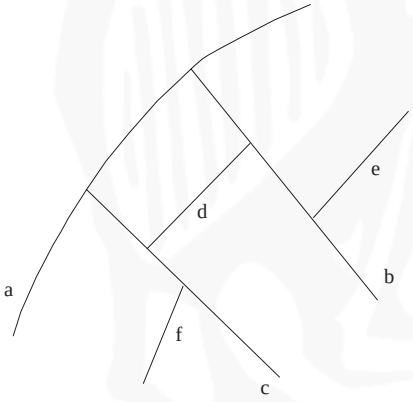
Forn garðlög í Suður-Þingeyjarsýslu

A system of earthworks in north-east Iceland



Framvinduskýrsla / Interim report

Oscar Aldred, Árni Einarsson, Elín Ósk Hreiðarsdóttir and Birna Lárusdóttir

Fornleifastofnun Íslands & Náttúrurannsóknastöðin við Mývatn

FS292-04262
Reykjavík 2005

Bárugötu 3

101 Reykjavík

Sími: 551 1033

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

SUMMARY

The second year of the Rannís sponsored project *A system of earthworks in NE Iceland* / *Forn garðlög í Suður-Þingeyjarsýslu* took place in 2005. A total length of 267 km of boundaries had been mapped, as well as a complete set of tracks and routes across the study, all farm sites dating to 1847 and other archaeological information added. The methods and techniques of mapping were developed further, in particular the use of high resolution scans of vertical aerial photographs to identify detail and new boundaries. New sources of information were used to enhance the coverage. The main component of 2005 was fieldwork. Fifteen boundaries were excavated, recorded and their tephra deposits analysed. As a result several all the excavated boundaries were dated and their construction and site formation processes were recorded. A programme of outreach also took place, involving presentation of the project to local communities in the study area, specialists and the general public. The work carried out in 2005 allows the final year's work to begin the process of understanding the boundaries through model building and the testing of hypotheses about their development and function.

ACKNOWLEDGEMENTS

A several people contributed towards the work carried out in 2005. These were Árni Einarsson, Orri Vésteinsson, Christian Keller, Elín Hreiðarsdóttir, Birna Lárusdóttir, Oscar Aldred, Ágústa Edwald, Guðrun Larsen, Magnús Sigurgeirsson, Magnús Jónsson and Peter Kuchar. In addition thanks go to Unnsteinn Ingason from Narfastaðir.

FORNLEIFASTOFNUN
ÍSLANDS

INTRODUCTION

2005 was the second year of the Rannís sponsored project *A system of earthworks in NE Iceland* / *Forn garðlög í Suður-Þingeyjarsýslu;* see figure 21. The aim of the project is to map the extensive system of boundaries in the county of Suður-Þingeyjarsýsla, determine their age and construction form and consider and test hypotheses regarding their function in the landscape. The first year was devoted to mapping through field survey, transcription from aerial photographs and incorporating this into a GIS and attribute database. Some of this work was continued into 2005, though for the most part the main effort was in excavating several of the boundaries.

In the report, as in 2004, the use of the terms Event, Data and Object is used. Below is a definition of meanings for each of these terms.

- *Events* – actions associated with the collection, interpretation and integration as definable objects within the GIS; for example, *when* a surveyor goes into the field and records a boundary or a verification of one and this information is then used to enhance or amend the definitions in the databases.
- *Data* – the data sources used in the collection, interpretation and integration as definable objects within the GIS.
- *Objects* – the mapped data objects created in the GIS; for example, each boundary or archaeological feature is defined as an object in the databases.

PROJECT WORK 2005

MAPPING

Enhancing transcription data

At the end of 2004, when the new phase of the project began, it was decided to remap the original transcription data done in 1999 and to compare the old coverage with the new. This was carried out by re-examining the original transcriptions from the vertical aerial

photographs and systematically checking and redrawng if necessary the boundaries into the GIS. The difference between the two was not substantial, but some of the boundaries that were originally mapped and indicated as possible boundaries may not have been included in the new computerised transcription done in 2004. In the remapping process new boundaries were observed. See figure 22 for the mapping events undertaken in 2005 and figure 23 for the comparison of new observations (black) against the original transcription carried out in 1999 (red).

In addition to the new mapping of the actual boundaries, new levels of information were added to the database. This included a remote link to the GIS data, allowing for querying on objects, the data sources and the events associated with the mapping identification. For example, it is possible to isolate and comparing boundaries identified in 1999 with any subsequent mapping; figure 23.

The distribution of boundaries was also enhanced with additional mapping. Firstly, natural features such as rivers and ravines were mapped, for the most part, though there is still work needed to complete this. Seeing the natural features against the boundaries created a much better sense of context, allowed an understanding of breaks and those that were fragmented; figure 24.

Secondly, a 1960 aerial photograph run series in the east part of the study area, running from Húsavík to Mývatn, was consulted. The 1960 aerial photographs depict a landscape free from much recent development (roads, building and agricultural improvements), and in theory show archaeological features that are better preserved. Also, the photographs show the landscape under different lighting and ground conditions. The mapping of new features took place across the run series, though the photographic paper that the images themselves were on was a matt variety and this reduced the recognition of new features; figure 25.

Farms, Survey sites and Tracks

At the end of 2004 it became clear that associating the boundaries with other types of archaeological features, such as farms, tracks and sites from the FSÍ's archaeological database Ísleif, would give them better landscape context and begin the process of understanding their development and functions.

Farm sites were mapped, based on Ísleif data and point placement from AMS (Air Map Service) 1:100,000 maps; figure 26. The surveyed farm sites are taken from a 1847 farm survey; this underlies the archaeological survey that is provided in advance of local and municpal plans. Therefore the mapped farm pattern is not contemporary with the boundary systems and the pattern that relates to the actual formation of the boundary systems is hidden. Much more knowledge about the date of farm settlement is needed before associations and interpretations can be explored.

Specific site types, such as tracks, *þing*, church farms, sheiling or summer grazing sites, *réttir* and charcoal pits may have a direct association with the boundaries. The known coverage of these sites were mapped and placed against the boundaries; figure 27. The relationship between different site types and the boundaries will be explored more fully in 2006. However, the use and function of the boundaries and the association with varying sites may well have differed over time.

Tracks were mapped across the whole study area. Firstly, the AMS 1:50,000 maps dating from 1950s republished in 1980s were rectified and placed into real space and used as base maps; figure 28. All tracks that were depicted on these maps were digitised regardless of their age: single dotted line, double dotted lines and two solid lines. After all were digitised a filtering process took place to identify the historically important tracks. This was done by consulting the ísleif database as well as Sýslu og sóknarlýsingar (SSL) and creating a correlation between the mapped tracks and those identified from these sources. At present all tracks from the DMA maps have been mapped, and approximately 70% of the Ísleif data has been consulted. The completion of this will take place in the following project year. The locations are approximate therefore but a good match can be

made by consulting additional imagery such as the satellite, digital aerial photographs and obliques. At the same time as mapping the tracks water crossings were mapped; both ferries and fords.

Scanning and mapping from aerial photographs

Parts of the oblique aerial photographs that were taken in 2002, 2003 and 2004 were located and mapped into the GIS and added to the attribute database. However, there is still considerable mapping to do and this is planned for the next year. It should be noted that this mapping will greatly enhance the identification and support the already identified boundaries.

The combination of obliques and verticals to identify features were tested in two cojoining areas, centred on Fljótsheiði (vertical aerial photographs E2864 and E2289). High resolution scans of the vertical aerial photographs were used to integrate more closely the oblique photographs and test the detail using the usual transcription process. The product from this was very good, and it added much more detail as well as new boundaries. However, it was a time consuming process, both in the transcription of features on to the scan and in the rectification of the image. Therefore a mid-way solution was carried out that merely related the transcriptions on the scans by associating locations on the satellite image. This proved to be a useful mapping exercise that enhanced the quality of the mapping.

FIELDWORK

Fieldwork took place over two weeks between the 3rd and 12th August 2005. In summary 15 trenches were excavated and recorded in section and plan at nine farms. The tephra layers in nine trenches were examined by tephra specialist Magnús Sigurgeirsson and pollen samples were taken from seven trenches and given to Ian Lawson, University of Leeds, to analyse.

Excavation

Excavation methods used use single context planning and recording system primarily derived from Museum of London Archaeological Service (MOLAS) and adapted for Icelandic archaeology (see http://www.instarch.is/instarch/utgafa/handbok/). Contexts formed the main unit of recording and were excavated stratigraphically, in sequence, within the excavation areas. All trenching / section cleaning was hand-dug. Sections were used in the main to record the deposist as opposed to orthodox single context planning, though the base of the trench was recorded in plan.

The choice for trench locations within the study area was based on several criteria. An initial assessment of landscape stratigraphy or development sequence of the boundaries identified possible areas for work; figure 1. In addition boundaries that had been investigated through excavation were mapped. The overall distribution of boundaries that had already been investigated were mapped and this identified gaps in knowledge based on their distribution. The combination of the initial development of the systems, their spread and gaps in knowledge, as well as areas that contained significant parts of the systems, allowed specific sites to be targeted for the 2005 fieldwork; figure 29.

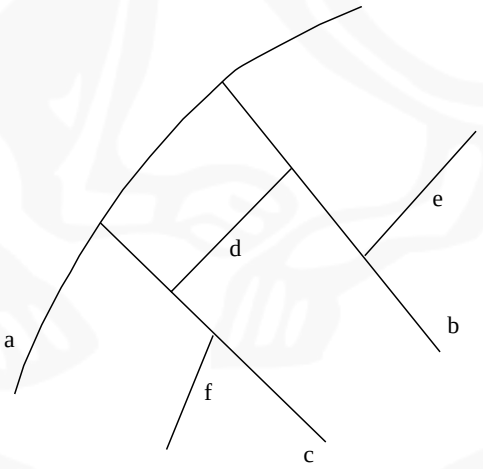


Figure 1. Landscape stratigraphy and the chronological arrangements of boundaries.

Wall (a) is probably older than (b) and (c). Walls (b) and (c) are probably older than (d), (e) and (f).

The target list was taken into the field and re-evaluated according to logistics of access and landowners permission for excavation. In general the trenches were located where erosion had already damaged the boundary. However, this was not always feasible and trenches were placed where they would give maximum information. In retrospect the damage to the boundary by excavation was miminal, particularly with a 1m wide trench; and all trenches were back filled and reconsolidated after recording and identification of tephras and removal of samples to minimise the effects of impact. The 15 trenches were located at: [the number of trenches through boundaries on each is given in brackets after the name (-)] Árbót (2); Brekknakot (1); Höskuldsstaðir (1); Narfastaðir (3); Nes (1); Núpar (2); Saltvík (2); Sýrnes (2); Þverá (1).

Site no	***Farm & trench***	***Boundary wall width (m)***	***Preserved height (m)***	***Width of earthwork (m)***	***Height of earthwork (m)***	***Stack number***
1	Árbót 1	0.7	0.3	3.1	0.8	1
2	Árbót 2	1.4	0.3	6	0.6	2
3	Brekknakot 1	0.5	0.1	5	0.4	1
* 4	Höskuldsstaðir 2a	1.2	0.5	6	0.7	1
4	Höskuldsstaðir 2b	1.6	0.4	5	0.5	1
5	Narfastaðir 1	1	0.2	7	0.5	2
6	Narfastaðir 2	1.8	0.4	6	0.6	2
7	Narfastaðir 3	2	1.2	2.2	1.2	1
8	Nes 1	1.1	0.5	7	1	2
9	Núpar 1	1.2	0.3	6	0.6	1
10	Núpar 2	1	0.3	5	0.6	1
11	Saltvík 1	1.7	0.4	5	0.6	2
12	Saltvík 2	1	0.1	6	0.4	1
13	Sýrnes 1	1.2	0.3	5	0.9	2
14	Sýrnes 2	0.8	0.3	4	0.7	1
15	Þverá 1	0.9	0.3	6	0.5	2

* Höskuldsstaðir is divided into two parts because 2 different boundaries were observed in section 2a is the earliest, 2b the latest.

Table 1. Boundary dimensions.

The form of construction varied between the boundaries that were excavated. All boundaries, however were consistently larger on the surface compared to the actual preserved boundary wall underneath; this was to be expected but the contrast was quite remarkable. The widths of the boundaries ranged between 0.7 to 2m, whereas the widths of the unexcavated earthwork ranged form 2.2 to 7m. The difference between the earthwork width and the actual boundary wall was in most cases 4 meters or more. The majority of the overburden was a mixture of turf collapse (only well preserved in one or two instances) and aeolian (wind blown) deposits. Evidence for ditches on each side was often seen though it was often impossible to determine whether these were cut or erosion edges. A two turf-stack construction of the boundary wall was seen in 7 boundaries out of 15 (either with an infill between the stacks or not). All others were single stack constructions.

The variation in the dimensions between the excavated boundaries does not suggest any firm correlations with the time of construction. There seemed to be little variation between boundaries dating before 1300 and 1477 for example. The only notable factor being that the earlier boundaries have tended to use a two stack technique; this may say something about the intended height of the boundary. Perhaps a two stack boundary would give more stability with greater height. The variation in the height of the boundary seen in excavation is a product of its preservation and therefore in this context is not important. However, the tallest boundary was at Narfastaðir 3 which dated to after 1717: 2 m wide and 1.2 m tall; figure 12. At Nes 1 the intended height of the stack, with some erosion appears to be in the region of 1.4 m from the bottom of the ditch to the top of the boundary wall; figure 2 and figure 13. From the bench it is approximately 1.2 m. Nes 1 was a well preserved boundary and allows this speculation to be made. In particular, the preservation of a large block of turf collapse that was almost fully articulated. It is likely that some of the turf has been eroded before its collapse.

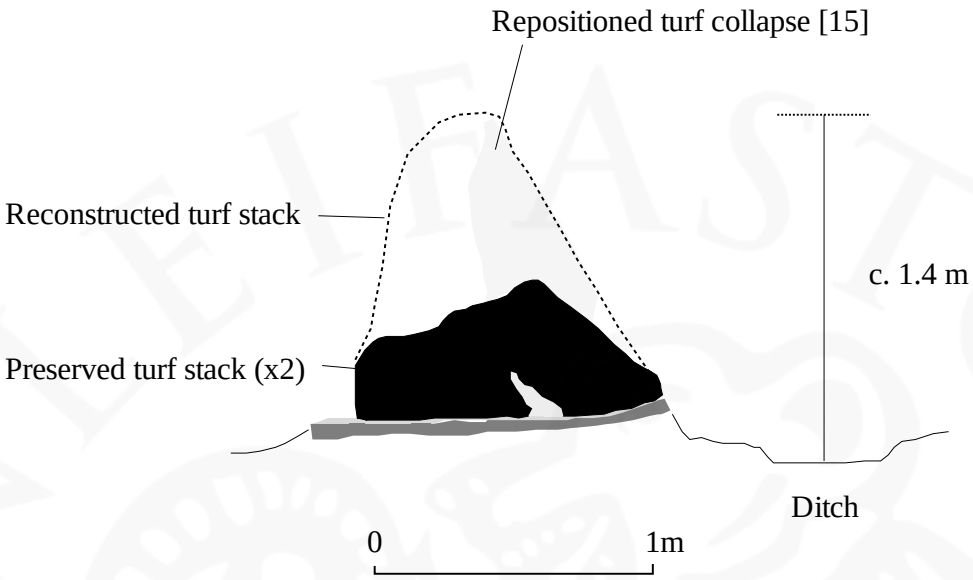


Figure 2. Nes 1 reconstructed boundary.

