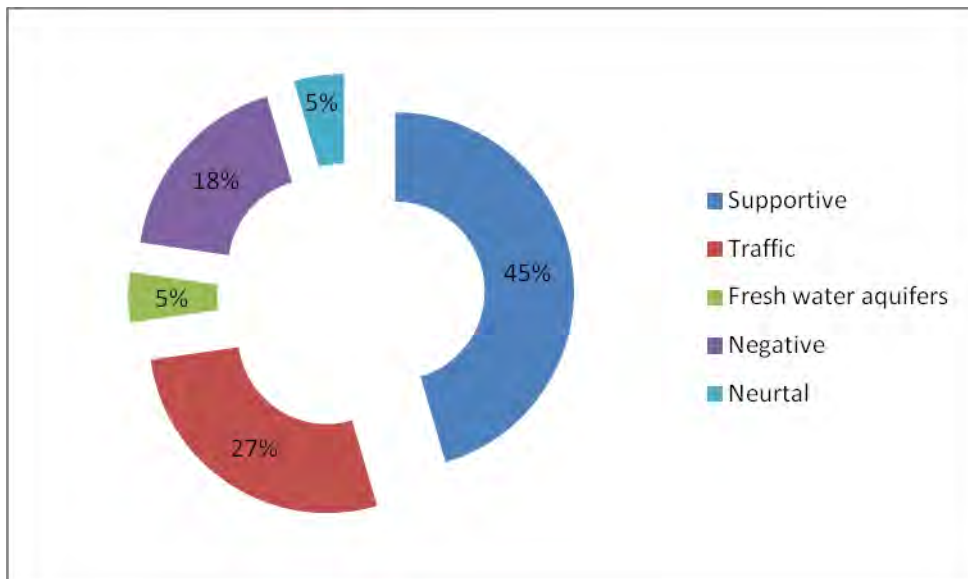
A high proportion of those who provided feedback believed it to be either 'important' (41%) or 'very important' (50%) for Celtique to support community initiatives if it's Broadford Bridge-1 site were to become a producing well. A much lower proportion of respondents downplayed the need for Celtique to support community initiatives; three respondents (7%) suggested that this was 'not that important'. 2% (one respondent) did not know whether this issue was important or not.

**(e) Creating employment and apprenticeship opportunities for local people**



A high proportion of those who provided feedback believed it to be either 'important' (38%) or 'very important' (48%) for Celtique to create employment and apprenticeship opportunities for local people. A much lower proportion of respondents downplayed the importance of this issue; four respondents (10%) indicated this issue was 'not that important', whilst one respondent (2%) expressed their view that the issue was 'not at all important'. One respondent (2%) was unsure whether it was important or not for Celtique to create employment and apprenticeship opportunities for local people.

## 4.7 General Comments



Among the written comments received from respondents providing such feedback, 10 comments (45%) were generally supportive; six comments (27%) placed emphasis on traffic issue; four comments (18%) were generally negative; one raised concerns regarding the protection of fresh water aquifers, whilst one comment (5%) was neutral in tone. A more detailed breakdown of the comments received are listed below:

**Generally supportive** comments indicated the following;

- Support for the choice of site location;
- Support for the contribution such a development could make to the UK's energy security;
- Support for the exploitation of indigenous natural resources;
- Support for an exploratory well site as opposed to a housing development; and
- General approval of a well presented exhibition.

Comments regarding **traffic issues** included;

- The need for speed cameras on Adversane Lane (B2133);
- Concerns over the impact of increased traffic along Marringdean Road;



- Concerns over the potential increase in the number of traffic accidents at the junction between Adversane Lane (B2133) and the A29; identified as an accident 'blackspot';
- Concerns over traffic flow due to drop-off/pick-up activity at Montessori Nursery at Adversane; and
- General concerns about additional traffic generation.

**Generally negative** comments indicated the following;

- Concerns about long-term impact;
- Objections in principle against the exploitation of finite resources (oil or gas) contributing to climate change;
- View that exploration in the area is both unfortunate and unnecessary;
- Concerns that exploration at Woodbarn Farm is the beginning of several large drilling sites within the rural area; and
- Scepticism regarding the potential employment opportunities available

**Neutral** comments included:

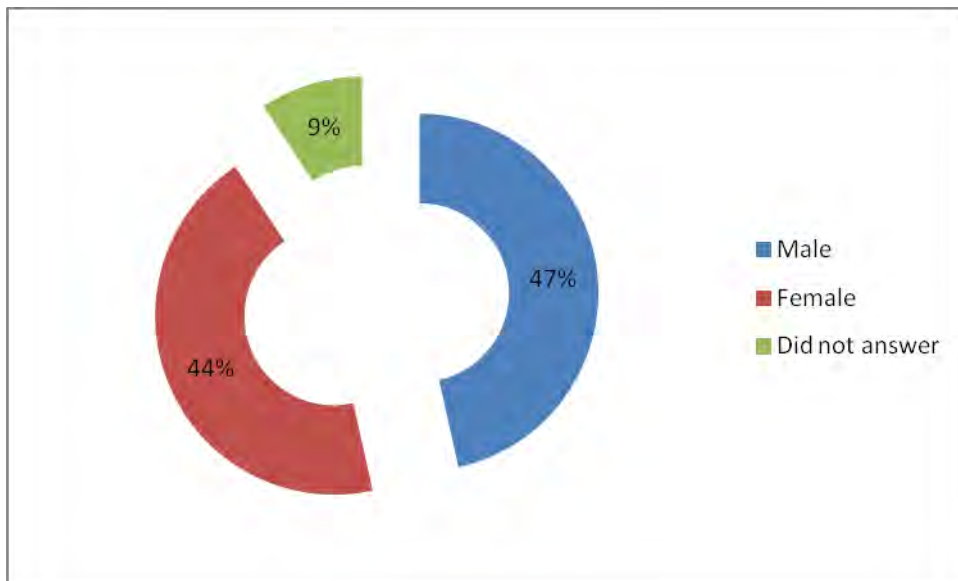
- An intention to follow Celtique's proposals with interest.



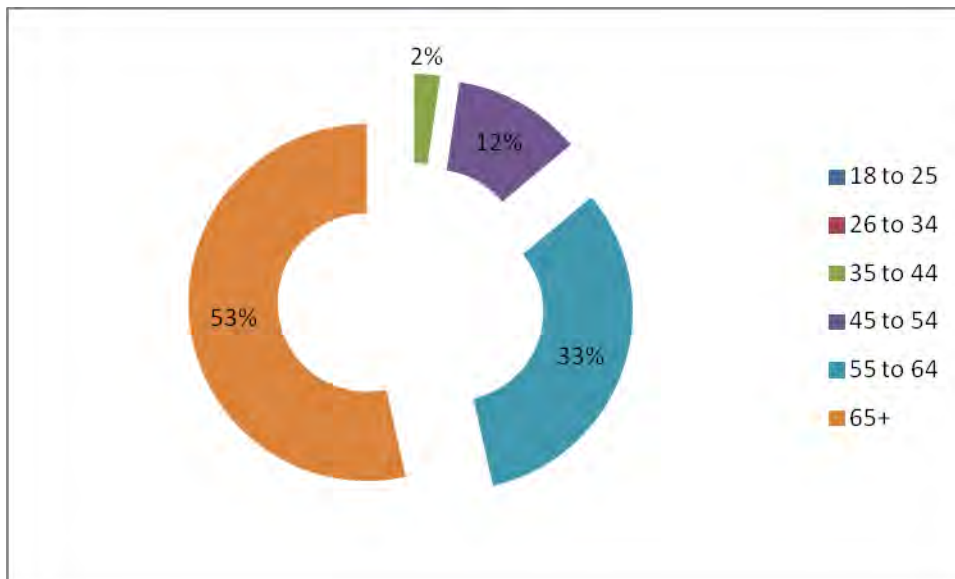
## 4.8 Demographics

### (a) Gender

47% (20 respondents) of those who provided feedback, following the exhibition event were male; 44% (19 respondents) were female; 9% (4 respondents) did not provide an answer.



**(b) Age**



The 55 to 64 and 65 + age groups were overwhelming represented through the feedback provided. 53% (23 respondents) were aged 65 or over, whilst 33% (14 respondents) were aged between 55 and 64. The 45 to 54 age group represented 12% (5 respondents) of those providing feedback, whilst 2% (one respondent) represented the 35 to 44 age category. There were no consultees from either the 26 to 34 or the 18 to 25 age categories, who provided feedback following the public exhibition.



## 5. Responses

During the consultation there were a number of issues raised by respondents that Celtique have sought to address in its proposals.

### Visual impact

If planning permission is granted, Celtique would lease the drilling equipment used at Broadford Bridge-1. Given that these rigs are in constant demand from onshore oil and gas developers throughout the UK and Europe, no decision will be made on the final rig model until Celtique knows which rigs are available.

However, the tallest drilling rig that could be used on the site would be no higher than 36m tall. Furthermore, Celtique has chosen this well site because of its discrete location and the significant amount of woodland around the site, including Pocock's Wood and Prince's Wood. The woodland will provide excellent screening for Celtique's operations and will ensure that the visual impact of Celtique's operations is minimal.

### Traffic

Celtique's proposals will generate a maximum of 35 additional two-way vehicle movements a day, which would represent just a 1.9% increase on existing traffic movements. The estimated breakdown across the separate stages is as follows:

Activity	Duration	Maximum Generated Daily Movements	
		HGVs	Light Vehicles
Phase 1: Construction of access road and well site	6 Weeks	22	13
Phase 2: Mobilisation of Drill Rig - set up, drilling mode and dismantling	10 Weeks	8	27
Phase 3a / 3b: Short-term test	2 Weeks (min.)	2	4



/ evaluation programme	/ 14 Weeks (max.)		
<b>Phase 4a / 4b: Restoration / Retention</b>	6 Weeks (min.)	22	13

In addition, Celtique will be operating a 'right in/left out' system at the access to the site to prevent traffic travelling through the village of Broadford Bridge.

Celtique notes a number of residents have proposed various traffic calming measures including traffic lights and speed cameras on the B2133. Celtique will explore the scope for introducing these measures as part of an ongoing dialogue with officers at West Sussex County Council prior to the determination of its application.

#### **Noise**

During the construction period, noise levels will be similar to that of a typical civil construction project where earth-moving equipment is in operation. Celtique will limit its operations to working hours agreed by the County Council to ensure that the impact on local residents is minimised, and the distance of the site away from residential properties should ensure that this work proceeds without undue notice.

Construction work for the site will only be undertaken during working hours agreed with the County Council. These will be likely be during conventional working hours (07:30 – 18:30hrs Monday to Friday, 07:30 – 13:00 hrs Saturdays) to minimise any disruption for local residents. No construction work would be undertaken on Sundays or public holidays.

#### **Protection of groundwater aquifers**

Celtique will drill down to a designated depth below any freshwater aquifers, at which point the drill string will be removed and surface casing will be run into the wellbore. The surface casing is then secured in place with cement. The combination of casing and cement acts as a barrier to protect the water aquifer throughout the drilling process. Drilling resumes once the cement sets, and the casing/cementing process is repeated at an additional 'intermediate' stage deeper underground.



