

Forn garðlög í Suður-Þingeyjarsýslu

A system of earthworks in north-east Iceland



Framvinduskýrsla / Interim report

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Front cover (clockwise from left to right): *site 9 Hamrar partially excavated boundary with stone cairn underneath sitting on top of Landnám tephra; site 1 Þegjandadalur I (Einarsstaðir); site 11 Narfastaðir; site 4 Þegjandadalur IV; site 8 Hamrar, Helgastaðir and Pálmholt II, H-1158 tephra in the collapse and windblown deposits overlying the boundary wall.*

TABLE OF CONTENTS

Summary 1
Acknowledgements 1
Introduction 3
Project work in 2006 3
Mapping 4
Fieldwork 5
Outreach 9
Discussion 10
Fljótsheiði 11
Þegjandadalur 15
Narfastaðir 19
Conclusions 20
Appendices 25
1. Context descriptions for trenches 25
2. Section graphics 28
3. Tephra report 39

LIST OF FIGURES

Figure 1. Boundaries in Suður-Þingeyjarsýsla (left) and in Svafaðardalur, Eyjafjörður (right). Underlying digital terrain model from LMÍ (dted level 1 in metres). Both maps to the same scale. 4
Figure 2. 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). 6
Figure 3. Sýrnes and Rauðaskriða boundary excavations in 2005 and 2006, with site numbers and post-construction tephra dates identified in the field. The other trench was an erosion front observation that indicated a pre-1477 build for the boundary. 11
Figure 4. Site 5 (Rauðaskriða I) after excavation looking south-west. 12
Figure 5. Hamrar, Helgastaðir, Pálmholt and Höskuldsstaðir excavations in 2005 and 2006. 13
Figure 6. Oblique aerial photographs taken in 2002 of the same boundaries on Fljótsheiði – the locations for sites 7 and 8; one looking north [2002_3_002] (left); and the other looking south [2002_3_019] (right). 14
Figure 7. Site 9 and the box excavation of the boundary and stone marker under it – pre 1158 date; [03-08-2006]. 15
Figure 8. Þegjandadalur: trenches and boundaries. 16
Figure 9. Þegjandadalur boundaries with trench locations 2006 (left) and abandoned farms (right). 17
Figure 10. Aerial photograph of Einarsstaðir, looking east (Árni Einarsson May 2006). 18
Figure 11. Narfastaðir boundaries. 20
Figure 12. Þegjandadalur I 28
Figure 13. Þegjandadalur II 29
Figure 14. Þegjandadalur III 30

Figure 15. Þegjandadalur IV 31
Figure 16. Rauðaskriða I 32
Figure 17. Rauðaskriða II 33
Figure 18. Hamrar, Helgastaðir and Pálmholt I 34
Figure 19. Hamrar, Helgastaðir and Pálmholt II 35
Figure 20. Hamrar I 36
Figure 21. Narfastaðir I 37
Figure 22. Narfastaðir II 38
Figure 23. Schematic profiles indicating tephra sequences from 6 trenches. 42
Figure 24. The project study area. 43
Figure 25. Trenches across boundaries during the Rannís funded project (between 2005 - 2006) and before. 44
Figure 26. Data sources consulted during the mapping of boundaries (dots are partial mapping of oblique aerial photographs taken over a 5 year period). 45
Figure 27. Mapping events that have contributed towards the mapping of individual boundaries during the project (red lines are GPS tracks of aerial surveys since 2005). 46

SUMMARY

The third year of the Rannís sponsored project *A system of earthworks in NE Iceland / Forn garðlög í Suður-Þingeyjarsýslu* took place in 2006. A total length of 275 km of boundaries have been mapped, as well as tracks and routes from 19th century sources across the study, as well as all farm sites dating to 1847 and other archaeological information from archaeological survey area in the region. 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, particularly from field survey. The main component of 2006, like in 2005, was fieldwork, specifically excavation though some field survey elements were added to enhance the mapping. Eleven boundaries were excavated and recorded, and their tephra deposits analysed. A total of 26 trenches have been excavated during two seasons of fieldwork in connection with this project. In addition mapping from aerial sources in Svarfaðardalur took place. This provides an extension of the project to neighbouring landscapes, testing the mapping methodology and providing new boundary systems and landscapes to compare with Suður-Þingeyjarsýsla. A programme of outreach also took place, including a presentation of the project to the general public at a symposium held at the National Museum in February 2006.

