

# Notice of request for more information

## The Environmental Permitting (England & Wales) Regulations 2016

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Rathlin Energy (UK) Limited  
West Newton 'A' Well Site  
Fosham Road  
Marton  
Hull  
HU11 5DA

Application number: **EPR/BB3001FT/V006**

The Environment Agency, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit duly made on 18/09/2024.

Send the information to either the email or postal address below by 10/01/2025. If we do not receive this information by the date specified, then we may treat your application as having been withdrawn or it may be refused. If this happens you may lose your application fee.

Email address: [miranda.culnane@environment-agency.gov.uk](mailto:miranda.culnane@environment-agency.gov.uk)

Postal address:  
Permitting Support, NPS Sheffield  
Quadrant 2  
99 Parkway Avenue  
Parkway Business Park  
Sheffield  
S9 4WF

Name	Date
Miranda Culnane	12/12/2024

Authorised on behalf of the Environment Agency

## Notes

These notes do not form part of this notice.

Please note that we charge £1,200 where we have to send a third or subsequent information notice in relation to the same issue. We consider this to be the first notice on the issues covered in this notice.

The notes in italics that appear after information requests in the attached schedule do not form part of the notice. The notes are intended to assist you in providing a full response.

## Schedule

Following a review of the information in the permit application we now require further information, as listed below, which may be copied into a Schedule 5 Notice:

### Habitats

- 1) Explain how the changes in operation which are subject to this variation will have an impact on the designated habitats.

***Reason** – You previously submitted report entitled ‘Ecological Impact Assessment, Project number: 60630268’ dated December 2021 Revision 3 as part of the previous variation which remains applicable however, you have not assessed potential impacts on relevant ecological features as a consequence of the development and how the change in operation will affect the designated habitats, or set out the measures to be provided to avoid or reduce any predicted significant effects on Greater Wash SPA, Hornsea Mere SPA, Lambwath Meadows SSSI, or the Local Wildlife Sites; The Moors, Burton Constable LWS and Wycliffe, North Plantation LWS.*

*Explain in terms of source-pathway-receptor linkages how, if any, the revised operation will impact any of these designated habitats.*

### Noise

- 2) Explain how the changes in operation which are subject to this variation will contribute to noise emanating from the site.

***Reason** – You previously submitted report entitled ‘Noise Impact Assessment for West Newton A Exploration, Appraisal and Production Development, JAT2106–REPT–04–R3-Rathlin-WNA, RPS, dated 14/12/2021’ as part of the previous variation which remains applicable however, you have not assessed potential impacts of noise as a consequence of this variation and how the revised operation will have any additional impact.*

### Permit Boundary

- 3) The application states there is a proposed change to permit boundary due to a change in activity A4 – oil storage location. For clarity confirm any physical boundary changes because of this variation. If the boundary is to increase provide a clear map showing the current permitted boundary (*The permit boundary is as detailed in Schedule 7*

Figure 1 of the current permit (V005) and the proposed extension. If the boundary is to increase explain why this is necessary and what activities are proposed in this new area.

**Reason:** *There are various references to 'changes in boundary' within the application documents. For example, para 4.1.1.1 and 4.1.5 of the Waste Management Plan, para 4.1.1.1 and 4.1.5 of the NTS, and the footnote point 2 on page 11 of the NTS as examples. This was discussed by phone with the applicant, and it was confirmed that there were no changes to the boundary. The application remains confusing. Confirm which is correct. Is it that you are proposing to increase the permit boundary in a future variation? (Also note question 19 below on the SWMP).*

## Technical Aspects

- 4) Provide a copy the probabilistic assessment of seismic hazards resulting from the proposed reservoir stimulation.

**Reason:** *To allow for full review of the considerations made to assess any impact to surrounding geological structures as a product of the proppant injection. The independently produced report is referenced within supporting documents (Outer Limits, 2024) but not provided.*

- 5) Provide a copy of the Central Regional GeoSeismic cross-section.

**Reason:** *This is referenced as Figure 10 in the HRA Technical Addendum, but it is not provided in the supporting document, or as an appendix. This is needed to support analysis of faulting across the basin and any extent into adjacent stratigraphy.*

- 6) Provide a copy of the report referenced as *Rathlin Energy, 2008*.

**Reason:** *This is needed for review and assessment of discussed Carboniferous faulting extending into the Sherwood Sandstone in the area of West Newton A and any impact the stimulation activities might therefore have on deeper aquifers.*

- 7) Provide models or references explaining the stimulation pressures chosen.

**Reason:** *Justification for the pressure used to complete the stimulation activities is needed. This is to show sensitivity analysis has been completed and gives due regard in respect to any surrounding geological structures that exists and whether any re-activation of nearby faulting may be likely.*

- 8) Confirm what re-conditioning activities have taken place at site to date.

**Reason:** *If the DFit has been completed, confirm the propagation pressure is still appropriate at 9,000psi. If greater pressure is needed, then re-submission of assessments made in mind of faulting and structural stability will need to be completed.*

- 9) Confirm the type of casing to be used in the borehole from the start of the Sherwood Sandstone to total depth, specifically outlining details from 1700m TVD.