## 6. Summary

In line with West Sussex County Council's Statement of Community Involvement, Celtique has undertaken a programme of public consultation to engage with local residents and stakeholders on its proposed Broadford Bridge-1 exploratory well site at Woodbarn Farm.

The consultation programme consisted of early stakeholder briefing meetings and a two day public exhibition event, with a preview event for key stakeholders beforehand. To maximise public attendance, over 6,000 invitation letters were delivered to local residents. Key stakeholders were also written to and contacted, and advertisement was securing in the local newspaper. In addition, a community information line and consultation email address were set up and publicised on a dedicated consultation page, which was added to Celtique's website.

The public response from the two day public exhibition event has helped Celtique to build a stronger understanding of the key issues for local people and stakeholders. Over the course of the two day consultation event, 155 members of the public attended, generating 37 completed comment forms and a number of telephone and email enquiries.

The issues that were most frequently raised by attendees included noise, traffic and visual impact of the drilling rig. Consideration was also given to concerns about the necessity of oil or gas exploration, and the potential contribution to climate change.

In response, Celtique has sought to provide assurances that stringent measures will be taken to ensure that the impact of its operation is minimised. During the construction period, Celtique will only carry out activity within the hours agreed with West Sussex County Council. This, coupled with the relatively remote location of the proposed site away from residential properties and natural screening, should address local concerns regarding noise.

Anticipating concern from local people about the perceived impact of increased road traffic and HGVs, especially on Adversane Lane (B1233), Celtique displayed the results of its Traffic Impact Assessment



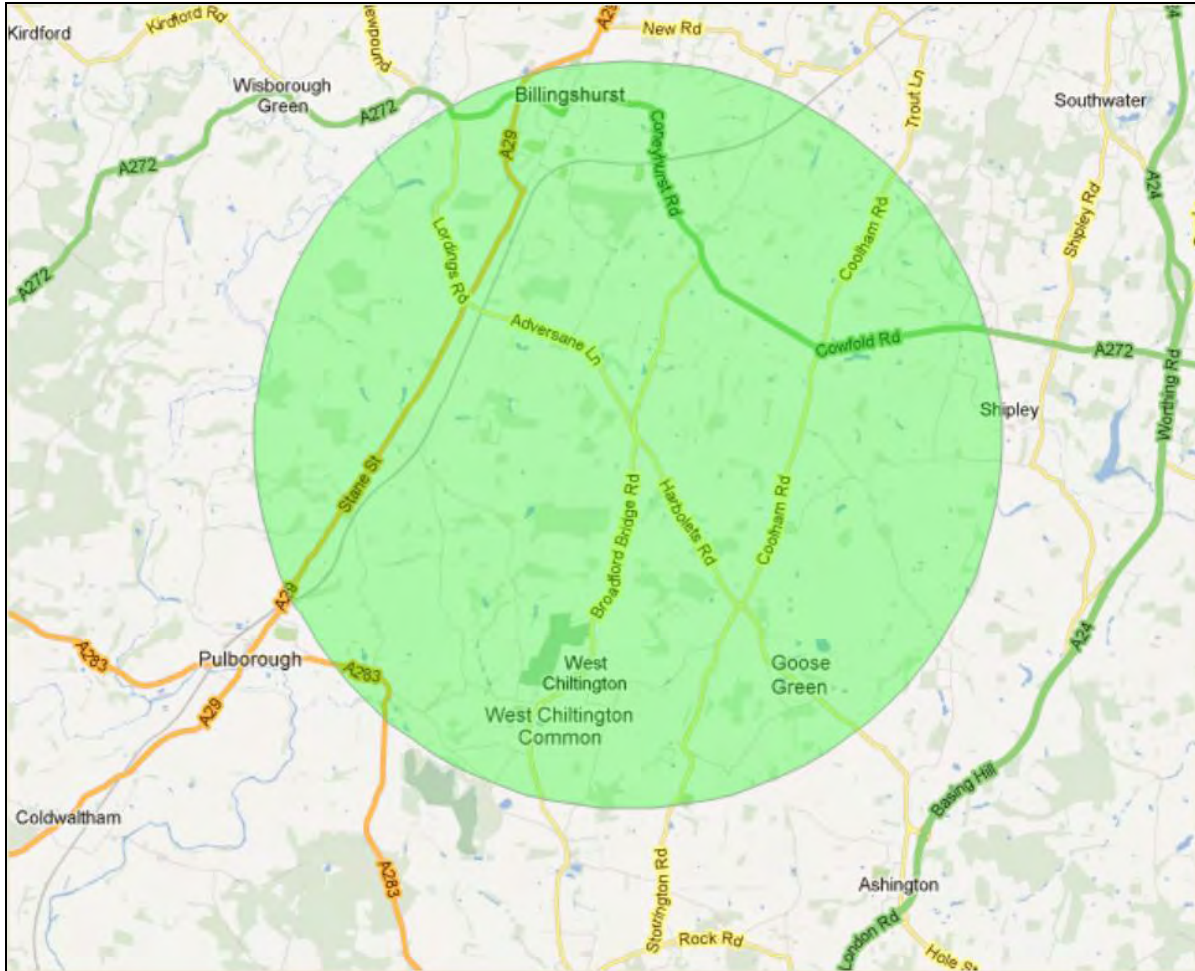
revealing that its proposals will generate a maximum of 35 additional two-way vehicle movements per day; this would represent just a 1.9% increase to existing traffic levels.

With regards to visual impact, Celtique highlighted that the tallest drilling rig that could possibly be used at the site would be no higher than 36m tall. Furthermore, BroadfordBridge-1 was carefully selected because of its discrete location and natural screening from both Pocock's Wood and Prince's Wood.

Celtique is committed to keeping the local community updated as the plans progress. The community information line and consultation email address will continue to operate and there is a dedicated page on Celtique's website about the consultation process. Celtique submits its application to West Sussex County Council fully aware that the Council's own consultation may reveal further issues and lead to further discussion of the Broadford Bridge-1 proposals. Celtique will, where possible, continue to remain open to further engagement throughout the planning process as the application proceeds towards determination.

## 7. Appendix

### 7.1 Map showing public exhibition invitation letter distribution area





## 7.2 Public exhibition invitation letter

### Celtique Energie Weald Limited

8 June 2012

Dear Local Resident,

**Consultation on proposed exploratory drilling planning application, Broadford Bridge  
Public exhibition 22/23 June at Billingshurst Community and Conference Centre**

I am writing to you personally as the chief executive of Celtique Energie Weald Limited, a British-based oil and gas exploration company, to let you know of our intention to seek planning permission for a temporary exploratory well site near Broadford Bridge, south of Billingshurst.

In 2008 the Department for Energy and Climate Change awarded Celtique a number of licenses across England to explore for onshore oil and gas reserves in areas where there is a history of oil and gas reserves and a history of previous onshore exploration, including four licence blocks in the Weald.

There are already a number of existing production wells which can be seen in the local area, operated by other companies in adjacent licence areas. The closest one is located alongside the A283 between Storrington and Pulborough. This was drilled in 1998 and has been extracting oil since that time.

After undertaking several detailed surveys of potential well sites within our own license area, we have identified a remote area of land located near Broadford Bridge away from residential properties and with good screening, which we believe would be suitable for an exploratory well site.

The planning application we hope to make to West Sussex County Council will be for a gas or oil well, similar to the existing well sites nearby. It would not require the use of hydraulic fracturing or 'fracking' that has recently featured in the local and national press.

As part of our commitment to being an open and transparent potential local operator, we would like to invite you to a public exhibition on our proposals, where you can meet members of the project team and share your feedback about the potential location for exploratory drilling. You will be able to find out more about the local geology, how an exploratory bore is drilled and how local impacts will be minimised at all stages.

The exhibition, open to all, will be held in the main hall at the **Billingshurst Community and Conference Centre, Roman Way, Billingshurst RH14 9QW**, on the following dates:

- **Friday 22 June, 3.30 pm to 8 pm**
- **Saturday 23 June, 12.30 pm to 5 pm**

If you have any queries, or are unable to attend the event but would like to make comments, please contact our free phone line for more information on **0800 023 2148**, or alternatively e-mail us at [consultation@celtiqueenergie.com](mailto:consultation@celtiqueenergie.com) at any time with your comments.

Yours sincerely,

Geoff Davies  
Chief Executive

[www.celtiqueenergie.com](http://www.celtiqueenergie.com)

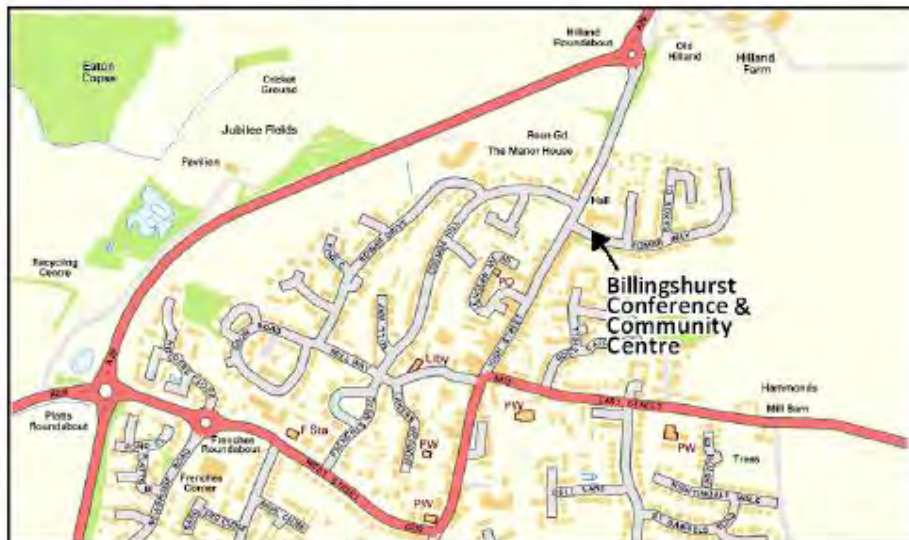
Registered Company No. 07055133



Celtique Energie, Public Consultation Event, Friday 22/Saturday 23 June 2012

Venue: Billingshurst Conference & Community Centre, Roman Way,  
RH14 9QW

Celtique Public  
Information Line: 0800 023 2148



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7.3 Press advert that appeared in the West Sussex County Times on 14 June 2012

**Celtique Energie Weald Limited**


## PUBLIC CONSULTATION

Celtique Energie Weald Ltd., a British oil and gas exploration company, would like to invite you to its public exhibition on its proposals for a temporary gas exploration well located near Broadford Bridge.

We will be hosting our exhibitions on the following dates:

- **Friday 22 June, 3.30 pm – 8 pm**
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The exhibitions will be held at Billingshurst Community and Conference Centre, Roman Way, RH14 9QW.