ACKNOWLEDGEMENTS

Several people contributed towards the work carried out in 2006. These were Árni Einarsson, Orri Vésteinsson, Christian Keller, Elín Hreiðarsdóttir, Birna Lárusdóttir, Oscar Aldred, Mark Rosenfeld, Magnús Sigurgeirsson, Óskar Gísli Sveinbjarnarson, Stefán Ólafsson and Sólveig Guðmundsdóttir Beck. In addition we'd like to thank Unnsteinn Ingason from Narfastaðir for his support and hospitality.

INTRODUCTION

2006 was the third and final year of the Rannís sponsored project *A system of earthworks in NE Iceland* / *Forn garðlög í Suður-Þingeyjarsýslu*. The aim of the project is to map the extensive system of boundaries in the county of Suður-Þingeyjarsýsla, and to determine their age and construction form and consider and test hypotheses regarding their purposes in the social, economic and political landscapes. The first year was devoted entirely to mapping the boundaries from field survey data and aerial photographs and incorporating this into a Geographical Information System and an attribute database. This work continued into 2005 and 2006, though for the most part the main effort in the last two years has been concentrating on the excavation of selected boundaries within the sub-regional systems. For the most part, the theorizing and comparison of the boundaries with other areas in Iceland and Scandinavia remains for the formal monograph publication of the project. This report summarizes the main body of work carried out during 2006.

In this 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 IN 2006

The work carried out in 2006 involved almost all elements that were carried out in previous years: mapping, database use, field survey, updating boundary alignments from

new data and excavation, as well as comparative studies. What follows is a brief summary of each of element of work that took place in 2006.

MAPPING

Scanning and mapping locations of features from oblique aerial photographs

Some of the locations of the features seen on the oblique aerial photographs that were taken in 2002, 2003, 2004 and 2006 were located and mapped into the GIS and added to the attribute database. However, there is still much mapping of these locations to take place; it is planned to carry this with additional funding or on an *ad hoc* basis in the future. It should be noted that this mapping will greatly enhance the identification and add much detail to the already identified boundaries. Additional funding is being sought to carry this out.

