

Crawberry Hill Community Liaison Committee Meeting

7pm on 25 February 2014

Bishop Burton Village Hall

Notes of Meeting

Attendees: Tom Selkirk (Project Manager, Rathlin Energy (UK)) - TS
Philip Silk (Planning Manager, Moorhouse Drilling and Completions) - PS
Jonathan Foster (HSE Manager, Petroleum Safety Services Limited) - JF
Caroline Foster (Field Manager, Rathlin Energy (UK)) - CF
Margaret Hebb (Bishop Burton Resident) – MH
David Oxtoby (Chair, Bishop Burton Parish Council) – DO
David Drew (Chair, Walkington Parish Council) – DD
Jason Chester (Bishop Burton Resident) - JC
Simon Taylor (Rathlin Communications) – ST

Apologies: David Montagu-Smith (Chairman, Rathlin Energy (UK)) - DM-S
John Castle (Walkington Resident) - JC

1. Welcome

TS opened the liaison group meeting, welcomed everyone and thanked them for attending. He explained that he would be chairing this evening's meeting because DM-S was away at the moment.

2. Operations Update

TS explained that the purpose of the meeting was to give resident representatives an update on the programme of work and to talk in more detail about the Environment Agency (EA) permitting process that is now underway. He said that nothing had changed with the proposed programme. Once again he explained the background to the EA process and reiterated that: Rathlin Energy (UK)'s primary targets are conventional and that this must not be confused with the wider debate that is currently underway surrounding hydraulic fracturing. The message is clear: **Rathlin Energy (UK) Limited is not fracking.**

TS said that the Crawberry Hill application is available for review and comment on the Environment Agency website and can be found at:

<http://www.environment-agency.gov.uk/research/library/consultations/151802.aspx>.

He said that the information had been made available for a period of four weeks and that the public consultation period would end on 12 March 2014 at 24:00. TS said that there would then be an eight week consideration period by the EA. He said that all being well, an early approval determination would mean that the team could be back on site in mid-May. He said that the application is also accessible to view within the Yorkshire section on Rathlin Energy UK's website (www.rathlin-energy.co.uk).

TS said that the plan for this meeting was to cover the following topics:

Operations Update and Test Programme - TS

EA Regulations and Permits - JF

Test Operations and Equipment - CF

Community Impacts - PS

AOB - All

At this point a gentleman turned up unannounced at the meeting asking if he could join in the proceedings. He introduced himself as Richard Howarth, a local representative of Greenpeace from Hull. He said that he would like to join and participate in the meeting.

TS explained that Mr Howarth had contacted him the week before to ask if he could join the Crawberry Hill community liaison group meetings. Having spoken to Mr Howarth for around 45 minutes, TS agreed that he would put the gentleman's request to the liaison committee members, reporting back when he was in the office during week commencing Monday 03 March 2014. He explained during the conversation that the next meeting was planned for this week so the response would be swift.

Following a short discussion, resident representatives suggested that they would consider his request to join the meeting and that TS would feedback as had previously been agreed. They politely asked Mr Howarth to leave to enable the meeting to proceed as planned and that TS would report back on their views after the meeting.

Mr Howarth then left the meeting. TS asked if the matter could be taken as an item under any other business as per the agenda. Resident representatives agreed.

Operations Update and Test Programme

TS started by showing a slide that had been used previously by Rathlin Energy (UK) to show the difference between conventional and unconventional targets.

He then went on to talk in detail about Rathlin Energy (UK)'s targets showing a technical diagram that explained:

- The Permian Reef Prospect
- The underlying Carboniferous structures evident at various levels
- The Westphalian level
- The Namurian level
- The Dinantian carbonate

He reminded the community liaison group about the initial project phases including how the well was constructed and the lengths the company has gone to to protect the aquifers. The diagram was also used to show the liaison group its initial targets

TS also reminded resident representatives that Rathlin Energy (UK) had originally included six potential reservoir target horizons in the planning application for the Crawberry Hill project. These included the Permian Age Brotherton, Kirkham Abbey and Cadeby carbonate sequences; the Carboniferous age Coal Measure and Millstone Grit sand sequences; and the Carboniferous Dinantian carbonate. On the diagram he showed where these formations would be encountered - at between 1,100m and 2,700m - in the wells. He also explained about the source rock potential that was present within the Permian basinal sediments, the Westphalian Coal Measures and the Bowland Shale sequence.