If you have any queries prior to the exhibition, please contact our freephone community information line on 0800 023 2148, or email [consultation@celtiqueenergie.com](mailto:consultation@celtiqueenergie.com)

## 7.4 Press coverage (West Sussex County Times, 14 June 2012)

# Oil firm bidding for rights to drill in district seeks public approval

By Joanna Powell  
 01243 761111  
 01243 761111  
 01243 761111

**A British energy company is bidding to drill for oil and gas south of Billingshurst as it prepares to submit a planning application later this month.**

Celtique Energie hopes it will strike a natural gas field on the site at Broadford Bridge off Adversane Lane.

Speaking exclusively to the County Times, a chief operating officer said the bid represented a three to four million pound investment in the local economy and could create hundreds of skilled jobs.

Stuart Catterall, 49, who has lived with his family in Horsham for 12 years, said 6,000 letters were already landing on the doormats of those living near the site, which is owned by a local farmer.

The company has stressed Celtique was keen to be as transparent and informative as possible throughout the whole process, with exhibitions at Billingshurst Community and Conference Centre on June 22 and 23 informing the public of the initial plans.

In light of the recent uproar over the controversial technique of fracking, the engineer explained Celtique was prospecting for conventional oil and gas deposits in this instance.

This method uses the pressure of the trapped deposits in porous rock to bring it to the surface, compared to pumping high-pressure chemicals to split or fracture shale rock to release oil or gas.

New geological data has the firm confident of striking a large gas deposit, and Celtique has several other prospective sites in the area, even though it currently has no firm plans for future locations.

"I hope people will see the positive aspects, especially the employment with a few hundred skilled employees," said Mr Catterall, adding: "For several weeks it could be several times that."

He recognised some may have concerns about the oil industry becoming established in the rural area. "It's a natural reaction," he said, "and it's not a surprise. Everyone wants to preserve the natural beauty of West Sussex, especially me because I live here."

Celtique already holds exploratory licences for parts of the Weald Basin, covering a substantial stretch of north West Sussex.

However, the firm must submit a planning application to West Sussex County Council as the local minerals planning authority for the two-hectare site off Adversane Lane.

Putting in the initial structure - a drilling tower around 20 metres high and associated temporary structures - will then take six weeks. Mr Catterall admitted this process would involve truck movements on local roads.

A maximum of 35 two-way traffic movements would be necessary to facilitate the initial construction phase which, according to Celtique, represents a 1.9 per cent increase on existing traffic movements. Similar heavy journeys would be necessary over a further six to eight week period while the company explores for oil or gas.

While road upgrades might be needed, he said that the site had been specifically chosen as it was away from built-up areas and with solid road links.

Should commercially viable deposits be found, Celtique would then have to submit a field development plan to the Department for Energy and Climate Change (DECC) and gain planning permission for a permanent production facility.

However, Mr Catterall did point out that energy exploration was not new in West Sussex, highlighting an operational oil well at nearby Storrington.

In response to concerns of pollution, noise and impact on nature, he pledged to minimise the environmental impact in both flora and fauna and predicted that the increasing volume of traffic would be the noisiest sound on the site.



**"Everyone wants to preserve the natural beauty of West Sussex"**

Stuart Catterall, Chief Operating Officer for Celtique Energie

If granted planning permission, and exploration is successful, Broadford Bridge could mark Celtique's first operating well.

Meanwhile any deposits are property of the British Crown, as legislation sets out the amount of royalty paid to the Government.

Celtique has been trading since 2004, and is backed by Avista Capital Partners, an American private equity firm, and a European company called Calsonex.

The exhibition will be in the main hall of Billingshurst's Community and Conference Centre in Roman Way on Friday June 22 between 3.30 and 8pm, and Saturday June 23 12.30 to 5pm.

Comments can be sent to consultation@celtiqueenergie.com or call 0800 023 2148.

### Fears around drilling for gas

While the country has been consumed with fears over fracking over the past year, Mr Catterall said that it would not be suitable for the Broadford Bridge site. However he did admit Celtique was considering fracking in West Sussex.

If the firm gets approval it will remove topsoil and erect a platform, drilling on a continuous basis to a depth of around 10,000 feet. To prevent aquifer contamination, cement is pumped down the hole to create a seal around the borehole. Engineers will then confirm whether or not there are hydrocarbons there and evaluate the properties of the rock.



An indicative view of how Celtique claims a 36m drilling rig would look 500 metres away, viewed from the south-west towards the site from Adversane Lane (S2133). The company states that the existing screening of the site is good, minimising the visual impact of the rig itself. (Image supplied by Celtique Energie)

ON THE WEB



JOIN THE ORANGE BY THE WEST SUSSEX COUNTY TIMES FACEBOOK PAGE Find us at West Sussex County Times

## Celtique Energie Weald Limited PUBLIC CONSULTATION

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Press coverage (West Sussex County Times, 28 June 2012)



Celtique Energie's Stuart Catterall explains the drilling plans at Billingshurst Conference and Community Centre at the weekend

# Rural drilling proposal under public scrutiny

By **Jonina Pownall**  
 01243 890190 or 01243 890191  
 01403 701201 @WSTJ\_Jonina

**The public had an opportunity to view prospective drilling plans for Broadford Bridge near West Chiltington last weekend.**

Celtique Energie is consulting with members of the public before submitting a planning application to explore for gas and oil off Adversane Lane at Woodburn Farm.

County, district and parish councillors were also invited to view the plans and talk to the company's chief executive and chief operating officer.

John Stephens, from Broadford Bridge, said: "We're not particularly concerned about the short term obstructions, it's only the long-term running of the site we're interested in."

He and his wife Sandra expressed concern that a very rural area might be affected by 70 new workers coming into the area, but added that it was good to see all the information up front, rather than looking at a planning application that they

knew nothing about.

After digesting the public's responses, which has a deadline of Tuesday July 3, the firm will submit the application to West Sussex County Council as the local minerals planning authority for the two-hectare site.

If approved, the structures will take six weeks to install, then it will take another six to eight weeks to explore.

If the company finds sizeable deposits, it will have to submit a field development plan to the Department for Energy and Climate Change (DECC) and gain planning permission for a permanent production facility.

Harvey Steele, West Chiltington parish councillor, said: "They have gone to a lot of trouble to tell people what it's all about and explained what's involved in the operation."

"They've taken the environment into account and done a first class job."

"They've also tried to choose a site that is screened from the public."

A West Chiltington resident who did not want to be named, expressed his frustration at the information presented.

He said: "They're represent-



"I personally think it's an exciting opportunity"

**Pat Arculus**  
 County Councillor  
 (Dev, Billingshurst)

ing themselves as a British company when the majority of their investors are American.

"There's no mention on any of their boards of West Chiltington. I find that a bit odd, that they are being so coy about not talking about West Chiltington as that's where this site is."

Bob Phillips, Shipley parish councillor, who is also heavily involved with the Scouts in the area, said he would like to take the youngsters to the site, if ap-

proved, to fire their interest in engineering or geology.

County councillor Pat Arculus (Con, Pulborough) added: "They have got a very good exhibition and I hope that members of the public do have a look at it."

"I will have to wait and see what my residents say, but I personally think it's an exciting opportunity."

Stuart Catterall, chief operating officer for Celtique, said: "The verbal and written feedback we received from the event indicates that the vast majority of people came away from the exhibition better informed about our proposals, which is important for us as a company committed to open and transparent engagement."


He added: "We are fully committed to having an ongoing dialogue with the community and will continue to engage with local residents to update them on the progress of the proposals over the coming months."

Comments can be sent to consultation@celtiqueenergie.com or by calling 0800 023 2148.

For more information visit the dedicated page at [www.celtiqueenergie.com/woodburnfarm](http://www.celtiqueenergie.com/woodburnfarm)

## 7.5 Exhibition Boards

Welcome



This region of Sussex is covered by Celtique's exploration licence PEDL 234 which provides the company with exploratory drilling rights, subject to planning approval.

Celtique has 20 exploration licences in six countries within onshore Europe and is the operator of 13 of these licences.

The company is led by a highly experienced team who have worked in energy exploration and production for many years and employs 30 dedicated members of staff and specialist consultants.

In 2008 the Department of Energy and Climate Change (DECC) awarded Celtique four licences to explore for oil and gas in southern England along with its partner

Magellan Petroleum (UK), a separate company that holds a 50% interest.

Petroleum Exploration and Development Licences (PEDLs) 231, 234 and 243 are located in the central Weald Basin and these form the core area of the company's exploration effort in this region.

Geological and geophysical studies indicate that there could be significant untapped reserves of oil and gas in this region.





Today's public exhibition will provide an opportunity for us to introduce ourselves to the local community, to explain our proposals, the exploratory techniques we intend to use and timescale for the operation.

Celtique is committed to taking an open and transparent approach to all of its operations.

If you have any questions, please feel free to ask any member of the team who are attending today's event.

**Feedback from the local community is very important, and your views do matter. We would be very grateful if you would take the time to share your thoughts with us by completing a short questionnaire. These will be taken into consideration in preparing our planning application.**

\* Celtique Energie Weald Ltd

Celtique Energie

Exploring responsibly for oil and gas in Europe

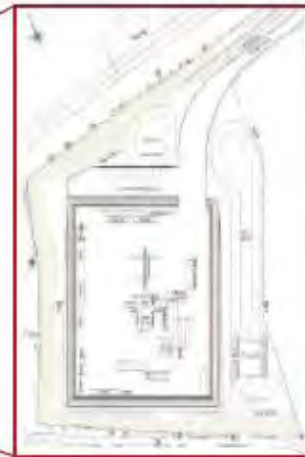
## Our Project at Broadford Bridge



This region of Sussex is covered by Celtique's exploration licence PEDL 234 which provides the company with exploratory drilling rights, subject to planning approval.

Celtique has identified a structure beneath the surface at Woodbarn Farm, near the village of Broadford Bridge that may contain a large oil or gas accumulation and are keen to investigate it by drilling an exploration well.

Celtique is submitting a planning application to West Sussex County Council (WSSCC) to construct a temporary well site and drill an exploration well.



Markwells Wood-1 well site in West Sussex – Courtesy of Northern Petroleum Plc

The proposed site at Woodbarn Farm is about one mile west of Broadford Bridge. The well would be drilled to a depth of approximately 3km (10,000 feet) below ground level.

Celtique has undertaken an Environmental Impact Assessment (EIA) to better understand the site and its surroundings, and will take all steps needed to ensure the protection of wildlife and the natural environment.

More about this study can be seen in the environmental section of our exhibition.

More about how we drill exploration wells can be seen in our exhibit on drilling technology.

## Oil and Gas Exploration in Southern England



The Weald Basin underlies Sussex and parts of Surrey, Hampshire and Kent. Sediments laid down in this depositional basin include organic rich rocks and porous sandstones and limestones.

Over millions of years, the sediments have been compressed to form the rocks we see today exposed on the coast. The combination of heat and pressure exerted on the organic rich rocks deep within the basin has resulted in the generation of significant quantities of oil and gas. Some of these hydrocarbons have migrated into traps containing the porous reservoir rocks. These became the oil and gas fields we know in the area.