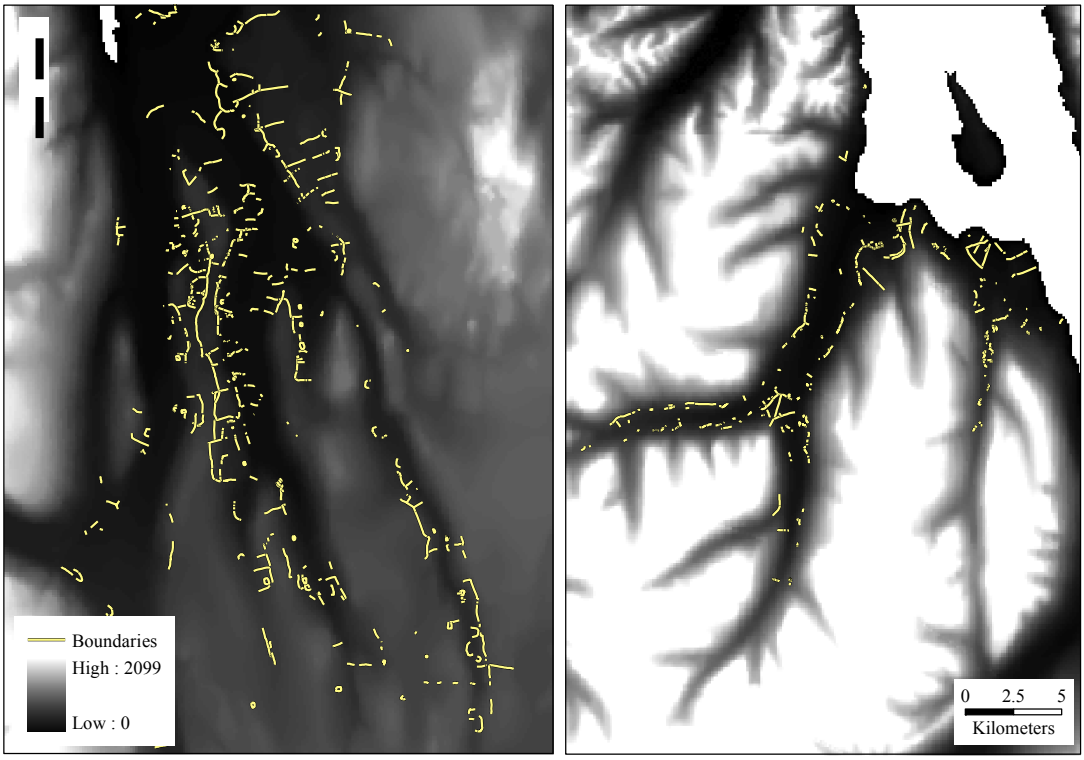


Figure 1. Boundaries in Suður-Þingeyjarsýsla (left) and in Svafaðardalur, Eyjafjörður (right). Underlying digital terrain model from LMÍ (dted level 1 in metres). Both maps are the same scale.

Mapping of boundaries from Svarfaðardalur

Mapping of the linear boundaries in Svarfaðardalur took place in addition to the main project to establish comparative material for the boundaries in Suður-Þingeyjarsýsla.

The main results from the mapping suggest that the boundaries systems in the two areas are comparable in terms of density. The Suður-Þingeyjarsýsla system appears to be more complex than Svarfaðardalur; where the boundaries are constrained by the underlying topography – hemmed in by the steep valley sides. A similar trait is evident in some places in Suður-Þingeyjarsýsla such as the upper reaches of Laxárdalur for example. Some complexity is seen in Svarfaðardalur in the northern areas outside the valley where the land opens out. However, it is not comparable to that seen on the low lying heath uplands such as on Fljótsheiði. Needless to say the boundaries in Svarfaðardalur show some potential for further analysis and adopting a similar approach in Suður-Þingeyjarsýsla with targeted excavations. This can then be used to ascertain the dates of boundaries, their construction and form providing a directly comparable dataset for Suður-Þingeyjarsýsla. It is also apparent that the mapping in Svarfaðardalur has demonstrated the successful application of the techniques developed out of the Suður-Þingeyjarsýsla project, suggesting that it can be applied in other areas across Iceland. A separate report will follow on the Svarfaðardalur mapping.

FIELDWORK

Fieldwork took place over two weeks between the 24th July to 4th August 2006. In summary 11 trenches were excavated across boundaries and recorded in section and plan, and the tephra layers in 7 of these were examined by Magnús Sigurgeirsson.

Excavation

Excavation methods used 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 as to record the deposit 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 excavation. The locations of trenches that had already been excavated across boundaries were mapped, and in doing this identified gaps in their distribution. Therefore a combination of the initial ideas on the development of the systems and gaps in knowledge, as well as areas that exhibited particular significance were targeted for the 2006 fieldwork. The two areas of Þegjandadalur and Fljótsheiði were chosen.

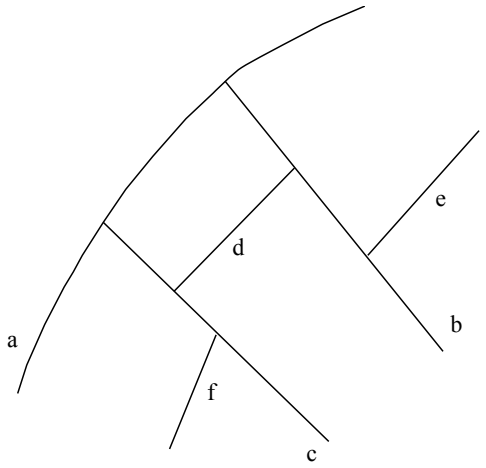


Figure 2. Landscape stratigraphy and the chronological arrangements of boundaries. Wall (a) is probably older than (b) and (c). Walls (b) and (c) are probably older than (d), (e) and (f).