MH confirmed her understanding that the Bowland shale was deeper than formations Rathlin is proposing to flow test.

TS said that, as explained earlier in the process, the Bowland Shale interval had been cored during the drilling phase to evaluate the source rock potential of that zone.

TS then went on to discuss the data gathering and evaluation work that had been done and what was proposed as part of the testing programme.

He said that the data gathered during the drilling process included:

- Drill cuttings
- Mud weights
- Gas monitoring
- Electric log data

TS explained that cores were cut and recovered from the following sequences:

- Cadeby (reservoir analysis)
- Namurian (reservoir analysis)
- Bowland (source rock analysis)

He said, that from all of the information gathered, it had been decided to carry out the following tests:

- A flow test in the Kirkham Abbey
- A flow test in the Namurian
- A mini fall off test in the Bowland

TS explained that the test objectives are:

- Kirkham Abbey formation flow test
 - to establish whether gas is present in the reservoir
 - to establish whether there is a commercially significant rate and volume of gas present
- Namurian formation flow test
 - to establish whether gas is present in the reservoir
 - to establish whether there is a commercially significant rate and volume of gas present
- Bowland Shale formation mini fall off test
 - to collect reservoir engineering data (pressure and physical rock properties)

TS explained, in more detail, that Rathlin Energy (UK) planned to acquire important data through the flow test to determine if the conventional reservoir formations have the potential for commercial development.

Explaining the mini fall off test in more detail, he said that this would enable Rathlin Energy (UK) to acquire important engineering data: a) formation pressure, b) permeability and c) fracture gradient – this data will help determine if gas is in place within the formation. He said that this is key to understanding the entire hydrocarbon system within the basin, including reservoir, source and sealing rocks and the potential volume of hydrocarbons present.

TS said that the planned future programme for Crawberry Hill is:

- To review the test results
- To refine the geological model
- To assess commercial potential
- To identify a potential follow-up drilling location

EA Regulations and Permits

JF then gave an overview of the Environment Agency Regulatory Position (October 2013).

He said that in June 2013, the EA wrote to operators, including Rathlin Energy (UK), informing them that the regulatory position for oil and gas exploration had been modified.

He then explained that in July 2013, the EA issued draft guidance for oil and gas exploration operations setting out the EA's modified regulatory position.

He said that in July 2013, the EA wrote to operators, including Rathlin Energy (UK), to inform them that the modified regulatory position would take effect from 31 October 2013. He said that, at that time, ongoing operations could continue, subject to operators having permit applications in place.

JF said that the applicable legislation for the permits are:

Principle UK Legislation:

- Water Resources Act 1991
- Environmental Protection Act
- Radioactive Substances Act

Principle EU Legislation:

- Mining Waste Directive
- Industrial Emission Directive

In explaining the regulatory position, JF said that the following were relevant (*applicable to Rathlin Energy (UK)):

Environmental Permitting (England and Wales) Regulations 2010:

- Mining Waste Activity*
- Groundwater Activity*
- Industrial Emissions Activity*
- Radioactive Substances Activity*
- Water Discharge Activity

Water Resources Act 1991 (as amended by the Water Act 2003):

- Consent to Construct or Extend a Boring for the Purpose of Minerals*
- Groundwater Investigation Consent
- Water Abstraction License

Flood Defense Consent:

- Works Undertaken Within, Over or Near a Main River of Flood Defense

JF then explained the difference between 'bespoke permits' and 'standard rules'. He said that in considering Rathlin Energy (UK)'s application, the EA was applying bespoke permits but in time, these would in all likelihood become standard rules.