As has been mentioned previously it was difficult to distinguish between ditches that might have been purposefully made as part of the construction form and those made for turf by cutting areas either side of the boundary wall. In some instances erosion compounded the uncertainty. It was possible to discern at least nine boundaries with ditches, but often on the opposite side of the boundary wall a slight depression also existed. These were found at Árbót 1 (figure 6), Brekknakot 1 (figure 8), Höskuldsstaðir 2(a) (figure 9), Narfastaðir 1 (figure 10), Nes 1 (figure 13), Saltvík 1 (figure 16), Saltvík 2 (figure 17), Sýrnes 1 (figure 18) and Þverá 1 (figure 20).

Tephra analysis

Magnús Sigurgeirsson was commissioned to investigate the tephras encountered during the excavation of the boundaries; his report is appended. Several known tephras were likely given the previous work in the region. They were: ~870, V~950, H-1104, H-1158, H-1300, V-1477 and V-1717. Nine trenches were examined: Sýrnes 1 (figure 18), Sýrnes 2 ((figure 19), Nes 1 (figure 13), Árbót 2 (figure 7), Núpar 2 (figure 15), Þverá 1 (figure 20), Narfastaðir 1 (figure 10), Narfastaðir 2 (figure 11) and Narfastaðir 3 (figure 12).

Site no	*Farm & trench*	*Ground surface date*	*Tephra post*	*Max duration of use (yrs)*
1	Árbót 1	870	1477	600
2	Árbót 2	870	1300	430
3	Brekknakot 1	< 870	1300	430
* 4	Höskuldsstaðir 2a	< 870	?1158	280
4	Höskuldsstaðir 2b	< 870	?1158	280
5	Narfastaðir 1	870	1158	280
6	Narfastaðir 2	870	1300	430
7	Narfastaðir 3	1717	/	200
8	Nes 1	950	1158	200
9	Núpar 1	870	1477	280
10	Núpar 2	870	1158	280
11	Saltvík 1	870	?1158	280
12	Saltvík 2	870	?1158	280
13	Sýrnes 1	870	1300	430
14	Sýrnes 2	870	1300	430
15	Þverá 1	870	1158	280

* Höskuldsstaðir is divided into two parts because 2 different boundaries were observed in section 2a is the earliest, 2b the latest.

Table 2. Boundary chronology as estimated by tephras identified under and sealing the boundary wall. Sites with grey shaded rows were examined by Magnús Sigurgeirsson.

The majority of ground surfaces below the boundaries date to the Landnám ~870 as was expected. The only exceptions were found at Narfastaðir 3 (figure 12), which was a homefield boundary built on V-1717 ground surface, and at Nes 1 which had a surface dated to V~950 (figure 13). The tephras that were seen lying over the boundary wall, in the collapse phase, varied though this may be a product of preservation associated with site formation processes such as the rates of soil accumulation and erosion. In general the H-1158 observations were not expected. These were located at a possible seven boundaries (four sites were actually identified by Magnús Sigurgeirsson). The remaining boundaries that dated after ~870 either demonstrated V-1300 or V-1477 disuse dates. In places where H-1158 was seen the soil thickness between it and the boundary wall, or the

same construction level, was between 6 to 12 cm; in one instance at Narfastaðir 1 the H-1158 lay over a possible charcoal pit that truncated the boundary disuse deposits suggesting perhaps a much earlier date for the disuse of the boundary (figure 10).

The positioning of the H-1158 tephra suggests a greater preservation of it on the northern and eastern sides of the boundary wall; in 5 instances it was located either on the north or the east side. At Nes 1 (good preservation) and Saltvík 1 (a possible H-1158 example) the H-1158 was located only on the western side of the boundary wall (figures 13 and 16 respectively).

In late June Guðrun Larsen, University of Iceland, recorded 3 tephra profiles in the Hólasandur region.

Soil sample analysis

Ian Lawson from the University of Leeds, Department of Geography, will analyse pollen samples taken from humic soil that lay underneath the boundary walls at seven sites. The humic deposit lay over ~870 tephra except at Nes 1 where the V~950 was present and in all case only 1-2 mm thick (figure 13). If the pollen turn out to be well preserved the analysis will indicate the environment in the immediate vicinity of the boundaries. Samples were taken from Árbót 2 (figure 7), Narfastaðir 1 (figure 10), Narfastaðir 2 (figure 11), Nes 1 (figure 13), Núpar 2 (figure 15), Þverá 1 (figure 20) and Sýrnes 1 (figure 18). In addition to the pollen samples, a charcoal sample was taken for identification from the suspected charcoal pit at Narfastaðir 1 (figure 10).

OUTREACH

On 5th February 2005 Árni Einarsson gave a talk “Forn garðlög í Suður-Þingeyjarsýslu” in the Húsavík Museum (*Safnahúsið*). The meeting was organized jointly by the Mývatn Research Station, the Húsavík Museum, The Archaeological Society of Þingeyjarsýsla and the North East Iceland Nature Center. The talk was covered a few days later by the local periodical Skarpur.

On 14th February 2005 Árni Einarsson gave a talk at the Department of Anthropology and Archaeology Brooklyn College of the City University of New York, titled “Settling Matters”. Boundary walls were a main issue.

On 28th May 2005 *Lesbók Morgunblaðsins* published an introductory paper by Árni “Garðlögin miklu í Suður Þingeyjarsýslu” (The great walls in Suður Þingeyjarsýsla).

On 11th June 2005 Árni Einarsson acted as a guide on guided tour during a meeting of directors for State Antiquarians meeting for the Nordic countries. The tour included one of the most impressive boundary walls above Hofstaðir.

On 13-14th August 2005 Árni Einarsson gave a talk “Miðaldir úr lofti” (Middle Ages from above) at Laugar in Reykjadalur as part of the Saga Symposium (*Sagnaþing*) organized by the Sigurður Nordal Institute. Árni Einarsson also acted as a guide (among others) in a guided tour in the district. *Talstöðin* radio station interviewed Árni Einarsson before the meeting , on 8th August.

A new web page, under the FSÍ’s web site, was created in 2005. General information, as well as images and documents relating to the project work can be viewed or downloaded (http://www.instarch.is/instarch/rannsoknir/annad/forn_gardlog/).

DISCUSSION

The boundary systems are spread at varying densities across the study area. In 2004 it was noted that the systems create clusters within the study area. These were focused around Fjótsheiði, Reykjahverfi, Hvammsheiði, Aðaldalur, Reykjadalur, Laxárdalur and Bárðardalur. Each contains different types of systems, though they all contain the generic types of boundaries: enclosures, contour-following boundaries and those that cut across them. A characterisation of the systems within each of these areas would reveal an

understanding of their development and general character in relation to topography, or settlement as well as perhaps other types of features or activities.

In 2004 the systems in each area were described according to their descriptive features. The work carried out in 2005 expands on this. The disussion in this section is focused on Fljótsheiði (Sýrnes and Höskulsstaðir) and Hvammsheiði (Árbót) as they demonstrated a range of different types of chronologies as well as two contrasting system types. The boundary systems are assessed in several ways. Firstly, from the stratigraphy of boundaries indicating an original layour design, a secondary development, as well as infilling division between different systems; in some cases the time difference might have been small. Secondly, it is possible to use the excavation evidence to demonstrate the development sequence through tephra chronology as well as the form of boundary construction. It is noted, however, in order to achieve this with greater confidence more trenches would have to be excavated at many boundaries.

Fljótsheiði

The Fljótsheiði area contains a number of different systems at varying complexities. Boundary excavations took place at Sýrnes and at Höskuldsstaðir and both have interesting features and the discussion is focused around these.

Sýrnes boundary systems show several different stages of development; figure 3. It is suggested that the original design and layout divides Fljótsheiði between east and west halves with a long boundary (6.1 km) that runs sinuously north-south. This was excavated at Sýrnes 1. It showed a pre-1300 build and one that was constructed differently from the boundary excavated at Sýrnes 2 (Sýrnes 2 boundary was also built pre-1300 but was a different type of build and also one that was not as well preserved as Sýrnes 1); figures 18 and 19. The secondary development of the system has used the long boundary to create compartments and enclosures with boundaries that run at right-angles to it. One of the compartments, which is quite large at 1.1 sq km, has smaller enclosures placed inside and have formed against its outer edge. Within one of these settlement platforms and structures were seen. The system that straddles land belonging to Garður, Jódísarstaðir

and Sýrnes is clearly one that has evolved organically over time and has gone beyond the orignal layout scheme. The excavation of the long boundary at Sýrnes 1 suggests that the inside area lay on the western side of the long boundary, towards the area where the system has developed and been added to (based on the landscape stratigraphy); the ditch was located on the eastern side – the sheep grazing area on the east and the domestic area on the west (figure 18). Excavation of the boundary on the east side might help to clarify this.

Figure 3. Boundary systems: original layout (black), extension of layout (red), infilling and further division (blue), and excavation sites Sýrnes 1 and Sýrnes 2 (black squares).

Figure 4. Höskuldsstaðir 2 from the air (2004\2\10304609\F1030024]); looking north. Structures (top centre) and boundaries are visible.

At Höskuldsstaðir there is a confluence of two boundaries across which the trench was placed; figure 4. Here it was possible to see the relationship between the two boundaries. The earlier boundary, the one further to the north (Höskuldsstaðir 2a), was an earthen bank with a ditch on the north side (figure 9). The later boundary was built of turf (Höskuldsstaðir 2b). It is interesting, as at Sýrnes, that a small cluster of ruins lay north of the excavated boundaries. The cluster of ruins consisted of a rectangular building with a large pit at its north end, a larger platform with a number of rooms and another platform closer towards the long boundary that runs north-south. The original layout of the system suggests that a long boundary running north south abutts against a semi-circular boundary that forms part of an enclosure around the ruin clusters. A secondary development of compartments formed by boundaries running at right angles is added to this, as well as

another boundary Höskuldsstaðir 2b that runs parallel to Höskuldsstaðir 2a. All of this activity took place prior to 1477 and perhaps earlier (possibly pre-1300, though the tephra was not identified by Mágnus Sigurgeirsson). In the ditch that was sealed under by Höskuldsstaðir 2b, a horse tibia was found. This is currently being carbon dated and will provide a date which can be associated with the boundary construction.

Hvammsheiði

Discussion is focused on the area around Árbót; figure 5. Three trenches were put across boundaries: two across contour following boundaries and one that runs against the contour. The landscape stratigraphy suggests that the original layout was the dividing boundaries that run east to west, between the rivers Laxá and Reykjahverfi, with secondary development associated with the contour following boundaries running north to south. The excavation evidence is not entirely clear on this however. At Árbót 1 the ground surface on which the boundary wall was constructed was 870 and sealed by 1477 tephra. At Árbót 2, a north to south boundary, the ground surface similarly was 870 but the wall was sealed by 1300 tephra (figure 7). At Nes 1, a north to south boundary, the ground surface was 950 and the boundary was sealed by the 1158 tephra (figure 13). Preservation may be an issue, but the 950 date at Nes 1 suggests that this was part of a later development, though it fell out of use sooner than the other boundaries. Compartments were added with the construction of boundaries at right angles to the original layout boundaries. The smaller enclosures formed by the compartments in the area closest to Laxá river may have been the main farm land, and that the east to west boundary upslope formed a barrier between the farms outfield and the upper grazing areas. In this system each farm had its own grazing land structured by the boundary system.

Figure 5. Hvammsheiði boundary systems, focused on Árbót with excavation sites (red) and natural features (grey dashed line).

CONTINUED WORK

The project will continue to focus on mapping the systems in 2006, which will involve a combination of mapping, fieldwork and continued aerial survey. However, the main aim of the final year is to create testable models and theories about the boundaries and systems in terms of their chronology and development, and their function within the organisation of the landscape at the time of creation and afterwards. In addition the boundary systems will be compared with other systems found in Iceland and abroad.


FORNLEIFASTOFNUN
ÍSLANDS

APPENDICES

1. CONTEXT DESCRIPTIONS FOR TRENCHES

Basic interpretative descriptions of contexts with additional information.

Site 1 Árbót Trench 1
Figure 6
Context description
[1] Root mat
[2] Aeolian deposit
[3] Turf collapse and aeolian deposits
[4] Aeolian deposit
[5] Turf wall
[6] Turf collapse
[7] Natural
[8] 1477 tephra
[9] Reddish brown lense ?1717

Other

Site 2 Árbót Trench 2
Figure 7
Context description
[1] LNL in situ
[2] Trample upcast
[3] Turf stack
[4] Turf stack
[5] Upcast between stacks [3, 4]
[6] Disturbed upcast
[7] Upcast
[8] Aeolian and soil wash deposits
[9] Aeolian and soil wash deposits
[10] Aeolian and soil wash deposits
[11] Aeolian and turf collapse deposits
[12] Aeolian and soil wash deposits
[13] ?1300 tephra
[14] 1477 tephra
[15] Root mat
[16] Ditch cut

Other
1477 and 1300 seen in section
Pollen sample taken

Site 3 Brekknakot Trench 1
Figure 8
Context description
[1] Root mat
[2] ?1717 tephra
[3] Aeolian deposit
[4] 1477 tephra
[5] Aeolian deposit
[6] ?1300 tephra
[7] Aeolian deposit
[8] Natural
[9] Turf wall
[10] Turf collapse
[11] Aeolian deposit
[12] Aeolian deposit
[13] Natural

Other
1717, 1477 and 1300 seen in section

Site 4 Höskuldsstaðir Trench 2
Figure 9
Context description
[1] Ditch infill
[2] Ditch cut
[3] Bank
[4] Lensed soil wash
[5] Redeposited H3
[6] Aeolian deposit
[7] Turf wall
[8] Soil wash and aeolian deposits
[9] Aeolian deposit
[10] Soil wash
[11] Soil wash
[12] Turf collapse
[13] 1477 tephra
[14] Root mat

Other
Bone and charcoal deposits found in ditch fill [1] (AMS date pending [1/11/05])
1104/1158 possibly seen in [9]
1262/1300 possibly seen at base of 1477 sequence [13]

Site 5 Narfastaðir Trench 1
Figure 10
Context description
[1] LNL in situ
[2] Trample upcast
[3] Trample upcast under turf wall [6, 7]
[4] Trample upcast under turf wall [6, 7]
[5] Upcast between turf wall [6, 7]

[6] Turf stack
[7] Turf stack
[8] Turf collapse
[9] Turf collapse and soil wash deposits
[10] ?1300 tephra
[11] 1477 tephra
[12] Aeolian deposit
[13] Aeolian deposit
[14] 1717 tephra
[15] Aeolian deposit
[16] Root mat
[17] Ditch infill
[18] Ditch cut
[19] Pit cut
[20] Infill of pit
[21] Charcoal lense
[22] Upcast
[23] Aeolian deposit
[24] ?1477 tephra