The target list was taken into the field and re-evaluated according to the logistics of access and whether landowner's permission was given for excavation. In general the trenches were located where erosion had already damaged the boundary. However, this was not always possible. A balance then had to be sought that would maximise the information whilst limiting the damage to the boundary. In retrospect the damage to the boundary by excavation was minimal, particularly with a 1m wide trench. *All* trenches

were back-filled and reconsolidated after recording and identification of tephras and removal of samples to minimize the effects of excavation on the monument. The 11 trenches were located at [the number of trenches through boundaries on each is given in brackets after the name]: Þegjandadalur (4); Rauðaskriða (2); Hamrar, Helgastaðir and Pálmholt (2); Hamrar (1); Narfastaðir (2).

Site no	***Farm & trench***	***Wall width (m)***	***Preserved height (m)***	***Earthwork width (m)***	***Earthwork height (m)***	***Stack number***
1	Þegjandadalur I	1.44	0.6	6.30	1.00	2
2	Þegjandadalur II	1.40	0.82	4.20	0.94	2
3	Þegjandadalur III	1.30	0.40	5.30	0.70	2
4	Þegjandadalur IV	1.15	0.20	4.00	0.70	1
5	Rauðaskriða I	1.60	0.54	4.00	0.78	2
6	Rauðaskriða II	1.80	0.60	4.00	0.82	2
7	Hamrar, Helgastaðir and Pálmholt I	1.30	0.40	4.50	0.72	1
8	Hamrar, Helgastaðir and Pálmholt II	1.10	0.38	3.68	0.64	2
9	Hamrar	1.46	1.00	4.38	1.24	1
10	Narfastaðir I	1.65	0.50	3.35	1.10	1
11	Narfastaðir II	0.80	0.50	4.70	1.00	1

Table 1. Boundary dimensions.

The form of construction varied between the boundaries that were excavated. As in 2005 all boundaries were consistently larger on the surface compared to the actual preserved boundary wall underneath soil accumulation. The widths of the boundaries ranged between 0.8 to 1.80m, whereas the widths of the unexcavated earthwork ranged from 3.68 to 6.30m. The majority of the overburden was a mixture of turf collapse (only well preserved in two instances) and aeolian (wind blown) deposits. A two turf-stack construction of the boundary wall was seen in 6 boundaries out of 11 (with an infill between the stacks). The remaining 5 boundaries were single stack constructions.

Tephra analysis

Magnús Sigurgeirsson was commissioned to investigate the tephras encountered during the excavation of the boundaries; his report is appended (section 3). 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. Seven trenches were examined, see highlighted rows in table 2 for details.

Site no	*Farm & trench*	*Ground surface date*	*Tephra post*	*Post tephra side*
1	Þegjandadalur I	870	1300	W
2	Þegjandadalur II	870	1158	N
3	Þegjandadalur III	870	1300	NW
4	Þegjandadalur IV	870	1477	/
5	Rauðaskriða I	870	1158	SE
6	Rauðaskriða II	870	1300	E
7	Hamrar, Helgastaðir and Pálmholt I	870	1300	E & W
8	Hamrar, Helgastaðir and Pálmholt II	870	1158	W
9	Hamrar	870	1158	N
10	Narfastaðir I	1300	1477	/
11	Narfastaðir II	870	1158	W

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 1477 tephra is continuous over the whole boundary in most boundaries. Post tephra side *indicates the position of the 12th and 14th century tephra which help to assess if there were consistent factors effecting tephra preservation.*

The majority of ground surfaces below the boundaries date to the Landnám (~ 870 AD). The only exceptions were found at site 10, Narfastaðir I, which was a homefield boundary built on 1300 AD ground surface. 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 the erosion of the this material and the boundary itself. Five of the boundaries had 12th century tephras (mainly H-1158); four H-1300, and two V-1477.

In 2006 the positioning of the H-1158 tephra was best preserved on the northern and western sides of the boundary wall, which was unlike the observations in 2005 which

suggested a northern and *eastern* location. In 2005 one boundary with tephra on the north, 4 on the east and 2 on the west. For 2006 see table 2.