**Reason:** *Figure 3 in the HRA Technical Addendum shows production casing stopping at c. 1700m TVD and the configuration of the borehole appears to move towards an open hole set up. The Waste Management Plan indicates steel production casing will be set from c. 1520m TVD, which does not seem to follow the same as the schematic in Figure 3.*

- 10) Confirm the depth when the side track commenced. Confirm the angle of the hole through the Kirkham Abbey Formation, including the angle at entry and exit of the formation. Confirm the total depth of the hole. Confirm the remaining thickness (both upper and lower to the stimulation zone) of the Kirkham Abbey Formation which will not be subject to any stimulation effects; be clear on the unaffected thickness of the Formation at the point closest to the entry and exit of the unit. Include details of any mitigation methods proposed.

**Reason:** *To re-affirm the distance between the stimulation zone and adjacent stratigraphic units across the 27/30m interval which the stimulation is proposed to take place; and to ensure the upper and lower lithologies are not at risk from any stimulation effects. Reassurance is needed to show the stimulation fractures will be isolated to only the Kirkham Abbey Formation.*

- 11) Confirm if the HFP (Hydraulic Fracture Plan) has been submitted and approved by the NSTA. Provide a copy of the HFP. Provide any comments given by the NSTA.

**Reason:** *Supporting documents confirm the HFP has been submitted to both the NSTA and EA for approval with sign off. No copy is stored on internal EA systems nor has a copy been submitted with this application.*

- 12) Confirm metrics for the stimulation activity, include supporting models, assumptions and documentation. Provide justification for the stimulation pressure.

**Reason:** *Different values are given for the height/zone of the stimulation activity and differing values are given for the radius/diameter of penetration. This lends to differing sizes calculated for the mining waste facility. Greater confidence is needed to support the stimulation pressure outlined.*

- 13) Confirm the expected depth of skin damage around the borehole into the Kirkham Abbey Formation. If vastly different to the reservoir stimulation penetration distance, explain and justify why such penetration depths are needed.

**Reason:** *To support the need to penetrate the environment as much as requested.*

- 14) Confirm the volume of proppant fluid need for the stimulation. Explain any variations to the confirmed amount.

**Reason:** Supporting documents confirm 60 m<sup>3</sup> to 70 m<sup>3</sup>, but not more than 85 m<sup>3</sup> will be needed for the activity. This is a variation of up to 42% of proppant required.

- 15) Explain why both an acidic or alkali-based wash and squeeze are discussed as interchangeable.

**Reason:** Given the composition of adjacent lithologies being primarily compounds sensitive to acid, justification is needed for why an acidic wash might be chosen. An alkyl ester gelling agent is also confirmed as the chosen additive during the reservoir stimulation so explanation into the potential interchangeable use of an acid-based wash is needed.

- 16) For the wash/squeeze activity, confirm explicitly the volumes intended to be used, the exact depths and frequency of the acid wash activity. Explain and justify any variation to figures provided.

**Reason:** To be registered as a deminimis activity we need to know such specifics to include in the permits operating techniques.

- 17) Define which chemicals listed in the chemical inventory are to be used for which activity.

**Reason:** It is unclear which chemical is being used for which activity. Justification for the use of hazardous chemicals over non-hazardous alternatives is needed for both activities.

- 18) Justify the use of an oil-based gelling fluids over water-based alternatives for use in the proppant squeeze.

**Reason:** Robust evidence is needed to support the use of oil-based fluids over water-based fluids for this activity.

- 19) Provide an updated SWMP which covers the permit extension area.

**Reason:** (Subject to your response in question 3 above). A change to surface water discharge (Activity A3) is requested and an extension to the permit boundary for WNA. A revised SWMP should be provided which takes into consideration the periods of increased activity on site and the changes requested in the application. It should also consider any impacts climate change could have which may affect site activities.

- 20) Provide a copy of the Waste Gas Management Plan

**Reason:** A review of this document is needed to approve the request to the AR2 Activity, which seeks to add natural gas incineration.

- 21) Clarify the composition of the chemicals listed below from the chemical inventory:

Product Name	Hazardous Chemical Composition (SDS Section 3)
Dynared (All Grades)	<i>"No Hazardous Materials"</i> - confirm actual chemical composition of the product
Defoam Plus NS	<i>"No Hazardous Materials"</i> - confirm actual chemical composition of the product
M-I Pac (All Grades)	<i>"No Hazardous Materials"</i> - confirm actual chemical composition of the product
Pure Bore	<i>"No Hazardous Materials"</i> - confirm actual chemical composition of the product
Safe Scav* CA	<i>"No Hazardous Materials"</i> - confirm actual chemical composition of the product
MO-IV BREAKER	<i>"This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). The product contains no substances which at their given concentration, are considered to be hazardous to health."</i> - confirm actual chemical composition of the product

**Note:** Where there are significant updates required to documents associated with the application, we would ask that you provide a summary reference table to show which elements in the revised documents have been changed or added to answer the questions in the schedule 5 response. This will reduce the time we have to spend reviewing the documents.