Other
1158 seen in [23] over lying the pit that truncates the boundary
1477, 1300 and 1158 seen in section
Pollen sample taken
Charcoal sample taken for identification (and dating)

Site 6 Narfastaðir Trench 2
Figure 11
Context description
[1] Root mat
[2] Aeolian deposit
[3] 1477 tephra
[4] Turf collapse and aeolian deposits
[5] Turf collapse and aeolian deposits
[6] 1300 tephra
[7] Turf collapse and aeolian deposits
[8] Aeolian deposit
[9] Turf collapse
[10] Infill deposit between turf stacks
[11] Turf stack
[12] Turf stack
[13] LNL natural

Other
1477, 1300 seen in section
Pollen sample taken

Site 7 Narfastaðir Trench 3
Figure 12
Context description
[1] Turf wall
[2] Re-build
[3] Root mat
[4] 1717 tephra

Other
1158, 1300, 1477 and 1717 under the turf wall [1]

Site 8 Nes Trench 1
Figure 13
Context description
[1] LNL in situ, with V ~ 950 observed
[2] Trample upcast
[3] Turf stack
[4] Turf stack
[5] Turf cap over [3, 4]
[6] Infill between stacks [3, 4]
[7] Ditch cut
[8] Turf cutting ditch
[9] Upcast
[10] Upcast
[11] Aeolian and soil wash deposits
[12] Soil wash deposit
[13] Aeolian deposit
[14] Aeolian and soil wash deposits
[15] Turf collapse (part of stack or turf cap 3, 4, 5])
[16] Aeolian deposit
[17] Turf collapse mixed with aeolian deposit
[18] Aeolian deposit
[19] 1477 tephra
[20] Root mat

Other
1717, 1477, 1410, 1300 and 1158 seen in section, with the boundary sitting over V ~ 950
Pollen sample taken

Site 9 Núpar Trench 1
Figure 14
Context description
[1] LNL in situ
[2] Turf wall
[3] Dicth cut (S)
[4] Ditch cut (N)
[5] Ditch fill upcast
[6] Ditch fill upcast
[7] Soil wash
[8] Turf collapse
[9] Soil wash
[10] Upcast and aeolian desposits
[11] Soil wash
[12] Aeolian deposit
[13] Aeolian deposit
[14] 1477 tephra
[15] Aeolian and root mix
[16] Root mat

Other

1717, 1477, ?1158 – similar to Trench 2

Site 10 Núpar Trench 2
Figure 15
Context description
[1] LNL in situ
[2] Trample upcast
[3] Turf wall
[4] Ditch cut (eroded on E edge)
[5] Dicth cut
[6] Aeolian and soil wash deposits
[7] Aeolian deposit
[8] Turf collapse and aeolian deposit
[9] Upcast and soil wash
[10] ?1300 tephra
[11] 1477 tephra
[12] Aeolian deposit
[13] Root mat

Other
1477, 1300, 1158 seen in section
Pollen sample taken

Site 11 Saltvík Trench 1
Figure 16
Context description
[1] LNL in situ
[2] Trample upcast or turf growth under turf wall construction
[3] Ditch cut (E)
[4] Ditch cut (W)
[5] Soil wash deposit
[6] Soil wash deposit
[7] Turf wall
[8] Turf collapse
[9] Aeolian deposit
[10] 1477 tephra
[11] Aeolian deposit
[12] Soil wash deposit
[13] Ditch infill (W)
[14] ?1158 tephra though might be H3 redeposited
[15] Old root mat
[16] Aeolian deposit
[17] Root mat

Other

Site 12 Saltvík Trench 2
Figure 17
Context description
[1] LNL in situ
[2] Aeolian deposit
[3] Redeposited natural/upcast
[4] Mixed upcast deposit
[5] Turf wall
[6] Collapse and upcast deposits
[7] Aeolian deposit
[8] 1717 and 1477 tephras
[9] 1300 tephra
[10] Aeolian deposit
[11] ?1717 tephra
[12] Aeolian deposit
[13] Aeolian deposit
[14] Root mat
[15] Ditch cut (E)
[16] Ditch cut (W)
[17] Ditch infill (W)

Other
1158 seen in [6]

Site 13 Sýrnes Trench 1
Figure 18
Context description
[1] LNL in situ
[2] Trample and upcast
[3] Turf stacks x2
[4] Turf collapse
[5] Soil bank
[6] Upcast infill between stacks
[7] Ditch cut
[8] Ditch infill
[9] Soil wash and aeolian deposits
[10] Soil wash and aeolian deposits
[11] Soil wash and aeolian deposits
[12] Soil wash and aeolian deposits
[13] Soil wash and aeolian deposits
[14] Soil wash and aeolian, with turf collapse
[15] 1477 tephra
[16] Root mat

Other
1717 seen in [16]
1300 seen in [14]
Pollen sample taken

Site 14 Sýrnes Trench 2
Figure 19
Context description
[1] Lensed deposits
[2] Lensed deposits
[3] Aeolian deposits
[4] Turf collapse
[5] Aeolian deposit
[6] Frost action disturbance
[7] 1477 tephra
[8] Root mat

Other
1300 tephra obersved by MS

Site 15 Þverá Trench 1
Figure 19
Context description
[1] Root mat
[2] Aeolian deposit
[3] 1477 tephra
[4] Aeolian deposit
[5] Aeolian deposit
[6] Turf collapse and aeolian deposits
[7] Turf collapse and aeolian desposits
[8] Aeolian deposit
[9] Turf collapse
[10] Turf wall
[11] Aeolian deposit
[12] 1300 tephra
[13] Aeolian deposit
[14] LNL in situ
[15] 1158 tephra