Pollen analysis

Samples for pollen analysis were collected in 2005 and analysed by Dr. Ian Lawson, Leeds University in 2006. The sample came from the sites at Árbót 2, Narfastaðir 1 and 2, Nes 1, Núpar 2, Sýrnes 1 and Þverá 1 (sites 2, 5, 6, 8, 10, 13 and 15 respectively). The results were far from clear mainly because of the preservation though they suggested that the environment at the time of boundary construction had no local presence of birch woodland, though there were some caveats. Sites 5, 6, 15 and 10 had particularly poor preservation; less than c.100 pollen count. The remaining sites had reasonable pollen counts up to c. 300 which is statistically viable for analysis. However, there is difficultly separating tree birch from dwarf birch; but the better preserved samples contained between 1-17% tree birch which suggests no closed birch woodland at any of these sites. At site 13 in the turf collapse there was some suggestion at low level grazing pressure.

Aerial photography

Two flights took place in May 2006 by Árni Einarsson. These covered the areas of Tjornes,and Þegjandadalur and Fljótsheiði.

OUTREACH

On 25th February, 2006 a symposium was held at Þjóðminjasafn Íslands called *Kínameírar Íslands - Ráðstefna um forn garðlög á Íslandi* (A symposium on medieval boundary walls in Iceland). It was attended by c. 60 people throughout the day. Speakers included Orri Vésteinsson, Ómar Ragnarsson, Oscar Aldred, Elín Hreiðarsdóttir, Árni Daníel Júlíusson, Oddgeir Hansson, Árni Einarsson, Birna Lárusdóttir, Christian Keller, Unnsteinn Ingason and Agnes Stefánsdóttir.

The boundary data continued to be used and distributed to local authorities in the study area (in 2005 the boundary was given to Húsavíkurbær) for local planning. In 2006 boundary data was given to Þingeyjarsveit for their local planning.

A talk on the boundary project was given by Árni Einarsson at the Hið þingeysla fornleifafélag meeting in June 2006.

Árni Einarsson published a paper in *Ritið*:3/2005 *Tímarit Hugvísindastofnunar* entitled *Miðaldir úr lofti*.

Information was also added to the FSÍ's web page about the project. Information added included aerial photographs of some of the boundaries, as well as reports from 2004 and 2005. All this data was available for download at the following link on the FSÍ's website (http://www.instarch.is/instarch/rannsoknir/annad/forn_gardlog/).

DISCUSSION

The main focus of the discussion is on the excavation field work that took place in 2006. In 2004 it was noted that the systems create clusters within the study area. These were focused around Fljótsheiði, 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 2006 it was decided to focus on 2-3 areas within the systems of Fljótsheiði (including the boundaries excavated in Rauðaskriða and Hamrar, Helgastaðir and Pálmholt), as well as the boundaries within Þegjandadalur which lay outside the system clusters that were noted in 2004. Narfastaðir was also another focus area in 2006, though discussion will be limited in this report.

FLJÓTSHEIÐI

In 2005 boundary excavations took place at Sýrnes and at Höskuldsstaðir in the Fljótsheiði area and in 2006 at Rauðaskriða and Hamrar, Helgastaðir and Pálmholt.

Rauðaskriða (and Sýrnes in 2005)

One of the boundaries in Rauðaskriða (site 6 Rauðaskriða II) that was excavated in 2006 had already been excavated at site 13 (Sýrnes 1) in 2005, but further south (see figure 3).