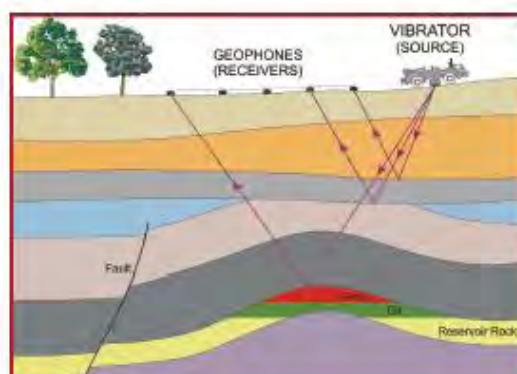
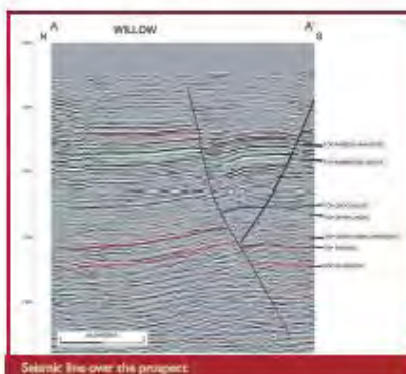
Sussex is an important, hydrocarbon rich county and contains a number of oil and gas fields currently in production. Gas was first put to use in Sussex in 1896, when employees of the London, Brighton and South Coast Railway in Heathfield discovered gas while drilling a borehole, looking for a water supply.



Oil was first discovered in Kimmeridge in Dorset in 1959; this is the oldest continually producing oilfield in southern England. Oil was also discovered at Wytch Farm in the Bridport Sands in 1973; this site is still producing oil, and is one of the largest onshore oilfields in northwest Europe.

Recent geoscience studies carried out by Celtique have indicated that there could be significant untapped oil or gas reserves still present in the Weald Basin below Sussex.

If oil or gas reserves prove to be economically viable, Celtique's work would make a useful additional contribution to the UK's energy mix, improving energy security of supply and provide significant benefits to both the local and national economy.



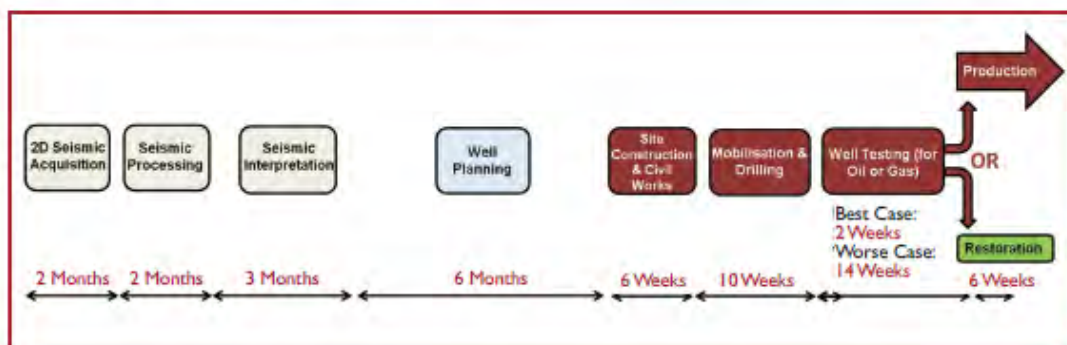
We have a section in our exhibition which explains more about how we explore for oil and gas.

## Next steps



Once we have taken into consideration your feedback we will prepare and submit our planning application.

- Once submitted, West Sussex County Council's planning department will engage in a process of consultation with the community and with relevant authorities.
- Following that process they will prepare a report and recommendation for consideration by the planning committee of West Sussex County Council who will make the decision.
- If granted planning approval, it would take about six weeks to construct the site once Celtique is ready to start drilling.
- The mobilisation and drilling operation itself then takes six – 10 weeks, but the timing of the rig arriving on site depends on availability as there are just a few drilling rigs operating onshore in western Europe.
- Once drilling is complete the rig is dismantled and removed from the site.
- If oil or gas is discovered following a successful well test, the well would be suspended with at least two barriers and consideration given to plans for longer term production. Otherwise the site would be restored and returned to its original condition.
- The construction and installation of any permanent production facilities would require further planning approval.



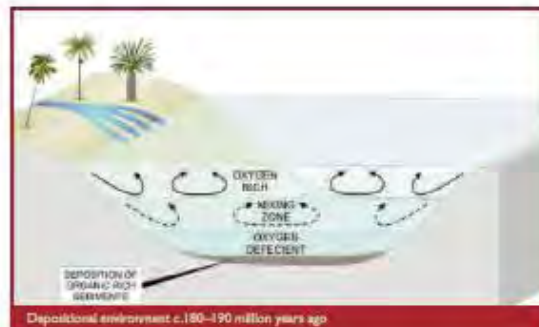


## What are the Ingredients for a Hydrocarbon Accumulation?



### SOURCE ROCK

An organic rich rock. These are often shales which have been deposited in a low energy marine environment with little or no oxygen. When the source rock is buried, the organic matter is converted to oil or gas under increased temperatures and pressures in the earth.



### RESERVOIR ROCK

A porous and permeable rock. In this case the reservoir rock is a Sandstone. Oil or gas are stored in spaces in the rock. The reservoir Celtique expect to find at depth here was deposited in river systems 245 million years ago.



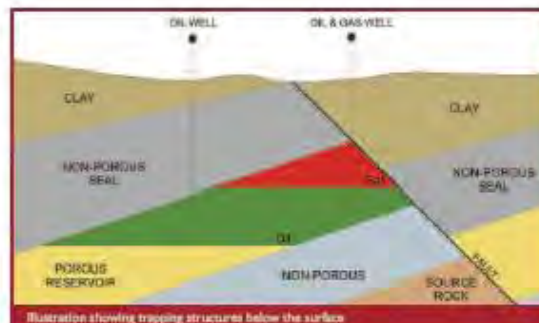
### CAP ROCK

An impermeable rock. The Cap rock seals the hydrocarbons in place and prevents them from leaving the reservoir rock and migrating to the surface. The Cap rock here is non porous, fine grained shales.

### TRAPPING STRUCTURE

Hydrocarbons (oil and gas) will find a path through the earth towards the surface due to buoyancy. Oil and gas will therefore be trapped and accumulate at a "high point" in the subsurface structure, where that point is overlain by a cap rock. The structures here at depth are known as Tilted Fault Blocks.

If your trapping structures have not formed when your source rock is mature to generate hydrocarbons, or a cap or reservoir rock has not been deposited, any oil or gas would have leaked away to the surface and would have been lost. So historical timing is extremely important.



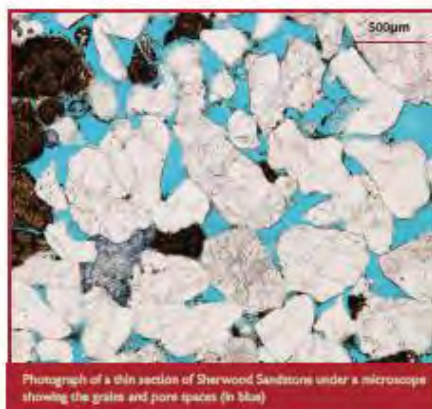
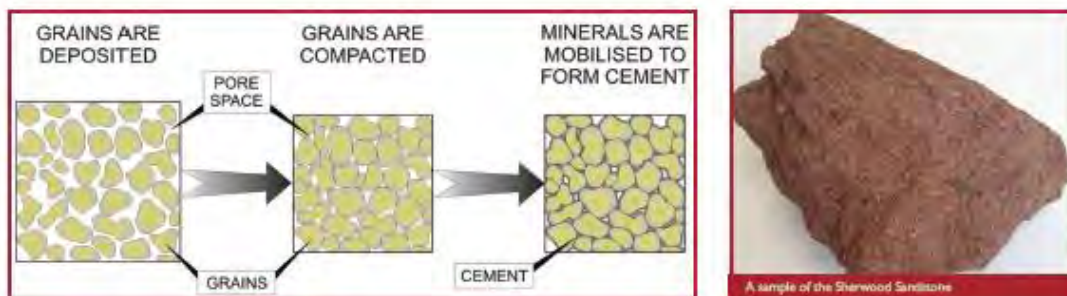
## Why are we looking for Sandstones?



Sandstones are the main reservoir target because they contain pore spaces which can hold gas or oil.

Sandstones are sedimentary rocks. They are formed of many individual grains of rock which have been deposited either by rivers, the wind or the sea.

Individual grains of rock are gradually buried as more rocks are deposited on top of them. As the rocks are buried, they are first compacted, and then cemented to form a competent rock unit. This process is called lithification.



The resulting holes in the rock or porosity determines the storage capacity but a good reservoir rock also has to have permeability. This is a measure of how well the fluid or gas can flow through the rock. The better the holes in the rock are aligned, the higher the permeability.



The rocks that we will find at a depth greater than 8,000ft below the ground can be seen at the surface on the coast of Devon. They were deposited 245 million years ago when the Dinosaurs were only just evolving!

## The First Oil and Gas Discoveries in Southern England



Natural resources have been extracted from the ground in the Weald Basin for many years. Historically, iron ore was mined in the region from as far back as the Iron Age (c.750 BC to AD 43), through to early medieval periods.

In 1895 gas was accidentally discovered in the stable yard of the Heathfield Hotel, close to the railway station. In 1896 gas was discovered in a borehole being drilled by the railway company who were looking for a source of good quality water. No water was found, but Heathfield Railway Station was subsequently lit by the gas from 1898 to 1930.



Discovery of Natural Gas in Sitons—Heathfield Station

c.1920 courtesy of The Heathfield Partnership Trust Ltd and Mr Burgess (deceased)



Oil shale mining was carried out in the 1890's at Kimmeridge, Dorset, for shale oil production.

Courtesy of Ian West

Oil shale mining was carried out in the 1890's at Kimmeridge, Dorset, for shale oil production.

The Kimmeridge clay formation is an extremely rich source rock with a very high level of organic matter (kerogen). Although this rock will not ignite easily, once it has been ignited, it will burn for a long period of time as it is so organically rich.



Kimmeridge Bay, Dorset



Courtesy of Ian West

## Oil and Gas Exploration in Southern England



Since the late 19th Century, southern England has witnessed periodic exploration activity. Early exploration began in 1935, after the 1934 Petroleum Production Act was passed.

The first few wells were unsuccessful. The Kimmeridge oilfield in Dorset was discovered in 1959 and is the oldest continuously producing field in England. Oil was discovered at Wytch Farm in the Jurassic Sands in 1973, and subsequently in the Triassic Sherwood Sandstone in 1977. This field is still producing and is one of the largest oilfields in northwest Europe with over 500 million barrels of recoverable oil. The Weald Basin is a proven Hydrocarbon Province and has been producing oil for over 30 years.

Little exploration has taken place in southern England for more than 20 years. However, with declining production from North Sea oil and gas fields, attention has recently shifted back to this area. In 2008, the Department for Energy and Climate Change awarded Celtique a number of licences to explore for oil and gas in the region. Celtique has identified a potential prospect and is preparing to undertake exploratory drilling.