Other
1477, 1300, ?1260, 1158
Pollen sample taken

3. SECTION GRAPHICS

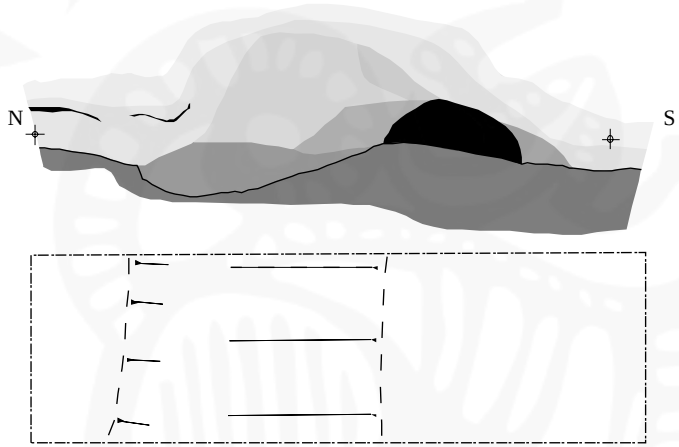


Figure 6. Árbót 1

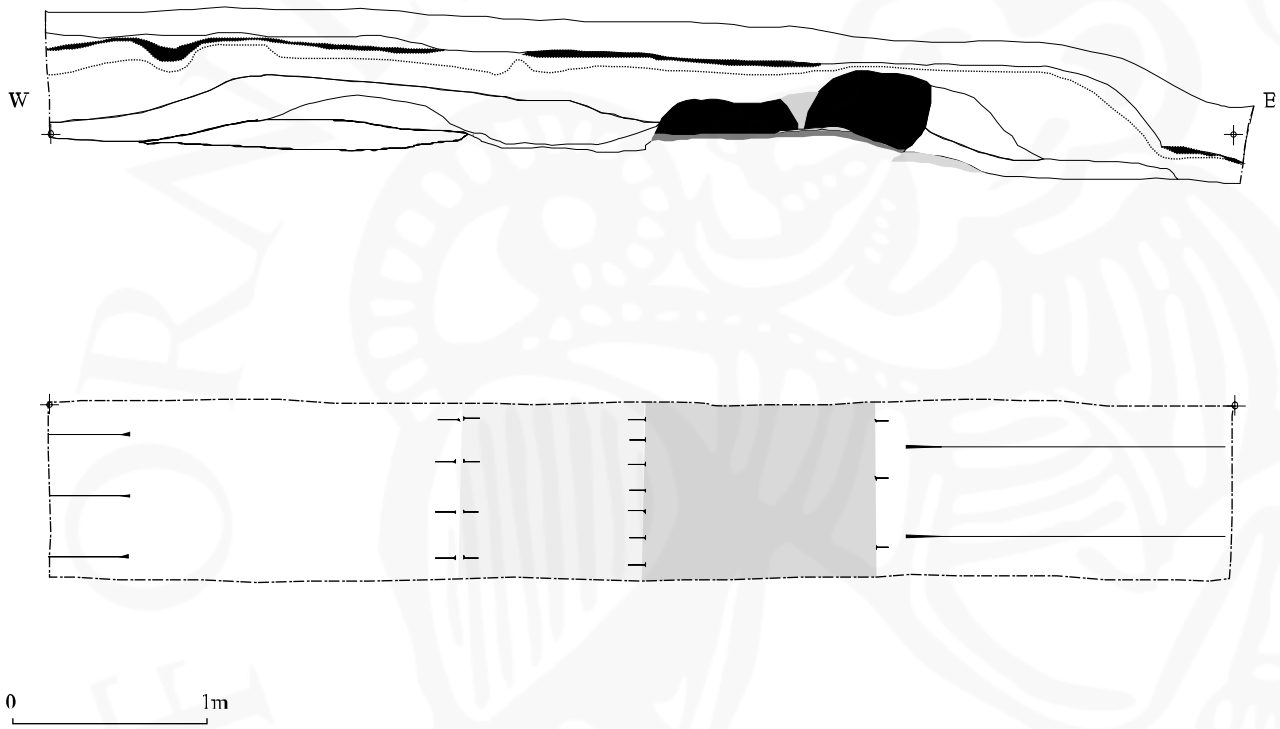


Figure 7. Árbót 2

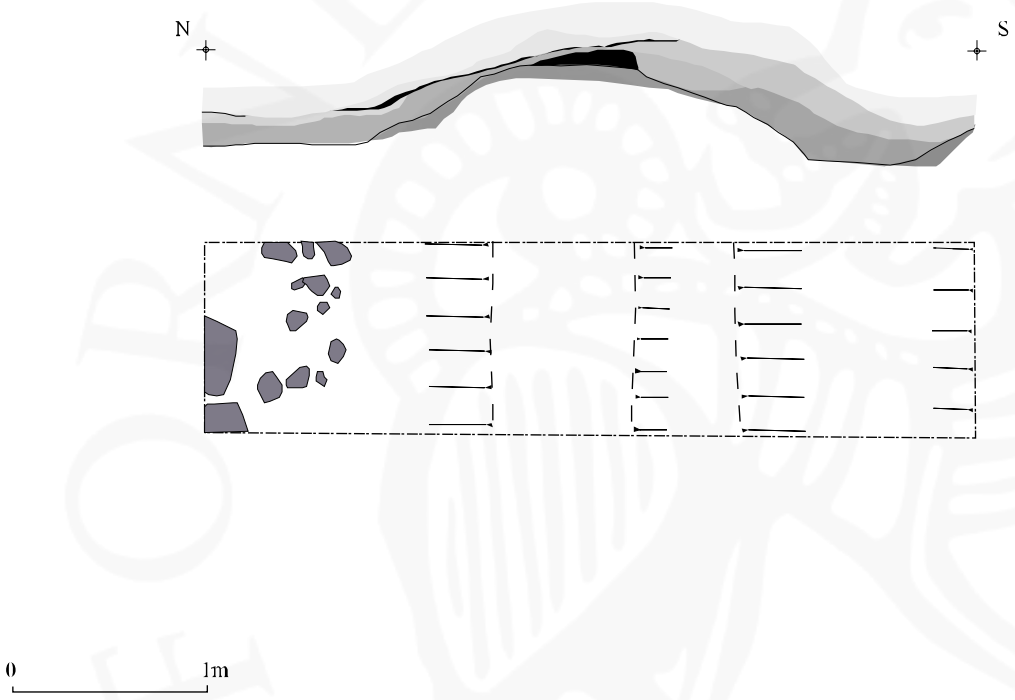


Figure 8. Brekknakot 1

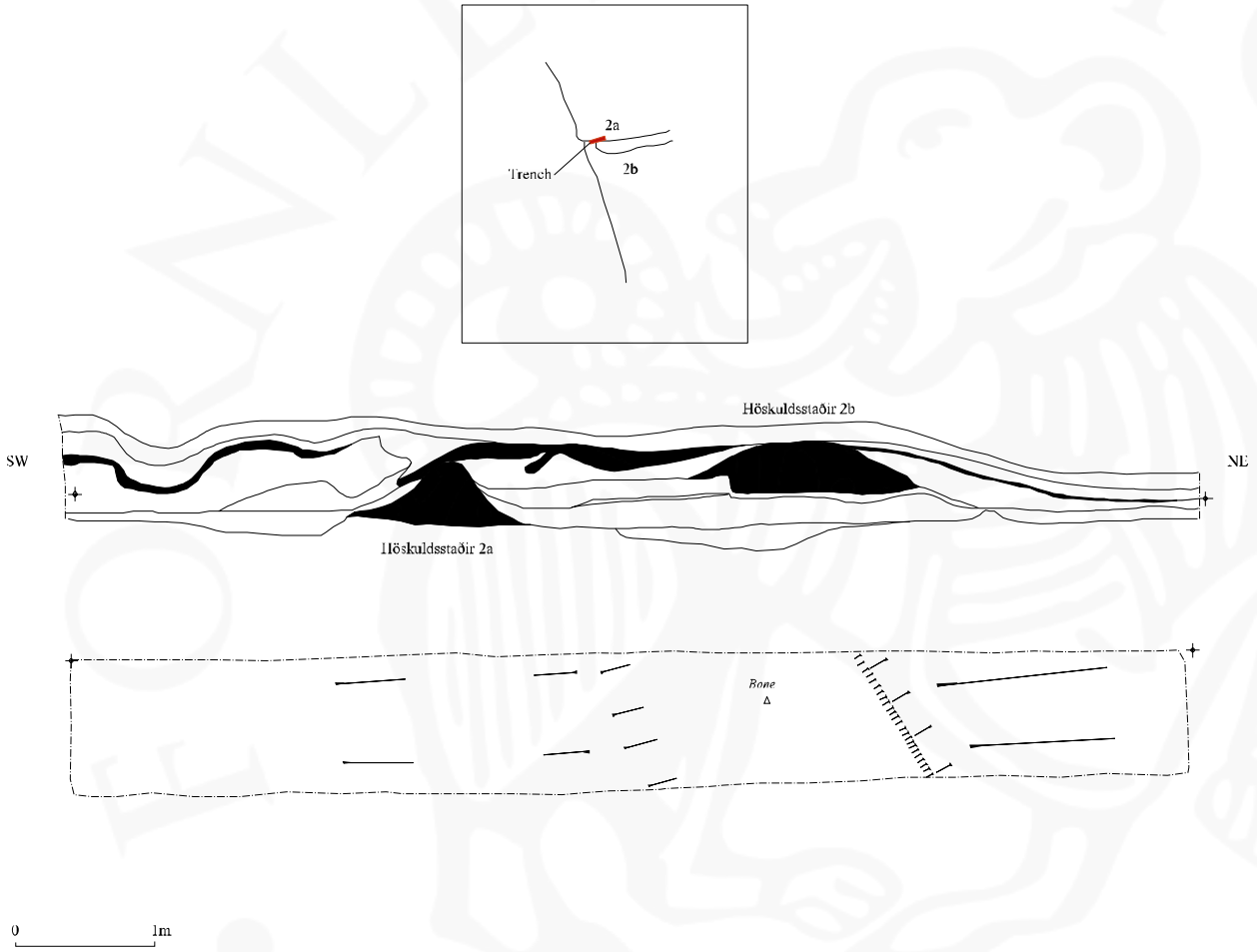


Figure 9. Höskuldsstaðir 2a and b

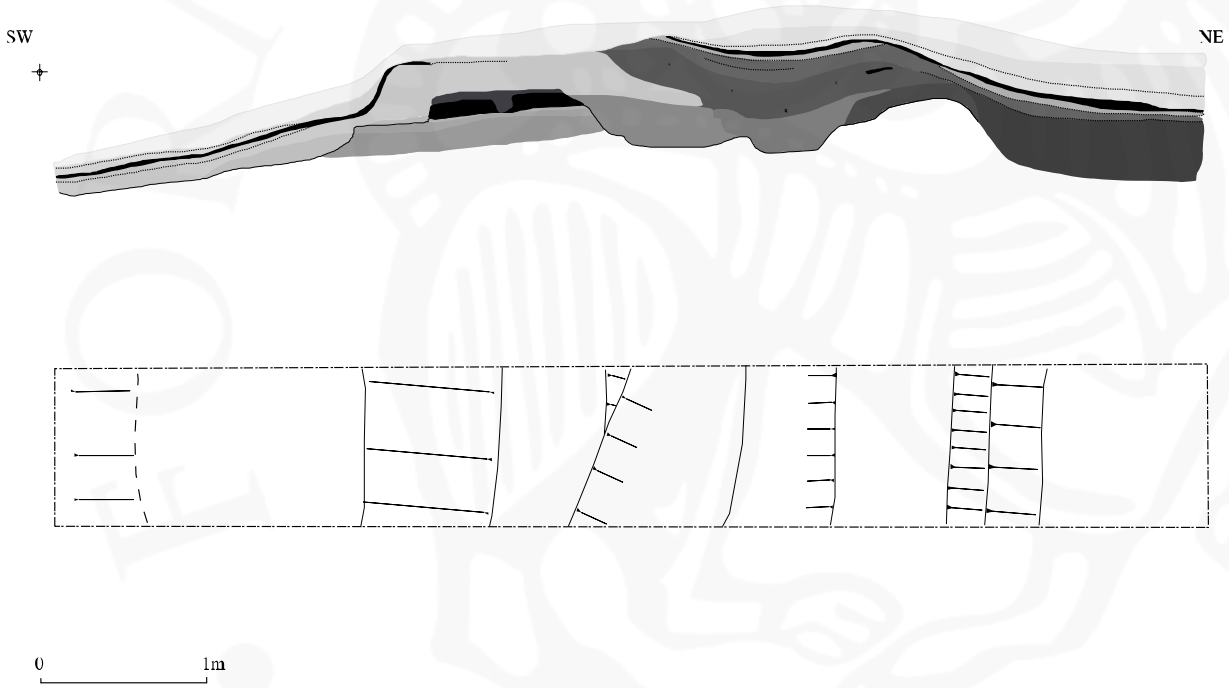


Figure 10. Narfastaðir 1

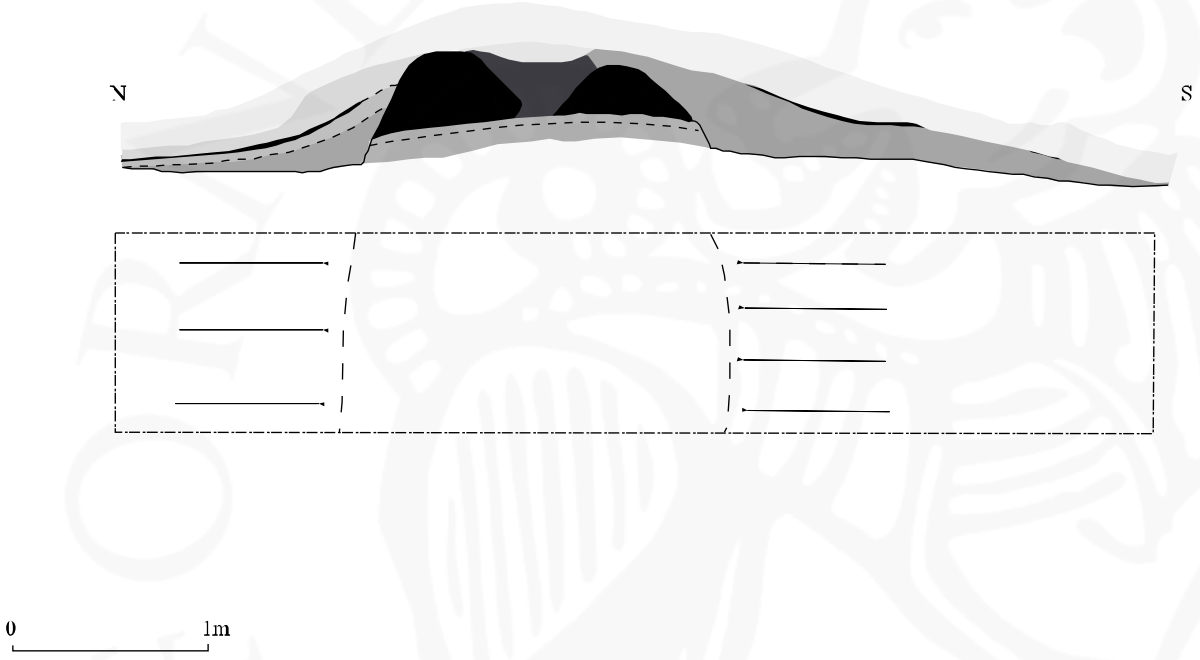


Figure 11. Narfastaðir 2

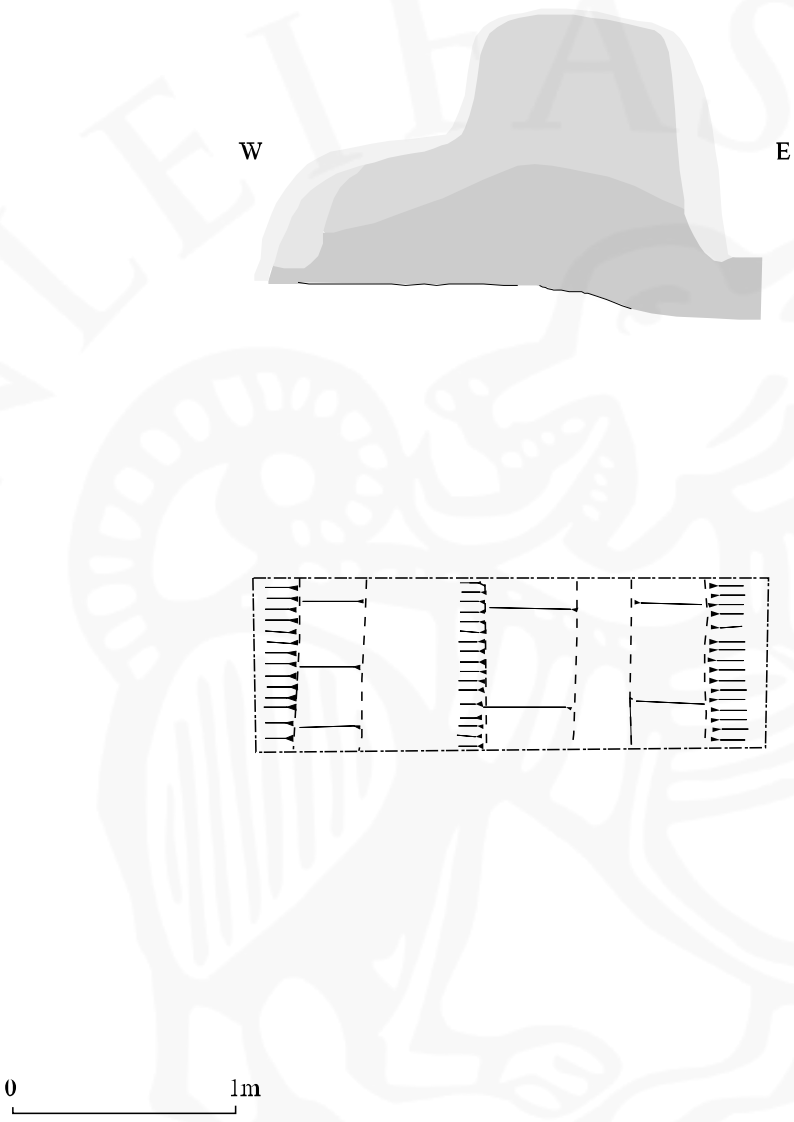


Figure 12. Narfastaðir 3

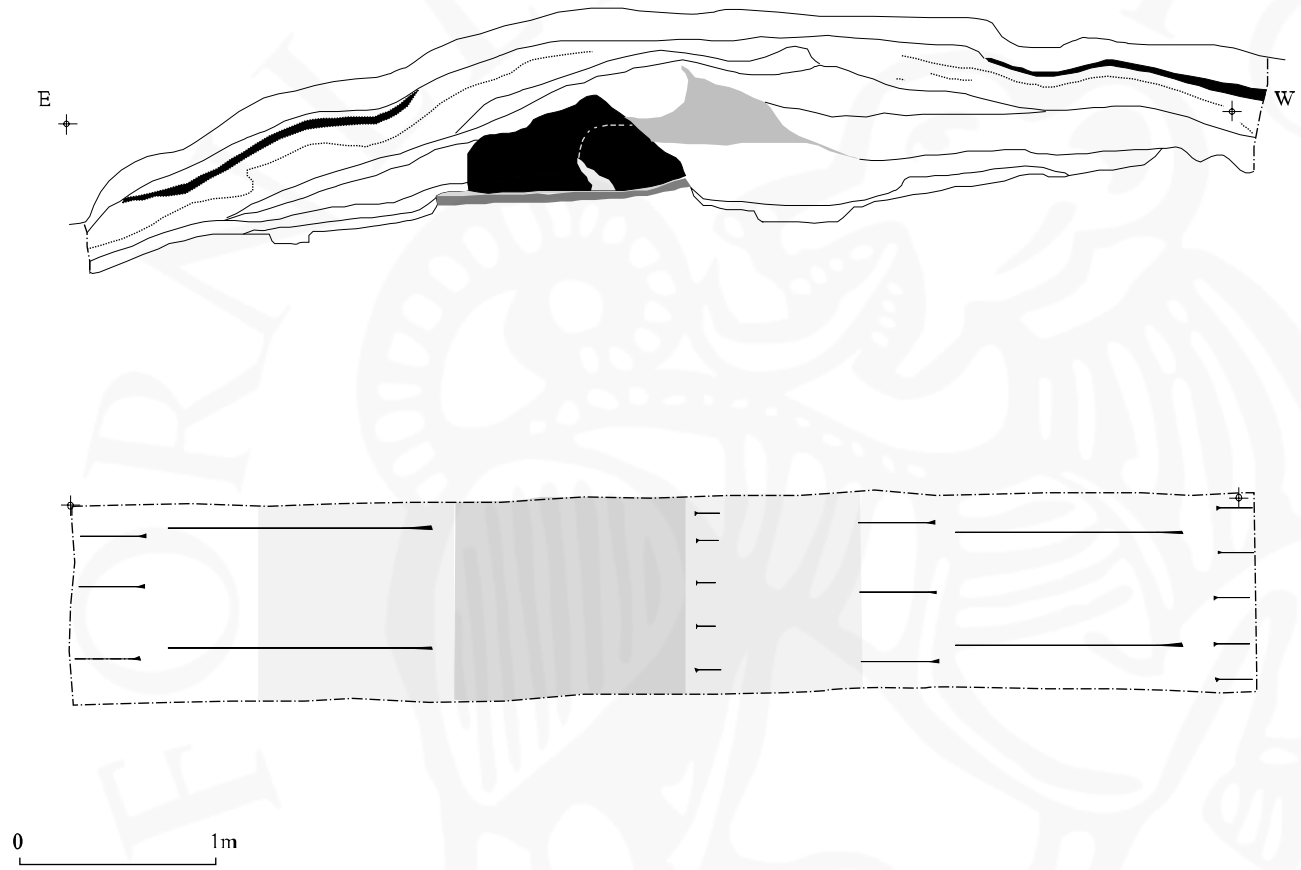


Figure 13. Nes 1

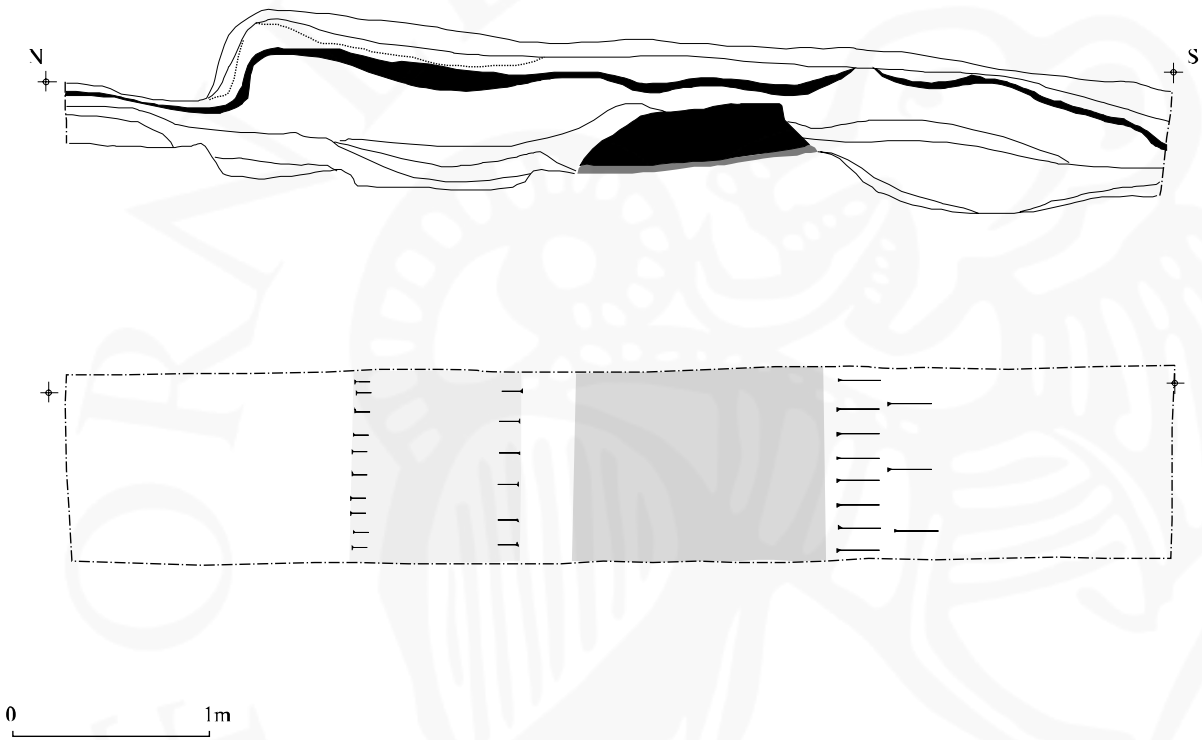


Figure 14. Núpar 1

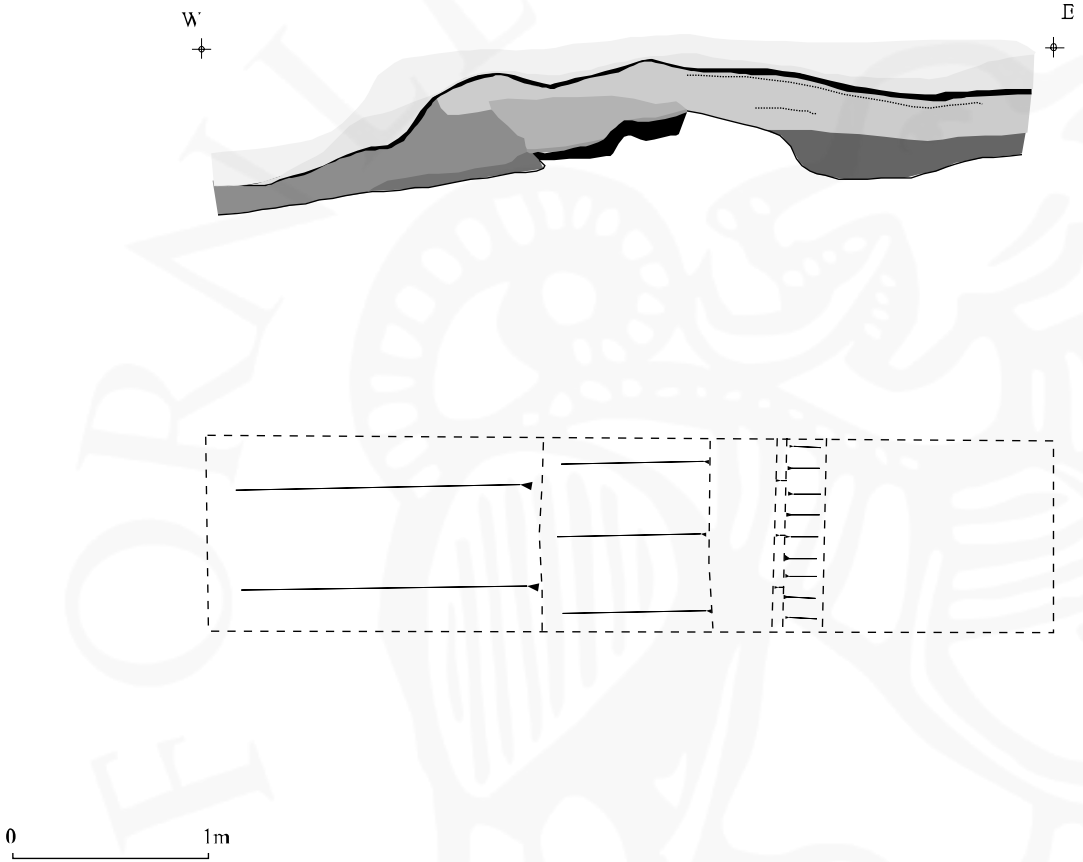


Figure 15. Núpar 2

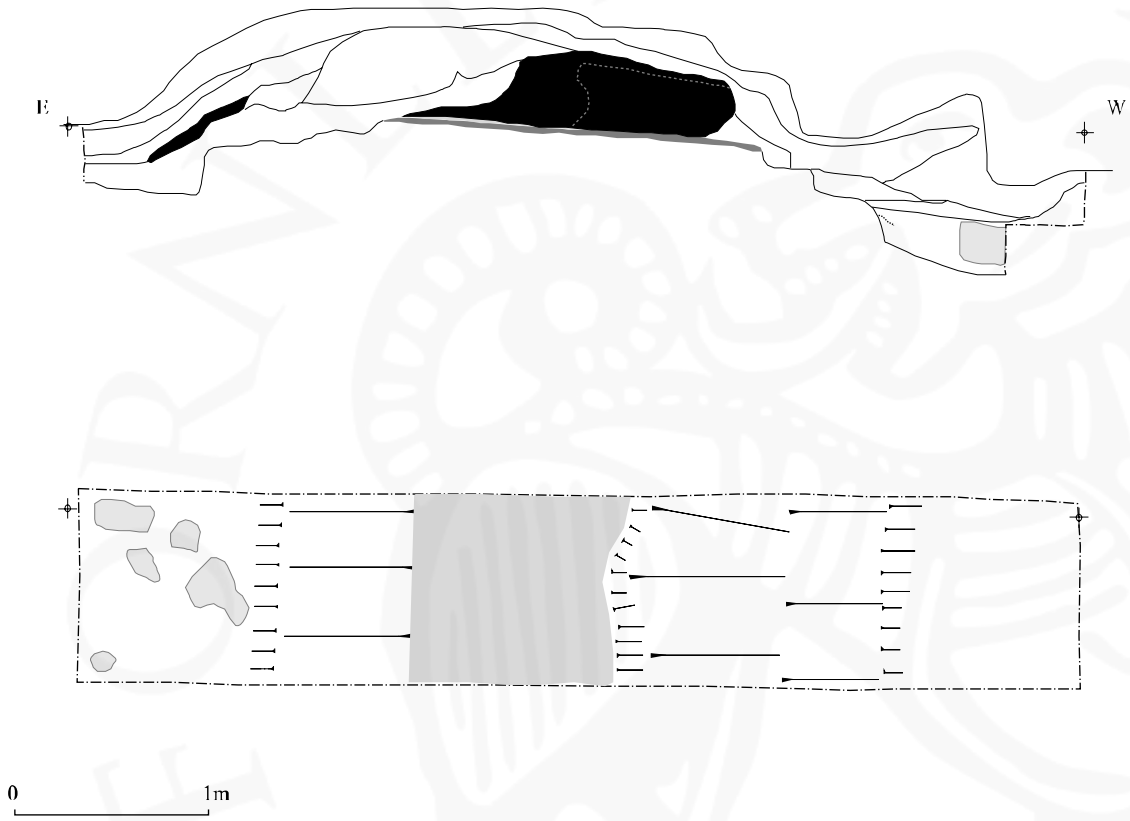


Figure 16. Saltvík 1

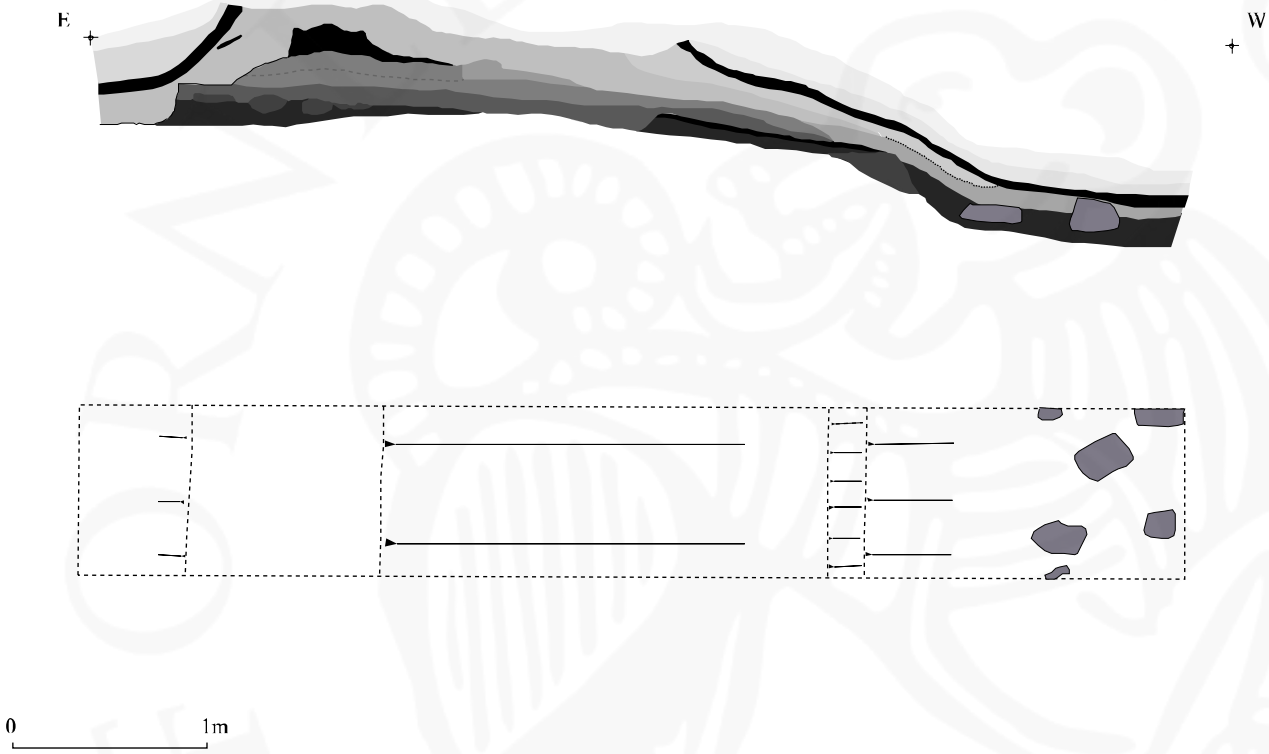


Figure 17. Saltvík 2

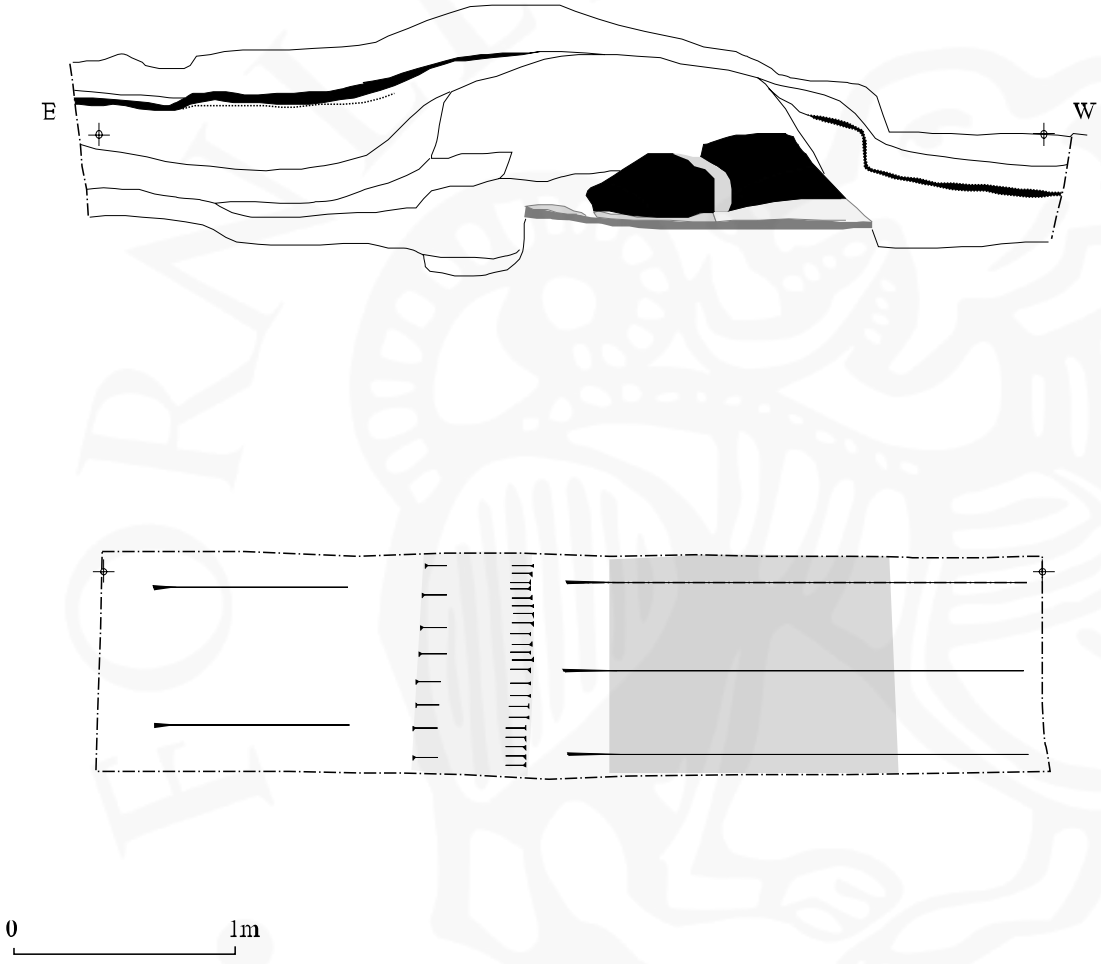


Figure 18. Sýrnes 1

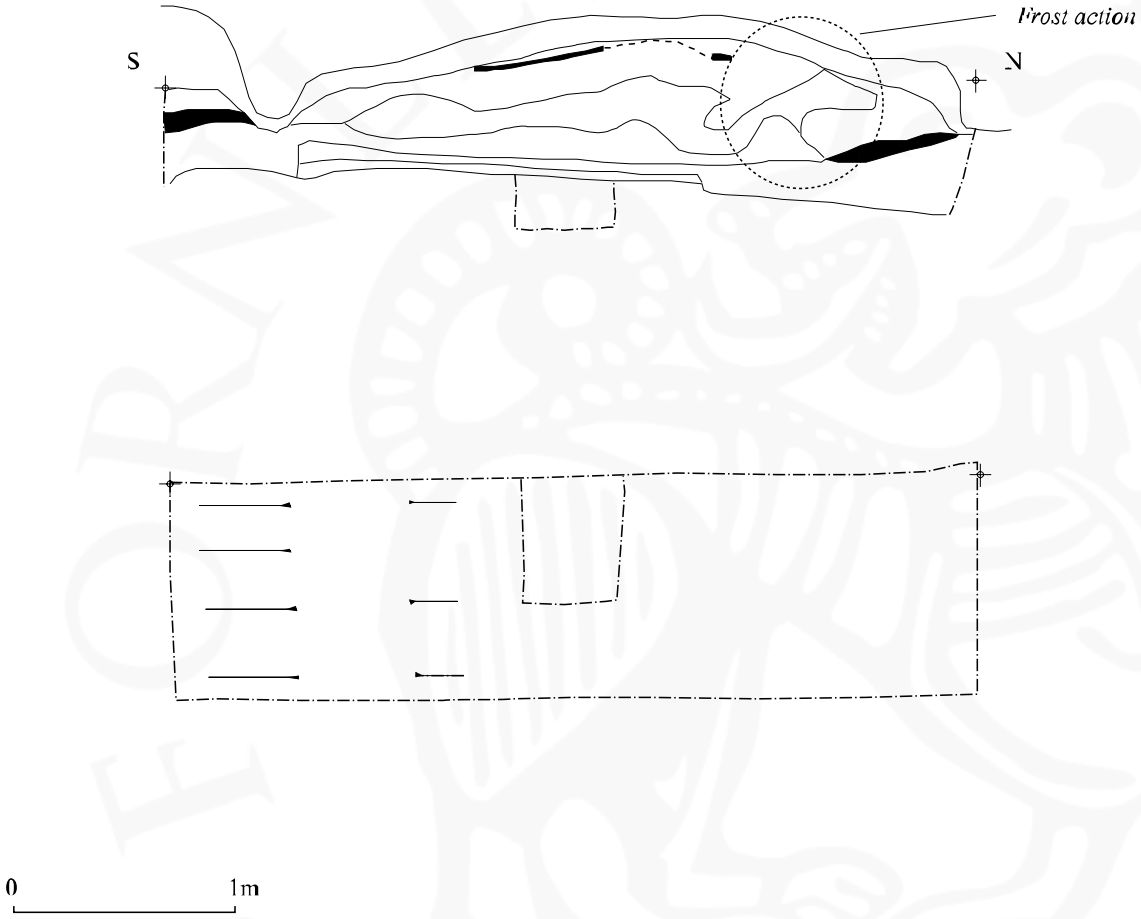


Figure 19. Sýrnes 2

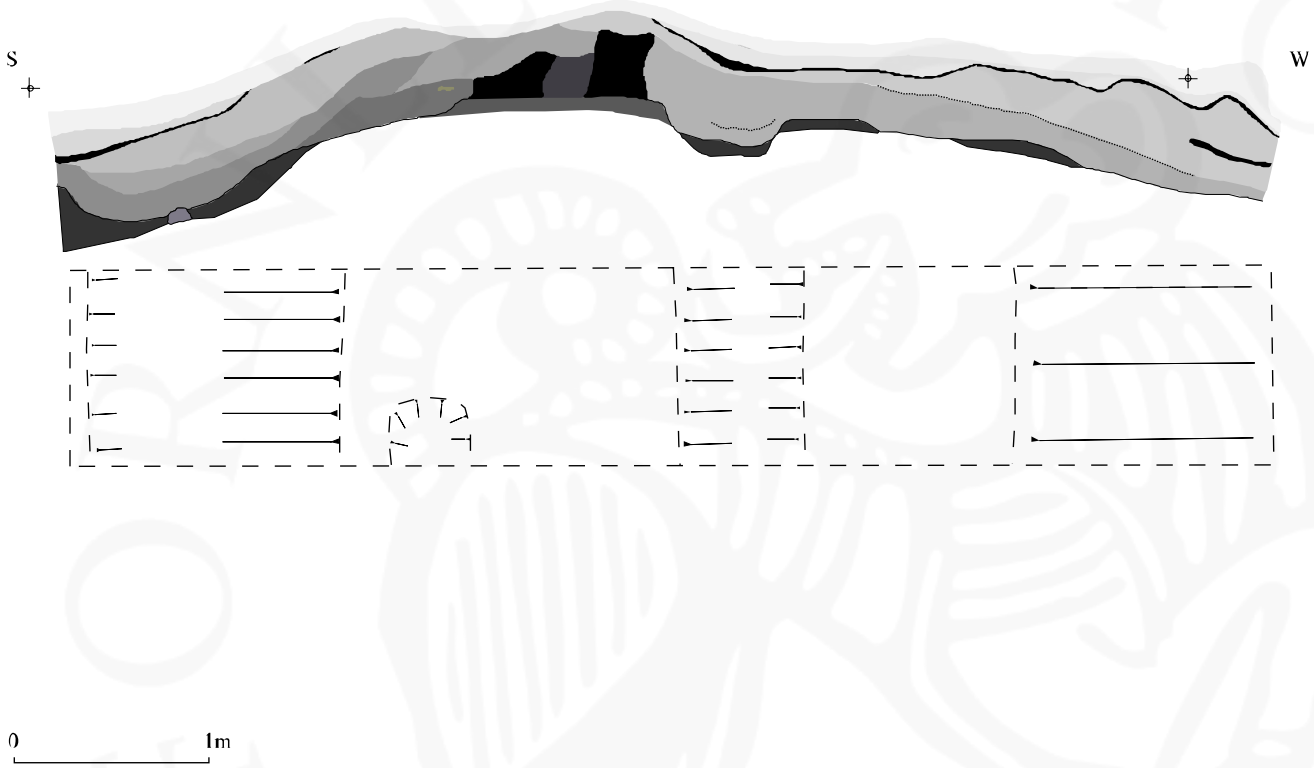


Figure 20. Þvera 1

3. TEPHRA REPORT

Fornir garðar í Suður-Þingeyjarsýslu

Gjóskulagagreining

Magnús Á. Sigurgeirsson, jarðfræðingur
Fjallalind 123, 201 Kópavogur
Netföng: masig@mmedia.is/ms@gr.is

Dagana 10.-11. ágúst 2005 var farin vettvangsferð í S-Þingeyjarsýslu til að aldursgreina forna garða með gjóskutímatali. Skoðuð voru alls níu snið á fimm mismunandi stöðum, þ.e. við bæina Sýrnes í Aðaldal, Nes og Árbót í Aðaldal, Núpa í Aðaldal, Þverá í Laxárdal og Narfastaði í Reykjadal. Stuðst var við sniðteikningar fornleifafræðinga ef þær lágu fyrir, annars voru snið teiknuð. Sýni voru tekin úr gjóskulögum sem ástæða þótti til að skoða nánar.

Gjóskulög í S-Þingeyjarsýslu

Allnokkrar rannsóknir hafa farið fram á gjóskulögum á Norður- og Norðausturlandi á síðustu áratugum (sjá t.d. Árni Einarsson o.fl. 1988, Guðrún Larsen 1982; 1984; 1992, Karl Grönvold o.fl. 1995, Magnús Á. Sigurgeirsson 1998, Magnús Á. Sigurgeirsson o.fl. 2002, Sigurður Þórarinsson 1968). Þau gjóskulög sem best hafa nýst við aldursgreiningu fornleifa á svæðinu eru: Landnámslag (LNL) frá ~870, V~950, H-1104, H-1158, H-1300, V-1477 (einnig nefnt "a-lagið") og V-1717. Tvö fyrstnefndu lögin ásamt nokkrum eldri lögum mynda saman fremur auðþekkjanlega syrpu gjóskulaga sem nefnd hefur verið Landnámssyrpan (LNS). Jarðvegur er yfirleitt áberandi dökkur við þessi lög.

NIÐURSTÖÐUR RANNSÓKNA

Sýrnes

Snið í skurði 1: Landnámssyrpan er undir torfhleðslu garðsins. Dökkt lífrænt lag er efst í LNS og á milli hennar og garðtorfsins er 2-3 mm grátt lag (lífrænt efni). Strengurinn í garðinum snýr ýmist rétt eða öfugt. Yfir garðhleðsluna liggja þrjú dökk gjóskulög, V-1717 (í grasrótinni), V-1477 og H-1300. Ekki tókst af finna V~950 í torfinu eða í jarðvegi undir garðinum. Allþykkt fokset er austan við garðinn. Garðurinn er frá því fyrir 1300.