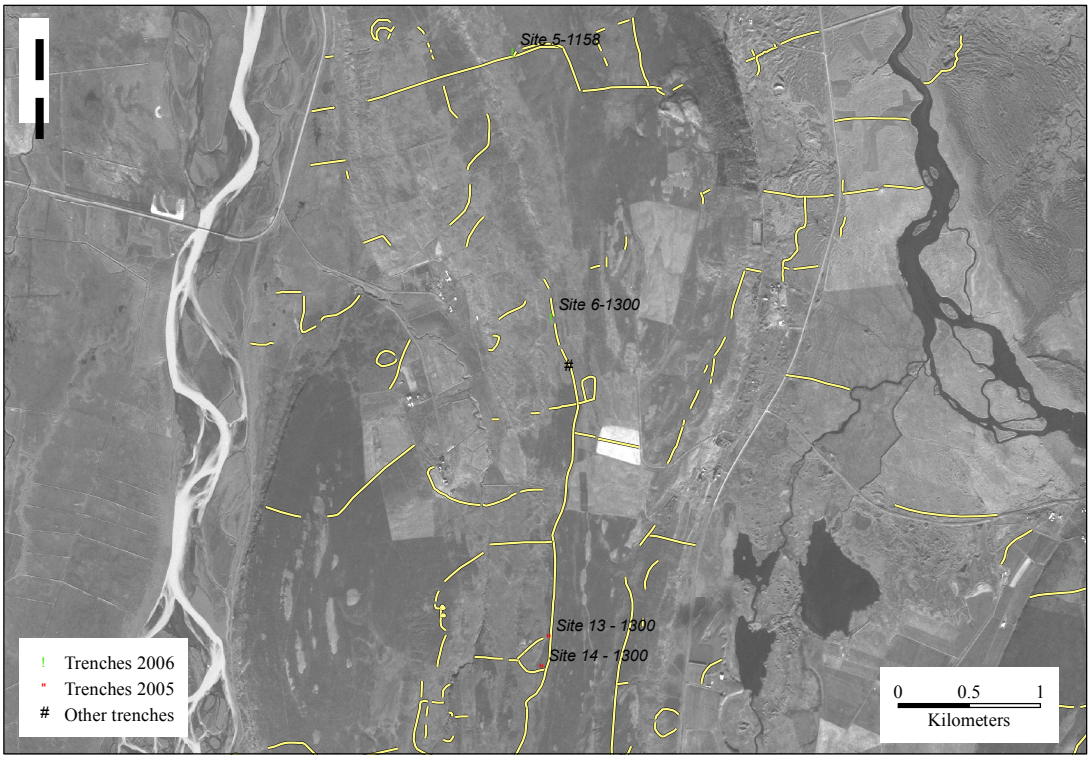


Figure 3. Sýrnes and Rauðaskriða boundary excavations in 2005 and 2006, with site numbers and post-construction tephra dates identified in the field. The other trench was an erosion front observation that indicated a pre-1477 build for the boundary.

Both the excavations showed that the boundary was constructed before 1300, and shared a similar form, construction and collapse sequence. It was suggested from the 2005 excavations that the Sýrnes 1 boundary was part of an original layout scheme based on its

length and that subsequent boundaries extended perpendicular to it (according to landscape stratigraphy). It was confirmed in 2006 that there was little variation in the boundary form from the locations of the two other excavations in 2005.

At site 5 (Rauðaskriða I) the boundary that was excavated was a replacement and rebuilt in a new location or was an extension added according to a new layout scheme. Unlike the boundary that lay further to the south the boundary at site 5 was well preserved and was consequently chosen. It had pre-1158 date. The boundary ran down to the slope towards the west, and probably marked the limit of a space that did not extend northwards towards the tip of Fljótsheiði. The boundary may have belonged to a system which was intended to completely enclose the northern end of Fljótsheiði, but only partial fragments of such a system survive. The natural topography helps to unravel the issue: the ridge that runs north to south is slightly up slope of the boundary excavated at site 6, though the site 5 boundary is part of a boundary system that extends towards it, enclosing this space off. The area between site 6 and the site 5 complex is relatively 'unbounded', though this is probably a product of preservation. The boundary systems in the this areas probably belonged to the farm at Rauðaskriða, though further associative evidence needs to be found to reinforce this relationship.



Figure 4. Site 5 (Rauðaskriða I) after excavation looking south-west.

Hamrar, Helgastaðir and Pálmholt (and Höskuldsstaðir)

Investigations also took place in the Hamrar, Helgastaðir and Pálmholt area, south of the trench excavated in 2005 at Höskuldsstaðir: site 4 (Höskuldsstaðir 2).