JF then clarified the differences as follows:

Bespoke Permits:

- Provide for the permitting of activities which are not covered by standard rules permits
- Require a bespoke set of conditions to ensure environmental risk is mitigated
- Up to 13 weeks to determine application, including four weeks for public consultation

Standard Rules Permits:

- Provides for the permitting of activities, which are considered by the EA to be a standard operation and which, can be permitted using a standard set of conditions to ensure environmental risk is mitigated
- Less than four weeks to determine application

Current Status:

- The EA is working to develop standard rules permits for oil and gas operations

Test Operations and Equipment

CF said that once the permits are granted that a much smaller amount of equipment will be brought to the Crawberry Hill site. She showed a picture of the type of equipment that Rathlin Energy (UK) would expect to use. CF explained that a work-over rig, similar to the one that had been initially used to drill down to a depth of around 200m during the drilling operations, would be used.

CF said that the work-over rig would be truck mounted, the mast would be approx. 22 metres high and that it would have a mud pump and a blow-out prevention system. She then explained that a wire-line and logging unit would also be used to lower the necessary well logging tools into the wellbore to record a variety of cased hole logs. CF showed a picture of the type of vehicle that would be used.

CF said that the wire-line and logging unit would have a winch system used to lower the necessary tools into and out of the well. She then showed a picture of the tools and explained how, with pin point accuracy, they would be lowered into the well and how the tests would be undertaken by setting off small charges that perforate the casing to communicate with the rock formation behind. Mini fall off tests will be conducted first and after the data is gathered the zone would be plugged and abandoned. The testing would then move upwards to undertake the flow tests in each formation separately.

Resident representatives asked how long this phase would take. CF said that it would take up to six weeks and that the service rig and wire-line logging unit may move between the two sites during the testing phase. Resident representatives suggested that it might be better just to get the work done and completed before moving off the site. CF said that this was something that was still being considered based on logistics.

CF then went on to talk about the surface testing equipment. She said that this would include:

- A choke manifold
- A sand knock out system
- A three phase separator system
- Storage tanks
- A flare stack with a shroud

Pictures were shown of the equipment to be used.

She then showed a diagram and talked resident representatives through how:

- Fluid flows from the well
- Pressure is monitored and regulated
- The fluid is separated into three phases – oil, water and gas
- The oil and water flows through the system into storage tanks
- The gas flows to the flare stack where it is incinerated

CF said that the team would closely and continually monitor:

- The pressure at the testing point and at the surface
- The flow rate
- The liquids rate
- The flow times
- The temperature
- All samples

She explained that this would enable Rathlin Energy (UK) to build up a picture of whether the flow rate was commercially viable. CF also said that this would help the team to better understand the reservoir properties, i.e. the extent of the reservoir, its permeability and if there is any water contact.

Resident representatives asked how long the flaring would take place for. CF said that it would be for seven-ten days per flow test.

Community Impacts

PS said he would summarise for resident representatives about what had been done so far in terms of his work with the relevant external authorities before talking through what information had been submitted to the EA as part of the application to secure the necessary permits.

He started by reminding resident representatives about the original planning application. He said that the planning permission was awarded on 18 September 2012.

He explained that the application was submitted with a number of independent studies. He said that the application came with a number of conditions which were later discharged. PS said that some of the documents that had been used during the planning process had also been used as part of the EA submission. He reminded resident representatives that before submitting the planning application, Rathlin Energy (UK) had consulted with a number of organisations, including:

- The Coal Authority
- East Riding of Yorkshire Council
- Natural England
- The Environment Agency
- The Wildlife Trust
- English Heritage

PS then explained that a site condition report had been produced, which reviews the baseline conditions across a number of areas, including:

- Land use
- Environmental setting
- Geology
- Hydrogeology
- Well construction
- Soils
- Surface water and drainage
- Site drainage
- Groundwater abstraction
- Air quality
- Historic land use
- Pollution incidents and contamination

This site condition report is then used on surrender of the Environmental Permit by the Environment Agency, to confirm that the site is in a suitable condition to allow the permit to be surrendered.