1973 Wytch Farm Oilfield (courtesy of bp/Shell)



1980 Hambly Grove Oilfield



Aerial View of Hambly Grove Oilfield (Google Earth Image)



Aerial View of the Wytch Farm Oilfield (Google Earth Image)



Aerial View of the Storrington Oilfield (Google Earth Image)



1959 Kimmeridge Oilfield (Google Earth Image)



1988 Singleton Oilfield



1986 Storrington Oilfield

## What is Seismic? How Can This Technique Help Us to Find Hydrocarbons?



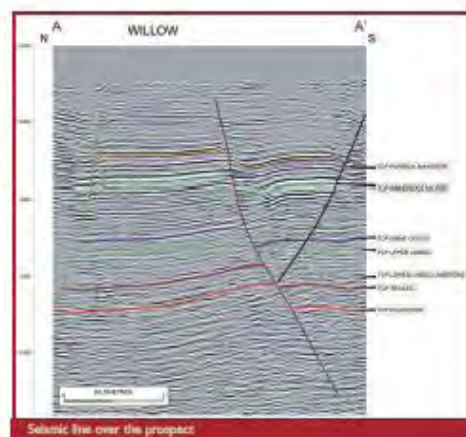
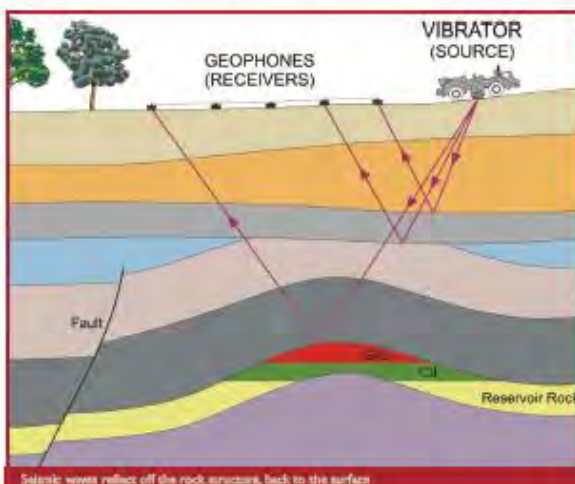
Seismic is a common tool that is used in the oil and gas industry to help us to locate underground geological structures and traps.

The technique is analogous to medical ultrasound scans or echo-sounding on boats or submarines. Energy is generated at the surface and is reflected off the subsurface strata due to rock property changes. The energy is generated using large machines known as a Vibroseis trucks, and is transmitted into the ground using a hydraulic plate. This plate vibrates at different frequencies and transmits energy into the ground.

The reflected waves are recorded at the surface using Geophones. The deeper the strata, the longer it takes for the wave to be reflected back and to reach the surface. The first seismic data was acquired in the area during the 1960s. The photographs below show new seismic being acquired in 2011.



The image to the right shows one of the resulting seismic sections which was acquired from a recent survey.

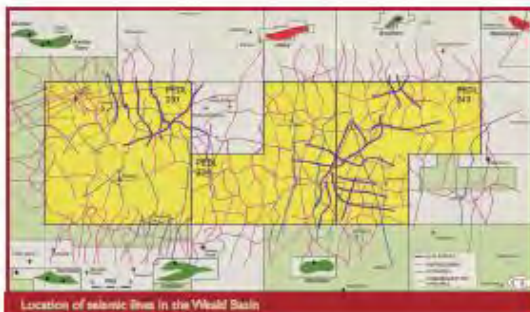


This seismic section shows the underground structure, with reflectors showing the boundary between rock layers with different properties.

## Exciting New Prospects Deep Below the Surface



With the recent advances in technology, it is now possible to relook at older seismic. Celtique has re-evaluated all the data and this has given us new insights into the underground structures of the Weald Basin in southern England.



Location of seismic lines in the Weald Basin

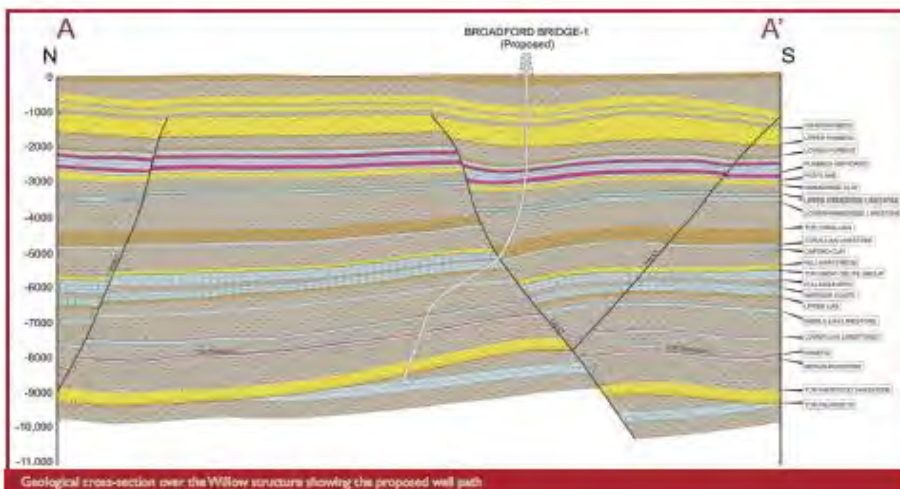
The results indicate several large structures deep within the basin. Celtique now wish to test these structures by drilling, and the first of these wells, called Broadford Bridge-1, tests a structure beneath the surface at Woodbarn Farm.

The contour map – second image on the left – shows the shape of the Willow Prospect deep below ground level.



Willow Prospect Contour Map

The target reservoir is the Triassic Sherwood Sandstone, anticipated to be 2.5km below the surface. The sandstone is expected to have good porosity and permeability (storage space and flow capacity) that would allow oil or gas to flow naturally. Celtique will use standard industry drilling techniques that have been safely used in the UK for many years. No hydraulic fracturing techniques (or "fracking" as it is known) will be used at Woodbarn Farm.



Geological cross-section over the Willow structure showing the proposed well path

## Typical UK Drilling Locations



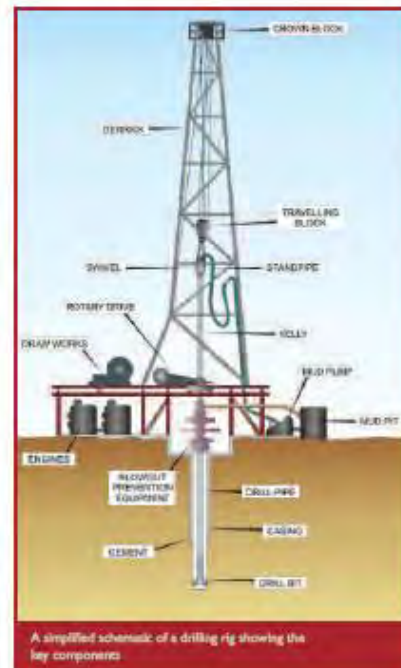
The picture below shows the drilling rig on the Markwells Wood-1 well site in West Sussex, nestled into the corner of woodland and hidden from the surrounding residences.



Markwells Wood-1 well site in West Sussex – Courtesy of Northern Petroleum Plc

The compact site and use of natural screening minimises the impact on the local community.

Components of the drilling rig are moved onto location over a five day period and assembled there.



A simplified schematic of a drilling rig showing the key components

The drilling process is constantly monitored in real time. Parameters such as hole depth, bit depth, weight on bit, revs per minute, torque mud pit volumes, mud density in and out and gas content in the mud are continuously monitored with alarms set for when these values move outside the expected range.



Monitors displaying these parameters are provided on the drill floor and for the rig tool pusher and Celtique's on-site representative.

## How We Drill



The drilling bit sits at the bottom of the drill string below the bottom hole assembly (BHA), consisting of drill collars and stabilisers.



The stabilisers help us drill a straight hole and the drill collars provide the weight on the bit. The BHA is run in on drill pipe which is rotated by a motor at surface or a downhole motor if drilling directionally.

The drill bit is designed to drill using a crushing/shearing motion, and although the three cones appear to be set equally, they are in fact slightly offset. The weight required on the bit is up to 5000 lbs per inch of diameter, so an 8½" bit will have up to 20 tons weight on it to drill.

The drill pipe and collars are generally around 30ft in length and have special tapered threads so they can be screwed together.



Drill Bit



Stabilisers



Drill Pipe



## How We Drill - The Mud System



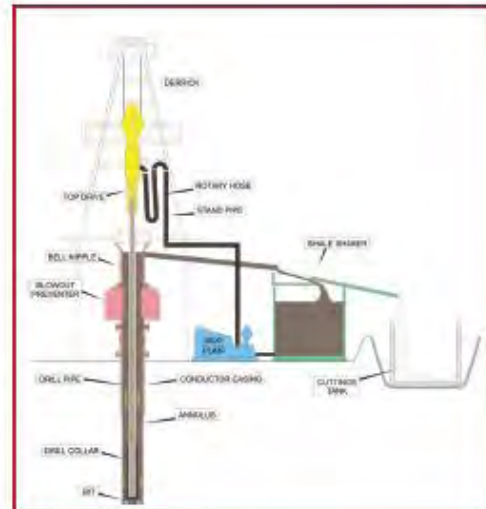
The drilling mud provides a number of key functions, it:

- cleans the bit face and the hole and transports the cuttings away from the bit;
- controls the fluid pressures in the formations drilled;
- maintains wellbore stability;
- lubricates and cools the drill string and bit; and
- minimises impact on the environment.

The drilling mud is circulated by the mud pumps down the drill pipe and through nozzles in the bit. After the mud passes through the nozzles in the bit it picks up the drilled cuttings and transports them up the annulus between the hole and the drill pipe to the surface.

At surface, the drilling mud is passed over the shale shakers consisting of a series of vibrating mesh screens which allow the drilling mud to pass through, but the drill cuttings are retained and discharged to a tank for removal to a waste disposal facility.

The modern drilling mud is environmentally compatible and are designed to provide viscosity, gel strength and minimise filtration to the formations drilled. The mud is totally self contained in tanks, and does not utilise pits dug in the ground.