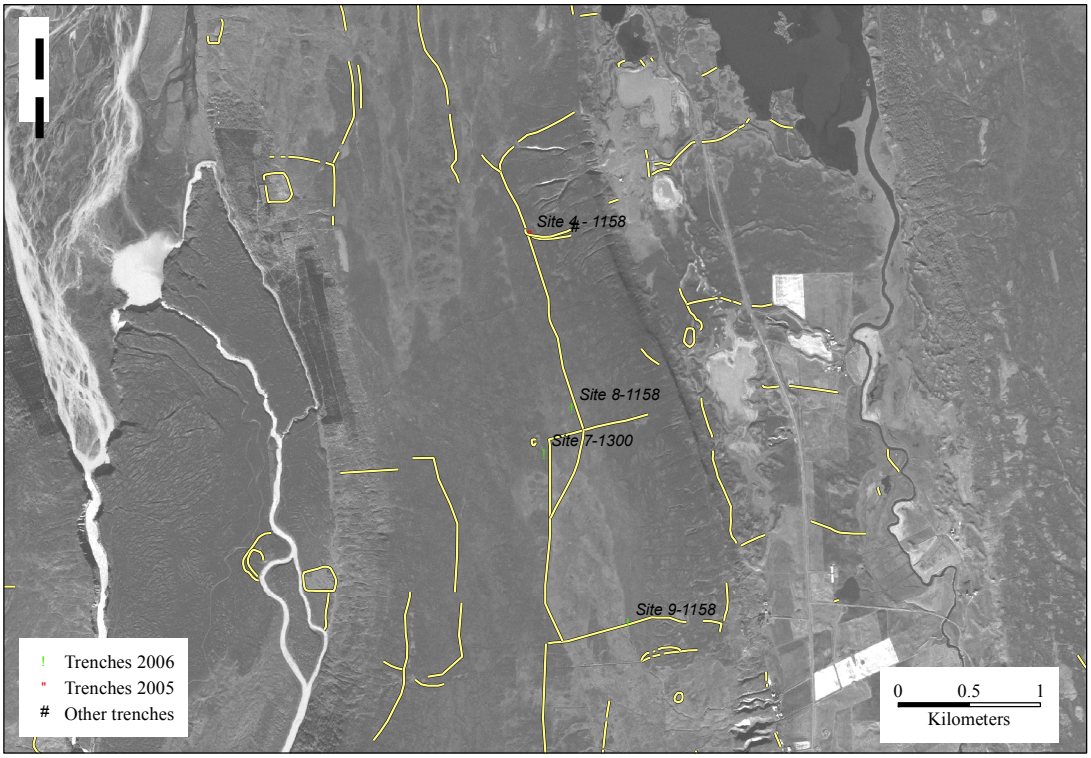


Figure 5. Hamrar, Helgastaðir, Pálmholt and Höskuldsstaðir excavations in 2005 and 2006.

The boundaries excavated in 2006 focused on those that ran north to south and from east to west, around the conflation of boundaries (see figure 5); the sites were 7, 8 and 9 (Hamrar, Helgastaðir and Pálmholt I, Hamrar, Helgastaðir and Pálmholt II and Hamrar, respectively). The results from the excavations indicated that the boundary that ran from north to south and associated with site 8 was built before 1158 AD. The boundary at site 7 (see figure 5) was built before 1300 AD. It is tempting to suggest that the boundary layout seen both in figure 5 and the aerial photographs below in figure 6 confirm the sequence seen in the tephra analysis. According to these facts the development of the boundaries suggests that a modification and new division and alignment took place after

an original laying out of the long linear boundary. The long linear boundary ran for c. 3.5 km until it reaches the boundary where site 9 was located.