Snið í skurði 2: Sniðið er í þvergarð á garð sem liggur út eftir dalnum. Landnámssyrpan er ekki varðveitt undir garðinum, neðri mörk torfsins liggja 6-8 cm ofan Heklu-3. Í torfinu eru slitrur af LNS og Heklu-3. Tvö dökk gjóskulög liggja yfir torfhleðsluna, V-1477 og H-1300. Ekki sá votta fyrir H-1158 í sniðinu. Garðurinn er frá því fyrir 1300.

Nes/Árbót

Nes, snið í skurði 1: Yfir hruni úr garðinum liggja V-1717, V-1477, V-1410, H-1300 og að öllum líkindum H-1158. LNS er lítt röskuð undir torfhleðslunni. Rauðbrúnt lífrænt lag er efst í LNS. Þunnt, 2-3 mm ljóst lag, er á milli neðsta torflagsins og jarðvegsins undir garðinum. Landnámssyrpan er mjög samþjöppuð og illmögulegt að sjá hvort V~950 er í henni, sama er að segja um torfið í garðinum, þar er LNS og Hekla-3 mest áberandi. Strengurinn snýr í öllum tilvikum öfugt. Garðurinn er frá því fyrir 1158.

Árbót, snið í skurði 2: Yfir garðhleðslunni eru V-1477 og H-1300. Um 6-8 cm frá H-1300 í torfhrun úr garðinum. Landnámssyrpan er óröskuð undir torfinu, aðeins þunnt dökkt lífrænt lag er á milli LNS og torfs. Landnámssyrpan og Hekla-3 eru áberandi í torfi. Engin merki um H-1158 fundust. Gjóskulögin eru neðst í rótalagi og því talsvert röskuð. Garðurinn er frá því fyrir 1300, sennilega alllöngu fyrr.

Núpar

Snið í skurði 2: Gjóskulögin V-1477 og H-1300 liggja yfir torfhleðsluna, Slitrur af H-1158 eru í torfhruni austan við garðinn, um 6 cm ofan við niðurgröft. Landnámssyrpan er í jarðvegi undir torfi. Í torfi garðsins eru LNS og Hekla-3 áberandi. Hægt er að rekja H-1158 á um 40 cm bili austan við garðinn. Á milli torfs og LNS eru 2-4 mm. Garðurinn er frá því fyrir 1158.

Þverá

Snið í skurði ~200 m vestan þjóðvegs: Snið var mælt í torfhruni um 0,4 m norðan við torfhleðslu garðsins (mynd 1). Í jarðvegi yfir torfhleðslunni er gjóskulagið V-1477. Ofarlega í torfhruninu er H-1300 og neðar er H-1158, um 8 cm ofan við niðurgröft. Gjóskulagið H-1158 er hægt að rekja 40 cm í vesturprófílnum. Rétt undir H-1300 er fínkorna grágrænt gjóskulag. Þetta lag gæti samsvarað grágrænu gjóskulagi sem sjá má á milli H-1300 og K-1260 suður af Laxárdal, t.d. við Suðurárbotna (MS, óbirt gögn). Landnámssyrpan er í jarðvegi undir torfhleðslunni. Milli torfs og LNS eru 1-2 cm. Í torfinu eru LNS og Hekla-3 áberandi. Garðurinn er frá því fyrir 1158.

Narfastaðir

Snið í skurði 1, skammt austan Narfastaðasels: Snið var mælt í norðurprófíl skurðsins, um 1 m norðan garðsins (mynd 1). Þar má sjá að gjóskulögin V-1477, H-1300 og H-1158 liggja yfir torfhruni úr garðinum. Um 4 cm eru frá torfi upp í H-1158. Landnámssyrpan og Hekla-3 eru áberandi í torfinu. Garðurinn er frá því alllöngu fyrir 1158.