Components of drilling mud system

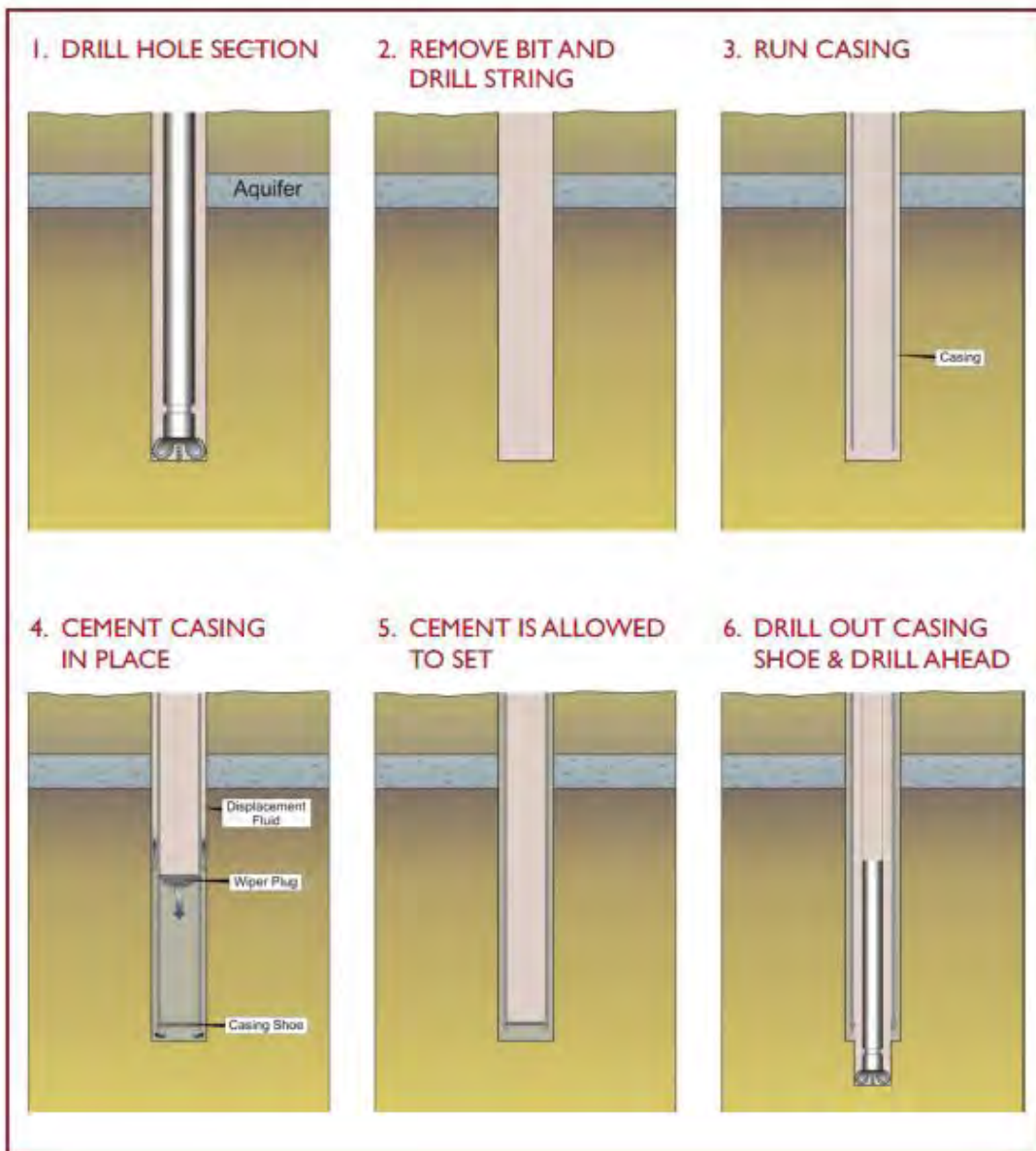


Mud pumps



Shale shakers

# Casing the Hole



## How We Drill - Directional Drilling



In most cases we cannot find a well site directly above the well target and therefore have to drill a directional well.

This is achieved by running a downhole motor above the bit (which provides bit rotation by the hydraulic power of drilling mud circulated down the drill string) attached to a steering assembly with a shallow (around 1°) bend.

A downhole gyroscope is used to orient the steering assembly to the azimuth required and mud pumped down the drill string and through the downhole motor to provide bit rotation.

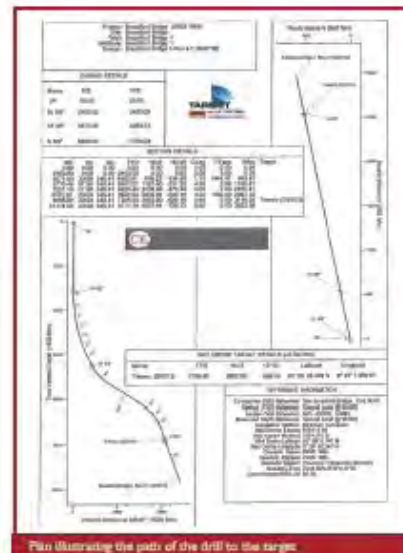
In this case the drill string is kept stationary as the hole angle builds along the desired azimuth.

During the directional drilling phase a MWD (Measurement While Drilling) system is used which measures the inclination and azimuth of the wellbore as well as a gamma ray sensor which gives an indication of the type of rock being drilled.

This information is sent to surface in real time using mud pulse telemetry. A downhole valve is employed to restrict the flow of drilling mud according to the digital information being transmitted, which creates small pressure fluctuations. These pressure fluctuations are picked up by pressure sensors at surface and processed by computers to reconstruct the information.



Schematic of deviated well path and Directional Bottom Hole Assembly



Plan illustrating the path of the drill to the target

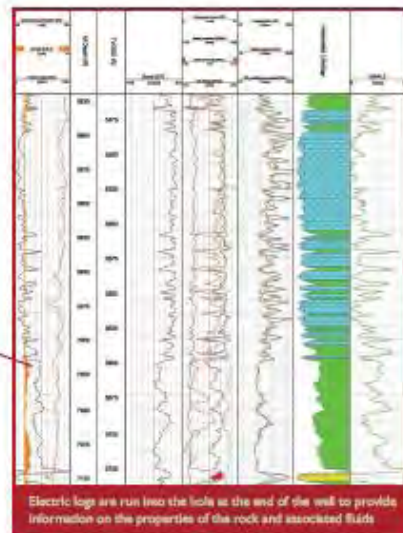
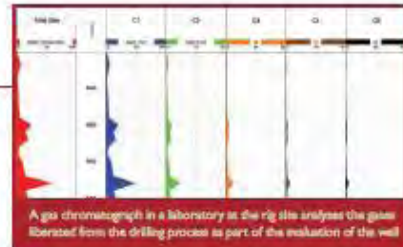
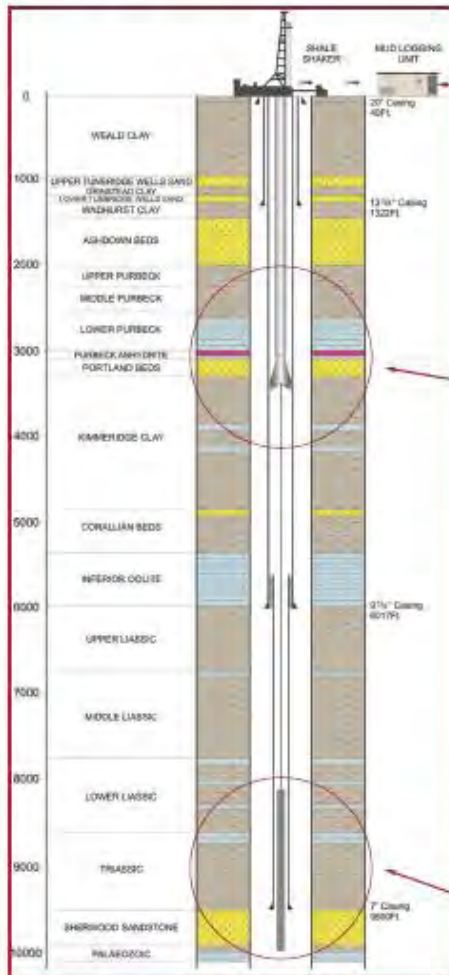
Euler's Equations		MWD Data		Azimuth Target		MWD Target		MWD Data		MWD Data		MWD Data		MWD Data		MWD Data		MWD Data	
Time	Lat	Depth	Depth	Inclination	Target	Actual	Target	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
14.24	70.58	1447	1447	90	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
14.33	14.50	1444	1444	85	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
14.42	14.58	1441	1441	80	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
14.51	14.67	1438	1438	75	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.00	14.76	1435	1435	70	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.09	14.85	1432	1432	65	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.18	14.94	1429	1429	60	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.27	15.03	1426	1426	55	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.36	15.12	1423	1423	50	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.45	15.21	1420	1420	45	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.54	15.30	1417	1417	40	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.63	15.39	1414	1414	35	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.72	15.48	1411	1411	30	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.81	15.57	1408	1408	25	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0
15.90	15.66	1405	1405	20	1.1	1.1	2.1	2.1	18	18	100	460	1100	1100	10.0	10.0	10.0	10.0	10.0

A number of variables are taken into consideration to ensure the drilling path is precise

# Rock Data Acquisition



During the drilling operation, important data will be collected in an onsite laboratory; rock cuttings samples are circulated to surface and are continuously examined to determine the rock type being drilled and to evaluate the presence of any hydrocarbon shows, and gasses in the mud are analysed for their hydrocarbon content.

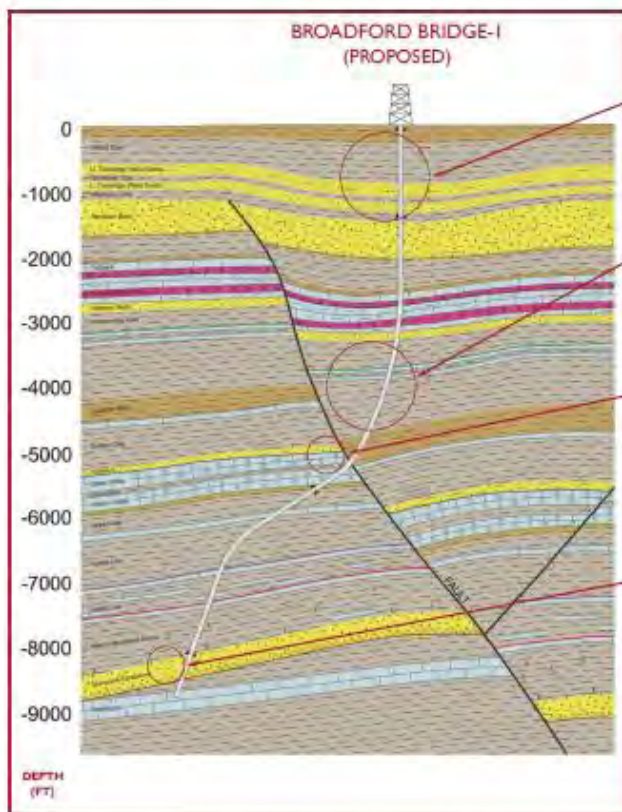


At the end of drilling the well may be tested to establish the fluid content and flow rate prior to completing the well. If successful, the well will be subsequently completed for production. If unsuccessful, the well will be plugged and abandoned and the site returned to its original condition.

## The Finished Well



Once the targeted well depth has been reached a process known as demobilisation occurs; drilling operations cease and the rig is disassembled and removed from the site.



The Tinbridge Wells sands are local freshwater aquifers. The well design ensures that the aquifers are isolated from the wellbore, behind casing, as soon as possible. Freshwater based drilling fluid will be used to drill this section. This further reduces any risk of aquifer contamination.

Some mudstone and shale formations such as the Kimmeridge and Oxford clays contain clay minerals (such as smectite) which swell when they come into contact with water. This reaction can cause problems in the borehole. An inhibitive drilling fluid will be used to drill this section which minimises or prevents clay swelling.

The Great Oolite is a highly porous layer which is the reservoir at several oil fields nearby. Broadford Bridge will not penetrate the Great Oolite due to offset of the stratigraphy caused by a fault. Fluid losses are sometimes experienced when drilling through this formation.

