

Lancaster Environment Centre,  
Lancaster University  
Lancaster  
United Kingdom

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### **Research permit – Fjallabak nature reserve**

The Environment Agency of Iceland has received an application from Lancaster University, dated 26<sup>th</sup> of June, for research permit within Fjallabak nature reserve.

Fjallabak is protected as a nature reserve, cf. regulation no. 354/1979. Construction work, extraction of minerals, disturbance to geological formations, vegetation and wild animal life in the protected area is prohibited.

### ***Project description:***

The project is a volcanological study of c.877 CE Hrafninnuhraun eruption. The location of the research is Hrafninnuhraun lava field. The timing of the research/fieldwork is from 3-24<sup>th</sup> of August 2023. Four participants will be conducting the research from 3-12<sup>th</sup> of August and two participants from 13-24<sup>th</sup> of August.

The main aim of this project is to research the c.877 CE Hrafninnuhraun eruption. In the application there are details regarding the fieldwork and maps that show the zones that the research aims to look into. A particular focus will be looking for evidence that the lava that emerged from the conduit existed deeper in the conduit as a mass of pyroclastic material that became sintered higher in the conduit and emerged as a lava-like body. With reference to the map provided from the applicant, 10-20 small lava samples will be collected from each of the three main zones, and around 50 small samples of pyroclastic material.

The applicants will avoid walking on vegetated slopes, and when walking within the lava flows they will avoid walking in the centre of troughs as these are prone to collapse and damage any flora growing there. Even though there are no marked trails within the lava flows, it will be taken care to ensure that sampling sites are not identifiable to any hikers who walk through the lava, the collection of rock samples will be done carefully to ensure that the minimum amount of damage is caused.

The applicant will be using a 4x4 to gain access to the area but there will be no off road driving.

***Impact assessment:***

The Environment Agency of Iceland considers the project to be unlikely to affect the natural environment of the area. 10-20 rock samples will be collected from the lava, but the applicant specifies that careful attention will be paid to finishing so that visible disturbance will be at an absolute minimum. The research will have a positive effect on the conservation value of the area as it will increase knowledge of the volcanic activity of the Torfajökull volcano, in particular the development of the 877 eruption.

***Conclusions and conditions:***

The Environment Agency of Iceland hereby grants Lancaster University permission on its behalf to conduct research within Fjallabak nature reserve as described above on the following conditions:

- The applicant must contact the ranger/specialist for the area before and after the research is conducted.
- Every measure should be taken to avoid damage to the sites and unnecessary disturbance while collecting samples.
- Samples should be collected where any resulting disturbance to soil, vegetation or geological formations is not visible to other visitors.
- All vehicles used during field exploration must be labelled with the identity of the researcher's institute. All participants in the project must wear high-visibility clothing during field work, labelled with the identity of the researcher or the research institute.

Sincerely

Daníel Freyr Jónsson  
advisor

Þórdís Björt Sigþórsdóttir  
Team leader