Snið í skurði 2, skammt frá Narfastöðum: Yfir garðinn liggja gjóskulögin V-1477 og H-1300. Slitra af grænleitu gjóskulagi er neðar, um 3-4 cm ofan við niðurgröft. Samkvæmt smásjárskoðun gæti verið um sama lag að ræða og fannst í sniðinu við Þverá. Sé sú raunin er um að ræða gjósku frá seinni hluta 13. aldar. Landnámssyrpan er varðveitt undir torfhleðslunni. Hún er ennfremur í torfinu ásamt Heklu-3. Garðurinn er frá því fyrir 1300 (sennilega talsvert fyrr).

Túngarður við Narfastaði: Í sniði sem grafið hafði verið í gegnum garðinn, sem stendur að mestu í fullri hæð, mátti sjá allmörg gjóskulög undir honum. Þar eru m.a. gjóskulögin H-1158, H-1300, V-1477 og V-1717 næst undir torfhleðslunni. Í torfinu eru hnausar með V-1477, LNL og Heklu-3. Túngarðurinn er hlaðinn eftir árið 1717.

UMRÆÐA

Í fjórum sniðum sem skoðuð voru reyndust vera garðhleðslur frá því fyrir 1158, þ.e. á öllum stöðum nema í Sýrnesi. Mögulegt að víðar, t.d. við Árbót í Aðaldal, séu garðar frá því fyrir 1158 þrátt fyrir að gjóskulagið H-1158 hafi ekki fundist þar. Lagið er mjög þunnt, 1-2 mm, og því ekki alls staðar varðveitt. Um neðri aldursmörk garðanna er lítð hægt að segja, nema að þeir eru allir byggðir eftir 870. Ekki tókst að greina gjóskulagið V~950 undir görðum eða í torfi, sem hefði þrengt aldursmörk garðanna verulega.

HEIMILDIR

Árni Einarsson, Hafliði Hafliðason og Hlynur Óskarsson 1988. Mývatn: Saga lífríkis og gjóskutímatal í Syðriflóa, Náttúruverndarráð, fjölrit 17.

Guðrún Larsen 1982. Gjóskulagatímatal Jökuldals og nágrennis. Í: Eldur er í norðri. Sögufélag, Reykjavík, s. 51-65.

Guðrún Larsen 1984. Recent volcanic history of the Veidivötn fissure swarm, Southern Iceland – an approach to volcanic risk assessment. J Volcanol. Geotherm. Res. 22: 33-58.

Guðrún Larsen 1992. Gjóskulagið úr Heklugosinu 1158. Yfirlit og ágrip, Veggspjaldaráðstefna, Jarðfræðafélag Íslands, s. 25-27.

Karl Grönvold, Níels Óskarsson, Sigfús S. Johnsen, Clausen, H. B., Hammer, C. U., Bond, G., Bard, E. 1995. Express Letters. Ash layers from Iceland in the Greenland GRIP ice core correlated with oceanic and land sediments. Earth and Planetary Science Letters 135: 149-155.

Magnús Á Sigurgeirsson 1998. Gjóskulagarannsóknir á Hofstöðum 1992-1997. Archaeologia Islandica 1: 110-118.

Magnús Á Sigurgeirsson, Orri Vésteinsson og Hafliði Haliðason 2002. Gjóskulagarannsóknir við Mývatn – aldursgreining elstu byggðar. Vorráðstefna 2002. Ágrip erinda og veggspjalda, Jarðfræðafélag Íslands, s. 36-37.

Sigurður Þórarinsson 1968. Heklueldar. Sögufélag, Reykjavík, 185 s.

FORNLEIFASTOFNUN
ÍSLANDS

Figure 21. The project study area.