When the reservoir target is reached, casing will be set to isolate the reservoir from formations shallower in the borehole. If hydrocarbons are present, core may be acquired and/or the formation tested to understand how much oil or gas is stored in the Willow Prospect, and what measures will be required to extract any hydrocarbons.

If the reservoir is dry, the well will be plugged with cement and abandoned according to approved procedures and regulations and the surface site restored.

The completed wellbore itself consists of several layers of steel casing and cement; these layers isolate the wellbore from the surrounding rock formations and allow reservoir fluids to flow to the surface.



Onshore The casing of master and secondary valves to isolate the well

## Site and Surroundings



The proposed site is located on agricultural land at Woodbarn Farm, Broadford Bridge.



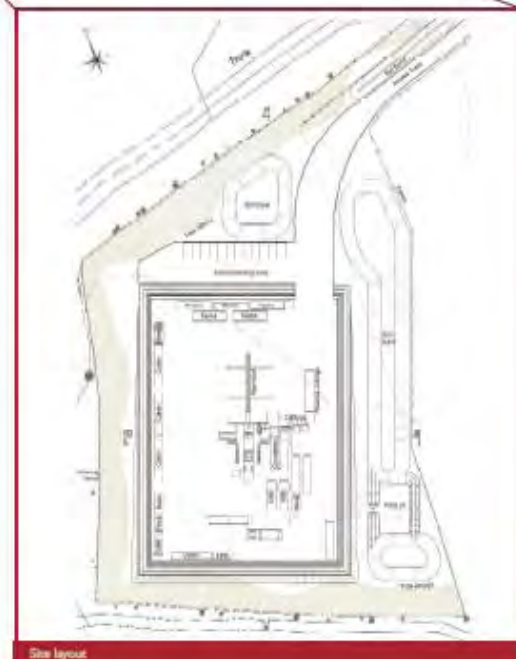
Location of site

Access to the site would be from an existing field entrance off Adversane Lane (B2133), with a new access road leading down to the proposed well site compound.

The surrounding environment to the site consists of pastureland (Grade 3) and mature woodland which will help to screen the proposed development from view.

All of the necessary drilling equipment will be enclosed in a fenced compound.

Both the top and sub soil will be retained on site in bunds, so it can one day be replaced when the well site is no longer required.



Site layout

## Landscape and Visual Impact



During drilling operations, a rig of up to 36m in height will be used on site for a period of six to 10 weeks.

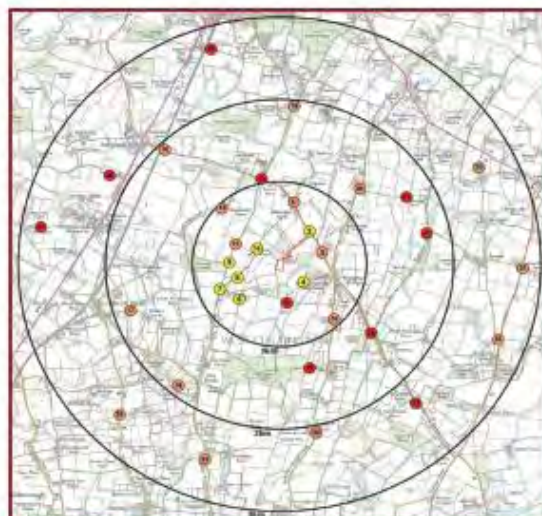
Should we find oil or gas, the drilling rig may be on site for up to a further two weeks whilst we test and evaluate the hydrocarbons found.

We have carried out a Landscape and Visual Impact Assessment (LVIA) which indicates that the drill rig will not be fully visible from either short or long distances.

The drilling rig will be on site for an anticipated period of 12 weeks and will not be a permanent feature in the landscape.

The local landscape and existing woodland helps to naturally screen the well site including the lower part of the drilling rig and the ground level equipment.

The illustrative photomontages provided below indicate the visibility of the drilling rig in the area around the site.



### KEY

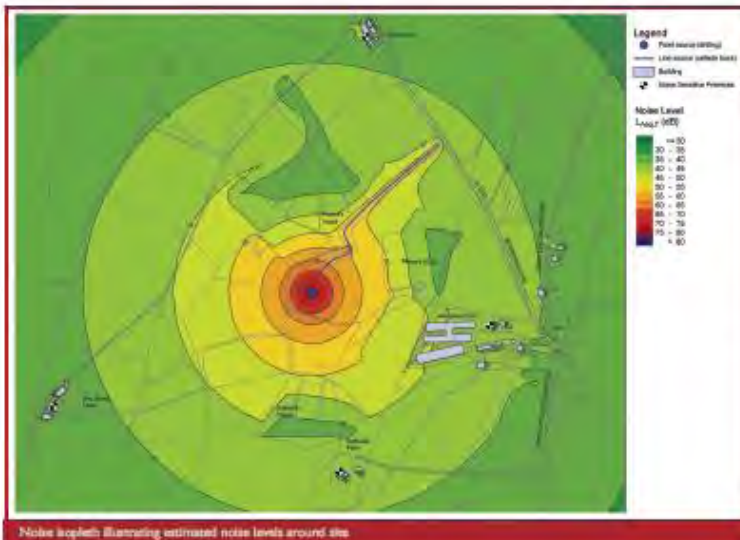
- Site and rig fully visible from viewpoint
- Site and rig partially visible from viewpoint
- Rig only visible from viewpoint
- Site and rig not visible from viewpoint



# Noise



A noise assessment has been carried out to ensure noise levels during construction and operation are not harmful to residents or the environment.



Noise isopleth illustrating estimated noise levels around the site

The noise isopleth shown below indicates the anticipated noise levels during drilling operations, on the surrounding environment.

Government advice on noise requires our proposed development to be below 45dB at neighbouring properties at night, 55dB during the evening and weekends and 65dB during the day.

Drilling would be undertaken 24 hours a day seven days a week and construction would take place during daytime hours only. The following information shows how the noise from our proposed development compares to other sources of noise and illustrates that we are within the Governments thresholds on noise emissions.

## NOISE COMPARISONS

NOISE SOURCE	Decibel Level (db)
Jet taking off (at 25m)	150
Chainsaw	120
Live rock music	110
Helicopter at 100ft	100
Motorbike at 25ft	90
Diesel truck 40mph at 50ft	83
Vacuum cleaner	70
Conversation in a restaurant	60
Conversation at home	50
Library	44
During construction of the proposed development	43 – 49
During drilling operations	38 – 42
Whisper	20
Breathing	10

## LIKELY NOISE LEVELS FROM OUR SITE

PROPERTY	Noise Source and dB	
	Construction	Drilling
Gatewick Farm off Broadford Bridge Road	47	42
Gay Street Farm, Gay Street	43	38
Homefield Farm, Adversane Lane	49	42
Wood Barn Farm, Adversane Lane	48	39



## Ecology and Lighting



There are a number of animal species which are protected under European law. We have undertaken surveys for all of these species on and around the site.

### DORMOUSE

No dormouse have been recorded by the surveys on and around the site, and we are continuing to check for this species.

### GREAT CRESTED NEWT

A low population of great crested newt was recorded in a pond outside the proposed site. No significant habitat loss or other effects are likely and we will programme the work to avoid harm.

### BADGER

There is evidence of badger in the area but no badger setts were identified on or close to the site.

### BATS

There was evidence of bats using this rural, woodland area for foraging and we have included measures for their protection in the design of the well site, particularly in relation to noise and lighting.

### LIGHTING

Drilling will take place 24 hours a day seven days a week and therefore lighting is required at night for the health and safety of the crew.

A Lighting Assessment has been carried out on the proposed development and proposes that light sources will be both downward and inward facing to minimise light intrusion on the local environment, residents and bats.



## Drainage, Flood Risk and Groundwater Protection



According to Environment Agency Flood Zone mapping, the site falls within an area classified as having a “Low Probability” of flooding with less than a one in 1,000 annual probability of flooding in any year.



An impermeable membrane is placed on site to prevent any contamination



Interceptor ditches lined with impermeable membrane

However, our on site water storage provision allows for there being a one in 100 year storm. If there was such a storm, the site would be approximately 25mm under water and the proposed development will therefore not have an impact on flood risk.

Surface water and drainage will be managed through the following design measures:

- drainage along the access road where required;
- lining of the internal well site with a impermeable membrane falling to a perimeter interceptor ditch;
- interceptor ditches falling to a corner sump; and
- the contents of the perimeter interceptor ditches and sump will be a) used for building new drilling mud, b) released to the water environment after passing through a Class I Full Retention separator, or c) taken by tanker to an approved disposal facility if contaminants are present.

Near surface aquifers are protected by the:

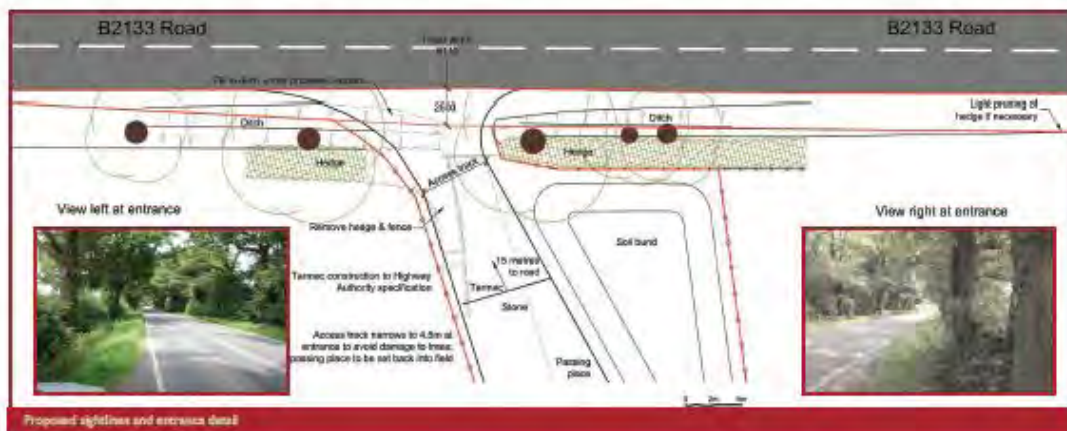
- use of a freshwater drilling mud with non-toxic additives;
- control of the mud-balance such that lost circulation and formation invasion are minimized; and
- the very short-term exposure of the formation to the drilling mud, given that the hole is quickly cased after drilling.

These mitigation measures are standard and are incorporated into the design of the well.

# Transport and Access

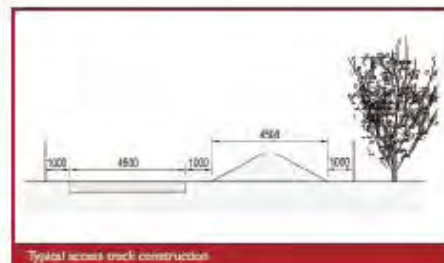


Vehicles going to and from the site will use a designated route from the A29 Stane Street on to the B2133 Adversane Lane, before joining the temporary access road which will lead down to the well site.



The temporary access road will operate with a right turn in and a left turn out only routing. By proposing this routing, none of the substantial oak trees adjacent to the existing entrance will need to be removed.