PS then took resident representatives through the surface and groundwater management and monitoring systems. He said that a hydrogeological risk assessment had been submitted. He explained that this provided an assessment of any potential risks and how these are mitigated.

He said that the mitigation includes:

- An impermeable membrane
- Cellar integrity
- Well integrity
- Site storage

PS explained that the groundwater monitoring was still taking place despite there being no operations at either site and that this would continue throughout any ongoing works.

PS then went on to talk about how the well had been constructed, the interfaces between the subsurface and the surface and how everything worked together to make sure that the water aquifers remain protected.

PS then went on to talk about ongoing air quality monitoring. He said that following a full impact assessment, an independent report had been produced by ESG and submitted as part of the EA process.

He said that the conclusion reached was that the flaring will not affect the attainment of air quality standards and the impacts to the nearest receptors are considered insignificant. He said that monitoring equipment had been in place since the very start of the operations and that ongoing air quality monitoring will continue throughout any future phases of work. PS said that there could be new conditions that the EA might stipulate and these will be detailed in the EA permit.

PS then went on to talk about noise mitigation and monitoring. He said that Rathlin Energy (UK) would comply with the planning condition requirements and would not exceed 42db Laeq between 23.00 and 06.00. He said that the existing noise management plan submitted as part of the EA permit submission. He said that noise monitoring equipment will be reinstalled.

PS then went on to talk about lighting. He said that the well test operations may take place over 24-hour periods. Consequently, Rathlin Energy (UK) has submitted details of the impacts and mitigations from the shrouded flare stack, lighting towers and vehicles. He said that the flare impact would be reduced significantly with the inclusion of a shroud. He also explained that a lighting plan had been submitted as part of the EA permit application.

PS then went on to talk about traffic and transport. He said that there would be a much lower volume of vehicles required to deliver the test equipment. He said that a traffic management plan would be in operation and that the previously agreed speed limits on Walkington Heads would be reinstated. He advised that security guards would be in place during busier periods to control vehicle movements to and from the site. He said that the traffic management plan within the EA permit application had been updated to reflect the revised number of vehicle movements. As before, the team would work closely with contractors to make sure they operate and behave responsibly at all times.

3. Any Other Business

TS asked if there was anything else that Rathlin Energy (UK) could address re: the EA application. Resident representatives said that there was nothing specific at that stage. TS asked again for feedback and urged resident representatives and the local community to let the company know if there were any concerns whatsoever. He said that Rathlin Energy (UK) wanted to be in a position to respond quickly if there were any issues at all.

TS then asked resident representatives for a view on whether they would like Mr Howarth to attend future community liaison meetings.

Resident representatives said that it was important that they continue to discuss matters of relevance to the local community so that they can feedback on progress and next steps to other residents across Walkington and Bishop Burton. There was a general consensus that Mr Howarth's inclusion would bring a wider environmental and political debate that had already formed earlier discussions by the local community and the liaison group at the beginning of the process. Rathlin Energy (UK) having already addressed these, resident representatives said that they did not feel that the community liaison group meetings were the right forum for Mr Howarth.

It was unanimously agreed, by resident representatives, that Mr Howarth's request be declined on the basis that the liaison group had been established to update those people who live closest to the site and that they were happy and comfortable with the current arrangement. They did not feel that Mr Howarth's inclusion would add any value to the existing consultation process.

TS said he would feed resident representative views back.

4. **Date and time of the next meeting:**

TS suggested that the next meeting be held once the EA makes a decision on the company's permit applications. Resident representatives agreed.

Further updates will be available via Rathlin's website: www.rathlin-energy.co.uk

24-hour emergency number: 0800 1959154.