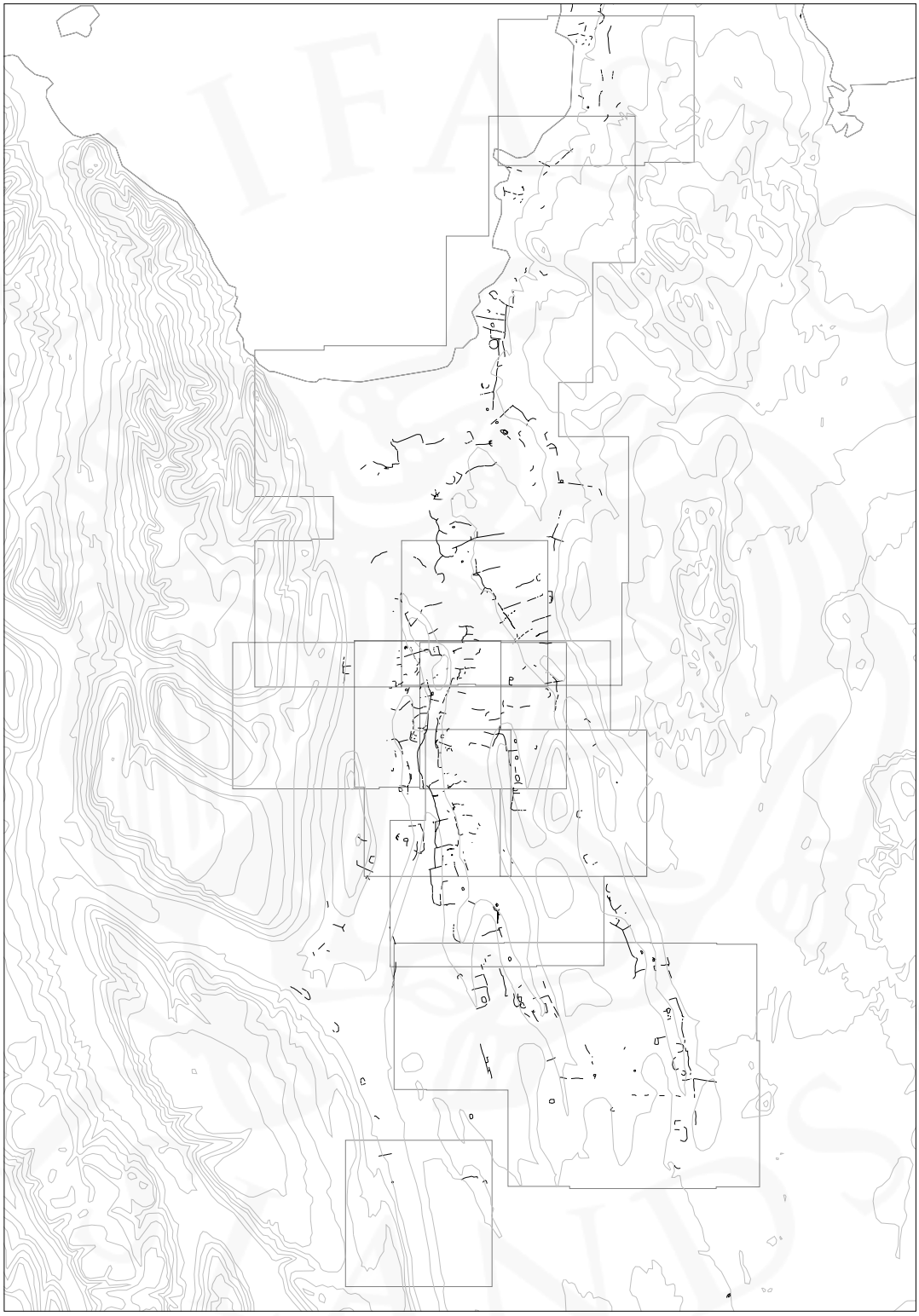


Figure 22. Mapping events carried out in 2005.

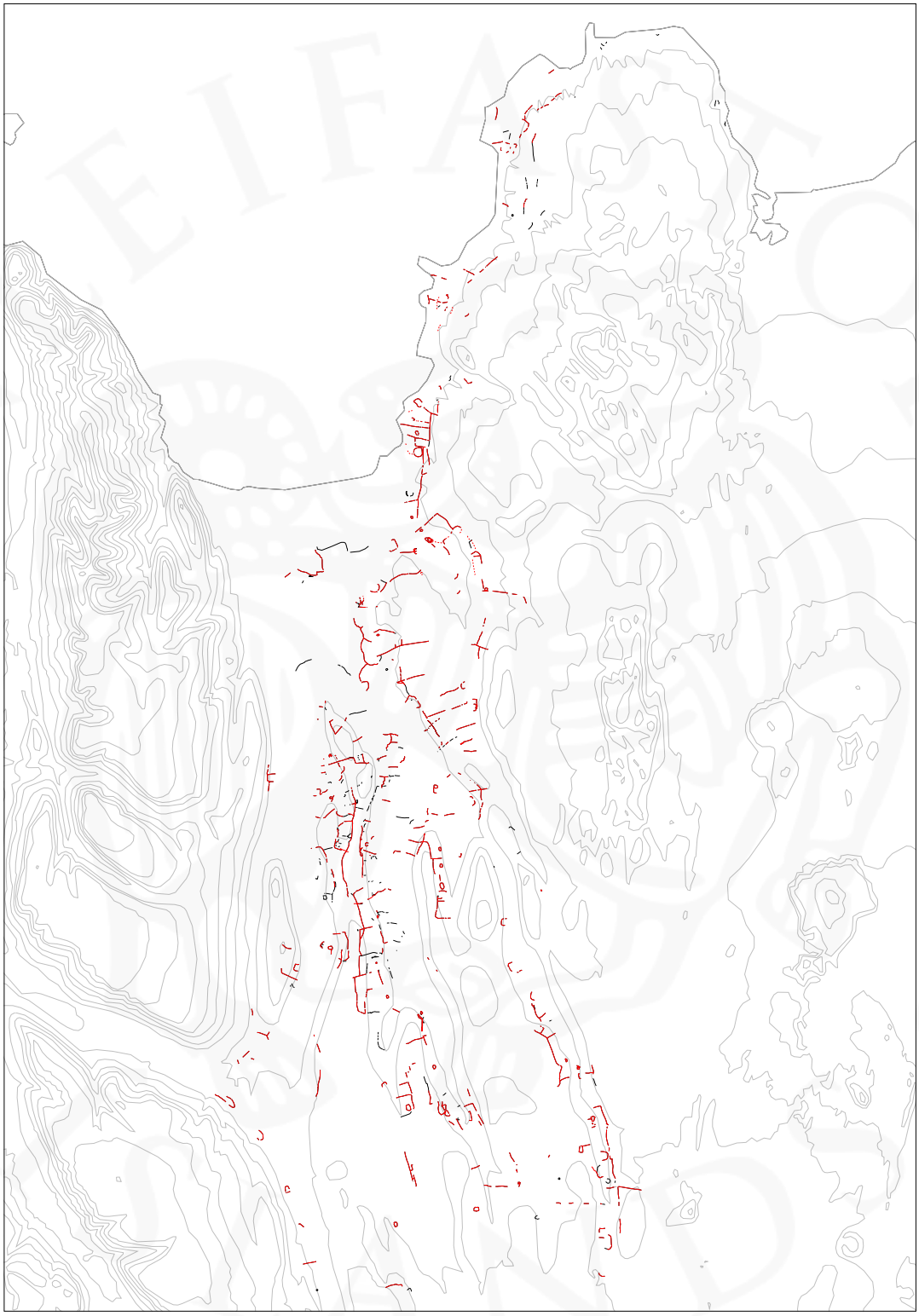


Figure 23. Original transcription boundaries (red) new observations (black).

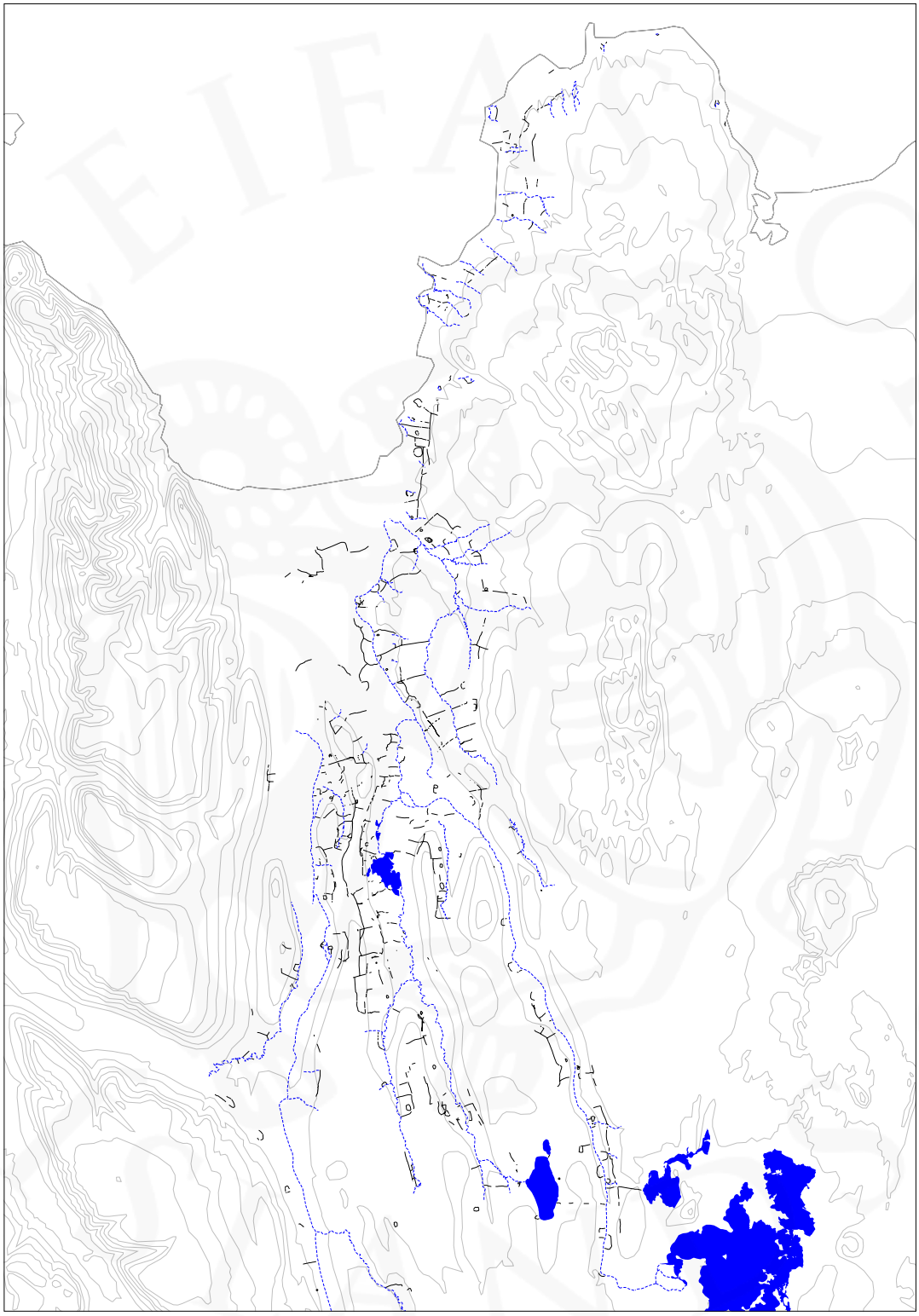


Figure 24. Natural boundaries and the earthworks boundaries.

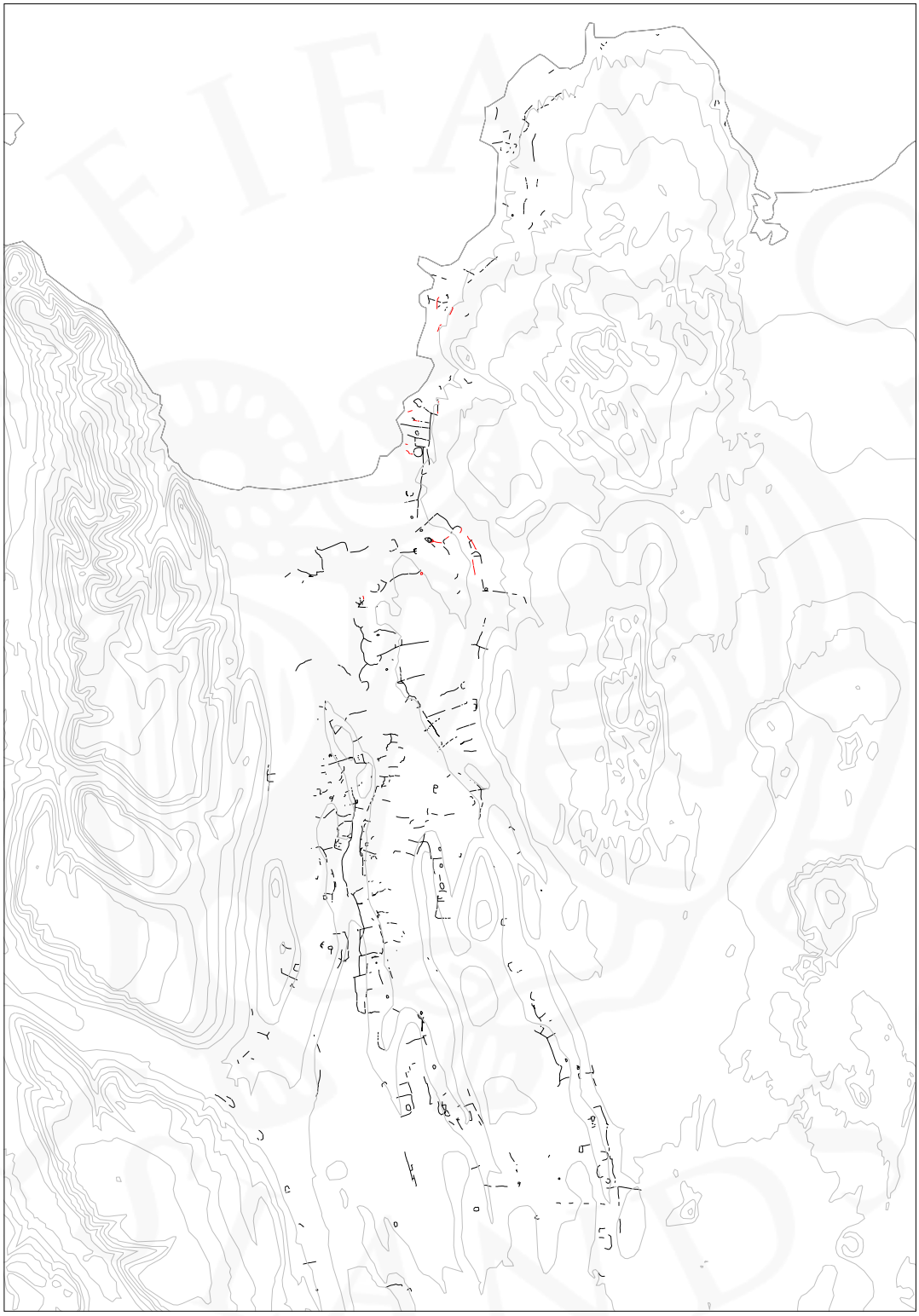


Figure 25. Boundaries seen only on 1960 aerial photographs (red) and all others (black).