The greatest number of vehicle movements will occur over a period of six weeks whilst the proposed development is being constructed. A Traffic Management Plan has been prepared which details how traffic and any associated risks to employees and road users will be managed.



Phase 1: Construction of access road and well site	Time Period	Existing Two-way Traffic Volumes			Proposed increase in Two-way Traffic Volumes		
		Total	Light Vehicles (<1.5t)	Heavy Vehicles (>1.5t)	Total	Light Vehicles (<1.5t)	Heavy Vehicle (>1.5t)
Forecast traffic associated with Phase 1 of the proposed development	AM Peak (08:00-09:00)	251	242	9	9	7	2
	PM Peak (15:00-16:00)	118	110	8	2	0	2
	24-hour (Annual Average Weekday Traffic)	1802	1722	110	35	13	22



## Community Benefits



If Celtique finds hydrocarbon reserves which are economically viable then the production phase will offer a number of significant benefits to the local community.

If we move to a permanent field development plan then Celtique will seek to recruit staff locally, and encourage our suppliers to do the same. This would equate to millions of pounds of additional economic activity within the region.

If we are successful in our testing and develop permanent operations at Broadford Bridge, Celtique will look to be

a good neighbour and support local initiatives within the community.

Celtique will also seek to work with local schools to promote education and awareness around the local geology and the technical and engineering challenges of exploring for and developing oil and gas fields.



Celtique will seek to work with local schools to support education initiatives

## What Happens Next?



We are currently assessing the results of our Environmental Impact Assessments (EIA) and preparing a planning application which will include an Environmental Statement (ES) discussing these results. Following the collection of information from our Public Consultation, we anticipate that we will submit our application to West Sussex County Council in July 2012.

EVENT	DURATION
Public Exhibition held	2 days
Comments from the Public Consultation are collated with relevant issues being resolved in the design and planning application	2 weeks
Planning application submitted to West Sussex County Council	16 weeks
Public consultation letters sent out to local residents and stakeholders seeking their opinion on the application	3 weeks
A decision will be issued by West Sussex County Council	1 day
Information to discharge any conditions is submitted	2 weeks
Conditions discharged by West Sussex County Council	6 weeks
Construction begins on site	6 weeks
Drilling operations are undertaken	10 weeks (max)
The site is restored if no oil or gas is discovered	6 weeks
Any oil or gas discovered is tested and evaluated	14 weeks (max)
If not restored, the site is retained whilst an application for production of any oil or gas reserves is prepared and submitted to West Sussex County Council	30 months (max)

We hope that you have found this exhibition useful in understanding our proposed development.

Your views count, so we would be grateful if you could spend a few minutes completing a questionnaire and telling us your thoughts about the exhibition and the proposed development.


All responses will be collated and used to identify any issues which can be resolved within the proposed design and planning application.

E-mail: [consultation@celtiqueenergy.com](mailto:consultation@celtiqueenergy.com)  
 Phone: 0800 023 2148



## 7.6 Comment form

# Comment Form



**Woodbarn Farm Public Consultation  
22 and 23 June 2012**

Thank you for visiting our public consultation event. We would appreciate it if you could share your feedback on what you have seen today.

**1. HOW DID YOU FIND OUT ABOUT TODAY'S PUBLIC EXHIBITION?**

Letter to household	<input type="checkbox"/>	Other (please state)	<input type="checkbox"/>
Article in local newspaper	<input type="checkbox"/>	_____	
Advert in local newspaper	<input type="checkbox"/>	_____	
Word of mouth	<input type="checkbox"/>	_____	
Social media (Facebook, Twitter, etc.)	<input type="checkbox"/>	_____	

**2. WHAT DO YOU THINK ARE THE MOST IMPORTANT ISSUES FOR CELTIQUE TO CONSIDER AS PART OF ITS TEMPORARY WELL SITE APPLICATION? (please tick more than one as appropriate)**

Visual impact of drilling rig	<input type="checkbox"/>	Other (please state)	<input type="checkbox"/>
Protection of groundwater aquifers	<input type="checkbox"/>	_____	
Vehicle movements to and from the site	<input type="checkbox"/>	_____	
Operational safety on site	<input type="checkbox"/>	_____	

**3. TAKING INTO CONSIDERATION FACTORS SUCH AS NATURAL SCREENING AND DISTANCE FROM NEARBY PROPERTIES, DO YOU AGREE THAT WOODBARN FARM IS AN APPROPRIATE LOCATION FOR A TEMPORARY WELL SITE? (please circle choice)**

Strongly agree      Agree      Neither agree or disagree      Disagree      Strongly Disagree

**4. THINKING ABOUT WHAT YOU HAVE SEEN HERE TODAY, WHAT SECTIONS OF THE PUBLIC EXHIBITION HAVE YOU FOUND MOST INFORMATIVE?**

Location plans	<input type="checkbox"/>	Geology	<input type="checkbox"/>
Exploration and drilling	<input type="checkbox"/>	Environmental assessments	<input type="checkbox"/>

**5. HOW BETTER INFORMED ABOUT CELTIQUE'S PROPOSALS ARE YOU AFTER TODAY'S EVENT? (please circle choice)**

Very informed      Somewhat informed      Not that informed      Not at all informed

Celtique EnergieExploring responsibly for oil and gas in Europe



**6. HOW IMPORTANT DO YOU RATE THE FOLLOWING ISSUES? (circle as appropriate)**

- Reducing the UK's reliance on gas imports

Very important      Important      Not that important      Not at all important      Don't know

- Promoting the use of natural gas to complement renewable energy sources

Very important      Important      Not that important      Not at all important      Don't know

- Mitigating climate change by supporting renewable technologies (e.g. wind or solar)

Very important      Important      Not that important      Not at all important      Don't know

- Supporting community initiatives if the site becomes a producing well

Very important      Important      Not that important      Not at all important      Don't know

- Creating employment and apprenticeship opportunities for local people

Very important      Important      Not that important      Not at all important      Don't know

**7. DO YOU HAVE ANY GENERAL COMMENTS YOU WOULD LIKE TO SHARE?**

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**8. TO HELP US ANALYSE THE FEEDBACK WE RECEIVE, COULD YOU PLEASE CONFIRM THE FOLLOWING DETAILS ABOUT YOURSELF? (circle as appropriate)**

Gender:    M / F

Age:      18 to 25      26 to 34      35 to 44      45 to 54      55 to 64      65+

Postcode: \_\_\_\_\_

**9. PLEASE ADD YOUR CONTACT DETAILS IF YOU WOULD LIKE TO BE KEPT UPDATED ON CELTIQUE'S PROPOSALS:**

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Postcode \_\_\_\_\_

Telephone \_\_\_\_\_ Email \_\_\_\_\_

All feedback forms should be returned by 3 July 2012 to:

Celtique Woodbarn Farm Consultation, c/o PPS Group, 302-308 Regent Street, London W1B 3AT

Your enquiries and comments will be analysed by PPS (Local & Regional) Ltd on behalf of Celtique Energie World Ltd. Copies may be made available, in due course, to West Sussex County Council so that they can note your comments. We will, however, request that your personal details are not placed in the public record. Your personal details will be held securely by PPS and Celtique in accordance with the Data Protection Act 2000, and will be used solely in connection with the Woodbarn Farm consultation and any subsequent planning application and, except as noted above, will not be passed to any third parties.



## 7.7 Consultation website page

# Celtique Energie

Exploring responsibly for oil and gas in Europe

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[About us](#)   [What we do](#)   [Environment and community](#)   [Health and Safety](#)   [Operations](#)   [Benefits](#)

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[Southern England](#)

[Woodbarn Farm Public Consultation](#)

[Back to The UK](#)

[Home](#)

## Woodbarn Farm Public Consultation

Celtique is committed to engaging with the local community at every stage of the planning process. Our public consultation event will provide local people, community leaders and interest groups with an opportunity to meet our team; learn more about our proposals; and provide their feedback, which we will take into consideration prior to the submission our planning application to West Sussex County Council.

If Celtique were to be granted planning permission, we would continue to proactively engage with the community in a responsible, open and transparent manner.

Our public consultation events will be held in the main hall at the Billingshurst Community and Conference Centre, Roman Way, Billingshurst, RH14 9QW. The events will take place on the following dates:

- Friday 22 June, 3.30pm to 8pm
- Saturday 23 June, 12.30pm to 5pm

(click below for map)

[Download PDF](#)

### Exhibition Documents

If you are unable to attend either of our public consultation events, but would still like to provide us with feedback, please feel free to download and complete our consultation feedback form below, which has been made available at our consultation events:

### Exhibition Boards

[Download PDF](#)

### Feedback Form

[Download PDF](#)

Alternatively, please free to email your comments to [consultation@celtiqueenergie.com](mailto:consultation@celtiqueenergie.com), or write to us at the following address:

Celtique Woodbarn Farm Consultation  
c/o PPS (Local & Regional) Ltd  
Langham House  
302-308 Regent Street  
London  
W1B 3AT

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**Celtique Energie**  
Exploring responsibly  
for oil & gas in Europe

By committing to operating at the highest standards and working openly with local communities, we aim to give countries the means to develop their own resources

**Operations**  
The UK  
France  
Germany  
Poland  
Romania  
Switzerland

**About us**  
What we do  
Environment and community  
Health and Safety  
Operations  
Benefits  
Site map

**Investor information**  
Contact  
FAQ  
News  
Useful links





## 7.8 Community contact log

Date	Method of contact	Comments
08/06/2012	Phone	Lived in Billingshurst over 20 years; unsure as to the location of Broadford Bridge
08/06/2012	Phone	Lived in Billingshurst; unsure as to the location of Broadford Bridge
11/06/2012	Phone	Requested correspondence address to send a letter to Celtique Energie
12/06/2012	Phone	Received letter and would like to know where the proposed drill site is
12/06/2012	Phone	Received letter and wondered whether CE would like to test for oil in her backgarden
12/06/2012	Phone	Wanted to know where the proposed site will be
12/06/2012	Phone	Wanted to know where the proposed site will be; was wondering whether it will interfere with the sale of her land, near Billingshurst. Interested in proposals because as a country we need to develop natural resources; cannot attend exhibition so requested copy of exhibition boards.
14/06/2012	E-mail	Calling on behalf of company called Protel - company provides notification of oil and gas projects to potential suppliers. Provided details if Celtique wished to avail of their service further down project timeline for Broadford Bridge.
20/06/2012	Phone	Ashington PC would like to view the proposals to confirm whether there are any impacts from Celtique's proposals
21/06/2012	E-mail	Asked what the application would entail. Offered to send through a hard copy of the exhibition information, which Mrs Alford would be glad to accept.
22/06/2012	Phone	Could not make exhibition; does Celtique have any details that can be e-mailed?
25/06/2012	E-mail	Missed Broadford Bridge consultation event; would be grateful if Celtique could forward any information about the proposals.
25/06/2012	E-mail	Wish to lodge objections regarding pollution issues such as chemical, visual, odour, noise and light. Area cannot sustain another large industrial site; additional traffic would be unmanageable burden on road; present wells only produced a small amount of oil.
05/07/2012	E-mail	