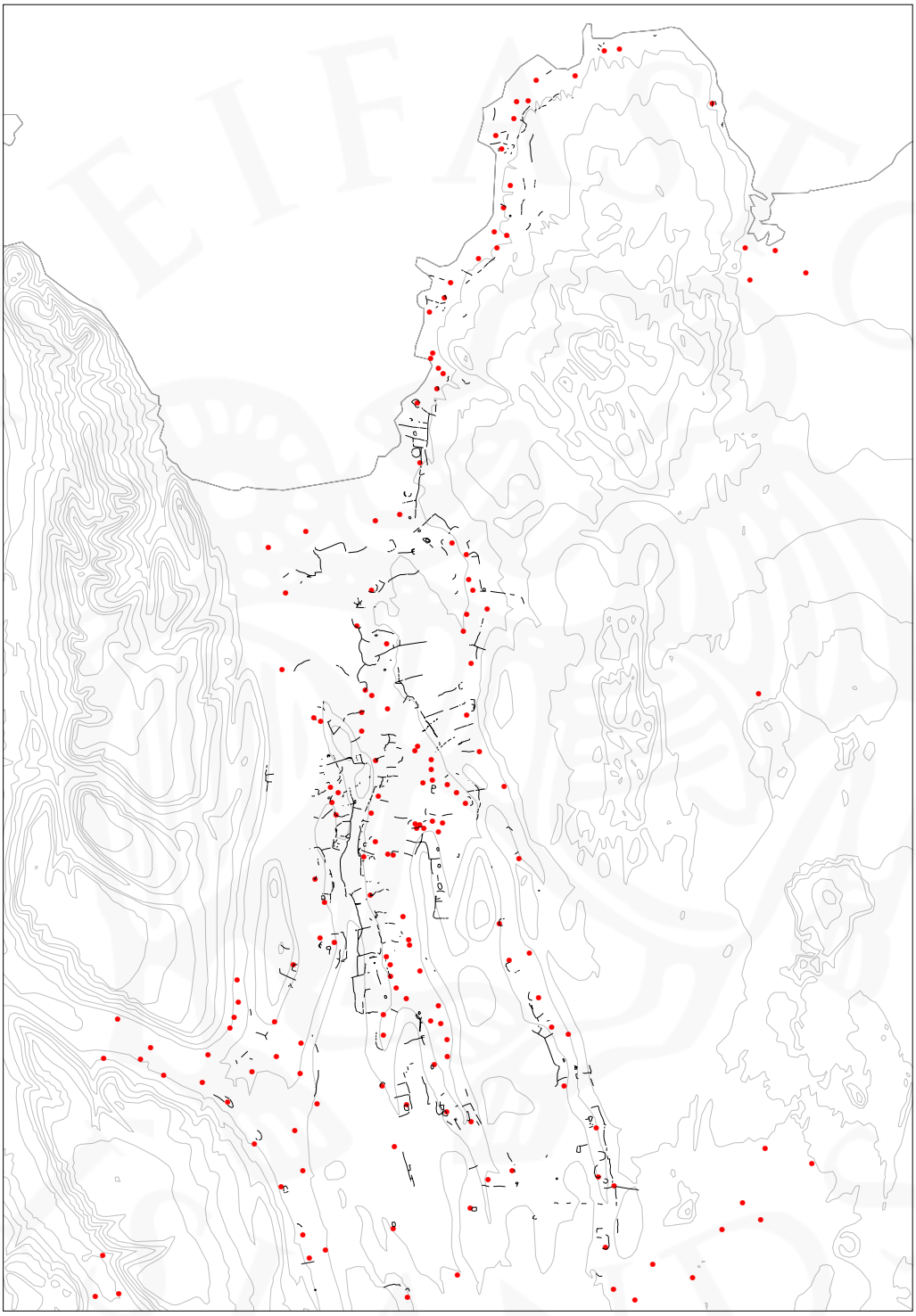


Figure 26. Farm sites and boundaries.

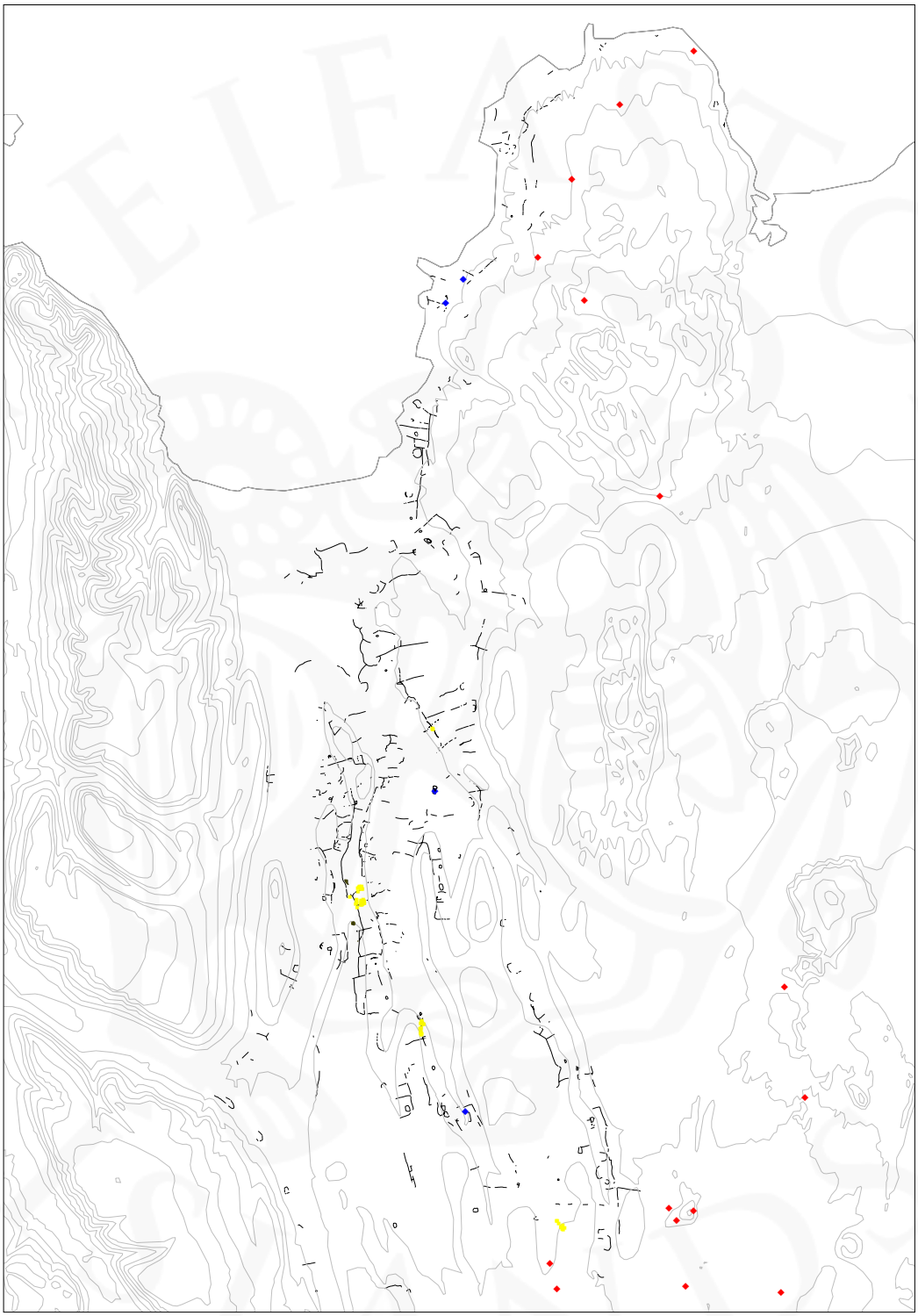


Figure 27. Ísleif sites (sheilings [red], réttir[blue], charcoal pits [yellow] based on current survey coverage) and boundaries.

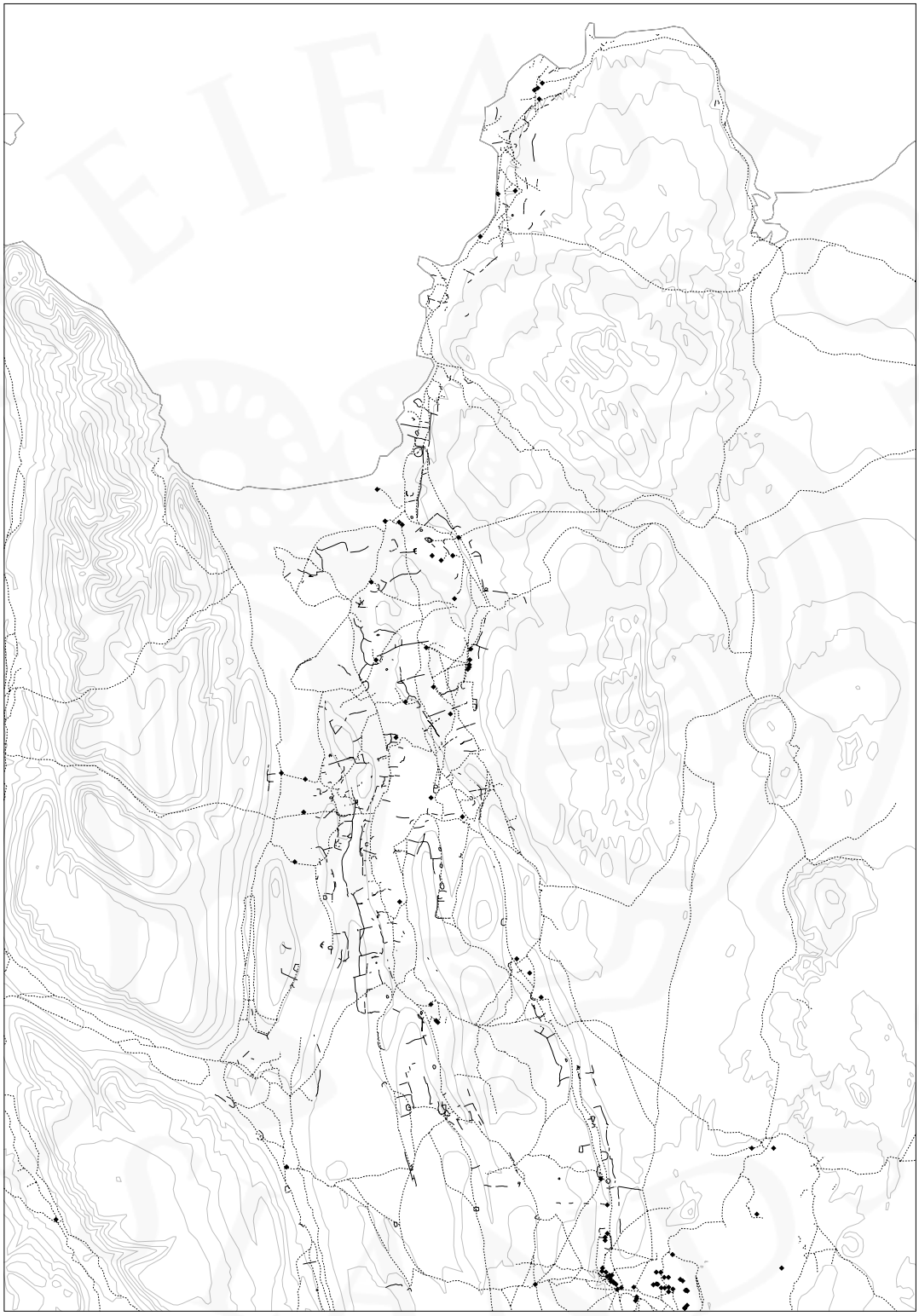


Figure 28. Tracks (dashed line) water crossing points (black dots) and boundaries.

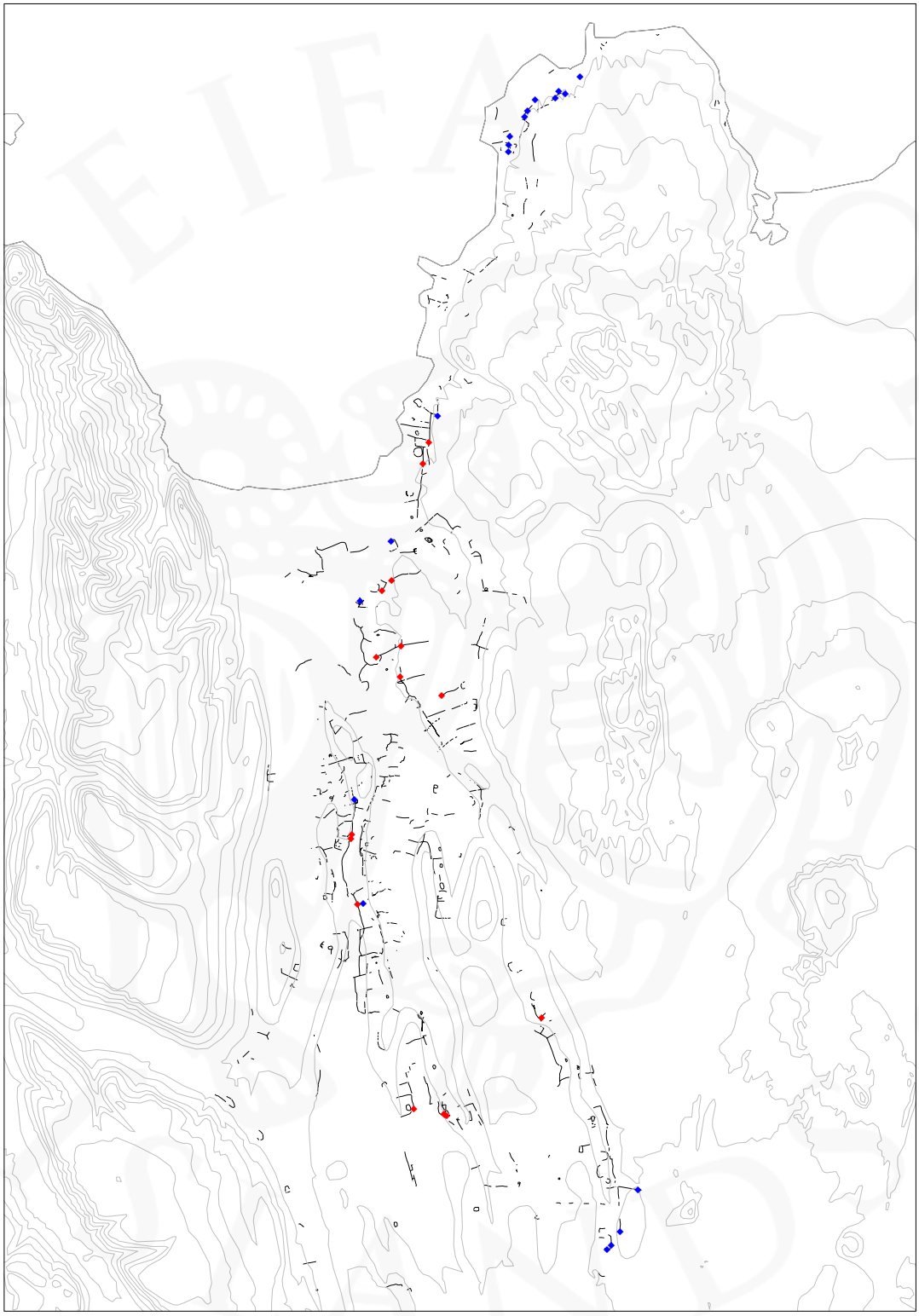


Figure 29. Distribution of 2005 trenches (red) and previous ones (blue).