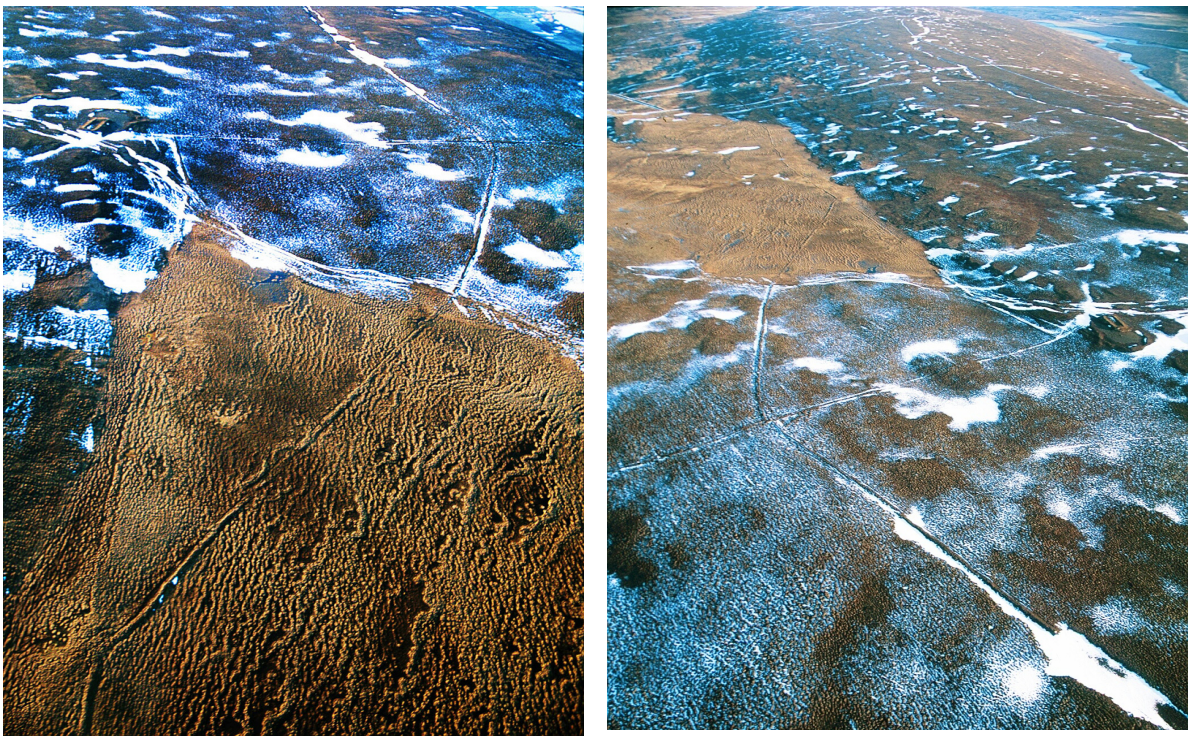


Figure 6. Oblique aerial photographs taken in 2002 of the same boundaries on Fljótsheiði – the locations for sites 7 and 8; one looking north [2002_3_002] (left); and the other looking south [2002_3_019] (right).

The boundary at the location of site 9 was further south than the ones relating to sites 7 and 8. It ran east to west across the upper part of the ridge, tailing off eastwards where the slope falls away, but continuing beyond the north to south boundary that site 7 was located on. At its furthest extent west it joins onto another boundary that turns perpendicular to it and heads again north- to south. Site 9 was the most interesting excavated in 2006. It was a built of one stack, and was well preserved to a height of 1m; although it comprised 2 phases. The earliest stack was c. 0.6m tall and between it and the rebuild was turf collapse and soil wash. The boundary was rebuilt, but both the old and new construction and rebuilding took place before 1158. Above the 1158, the 1300 and 1477 tephras were also observed. The whole boundary sequence was also built on top of a stone built marker that had survived to a height of 2 - 3 courses tall, and roughly circular in shape. The stone marker was perhaps a layout cairn or part of a series of

markers that were located on the heath. In any case the discovery of the stone marker under the boundary was of particular interest in perhaps understanding the process of land marking and laying out of the boundary system before the turf built boundaries were constructed. In all likelihood these markers are part of the earliest history of land use and activity on the heath. Other examples of this type of feature thjat are found close to or under boundaries are found at Narfastaðir. There is a a cairn possibly under an eroded boundary close to the river Reykjadalsá. Along this boundary away from river another cairn, though not under the boundary, is located at the juncture between the same boundary and another that runs north. Another similar fetaure is located at SÞ-282:011b at another boundary junction on the same alignment as a boundary excavated in 2005 (site 5 - dated to before 1158).



Figure 7. Site 9 and the box excavation of the boundary and stone marker under it – pre 1158 date; [03-08-2006].

ÞEGJANDADALUR

The boundaries in Þegjandadalur are good example of a system that can be de-constructed and analysed more comprehensively than others in the boundary project. This

is possible because of inter-related research that has taken place in the valley: a archaeological field survey in the valley in 2005 which was continued in 2006, and aerial survey took place in 2006 before the field season as well as aerial photographs by Árniþór Garðarsson. As a result the excavation of boundaries was placed within the context of other research allowing a fuller narrative of the developmental sequence of boundaries and their relationship to the farm landscape to be discussed.

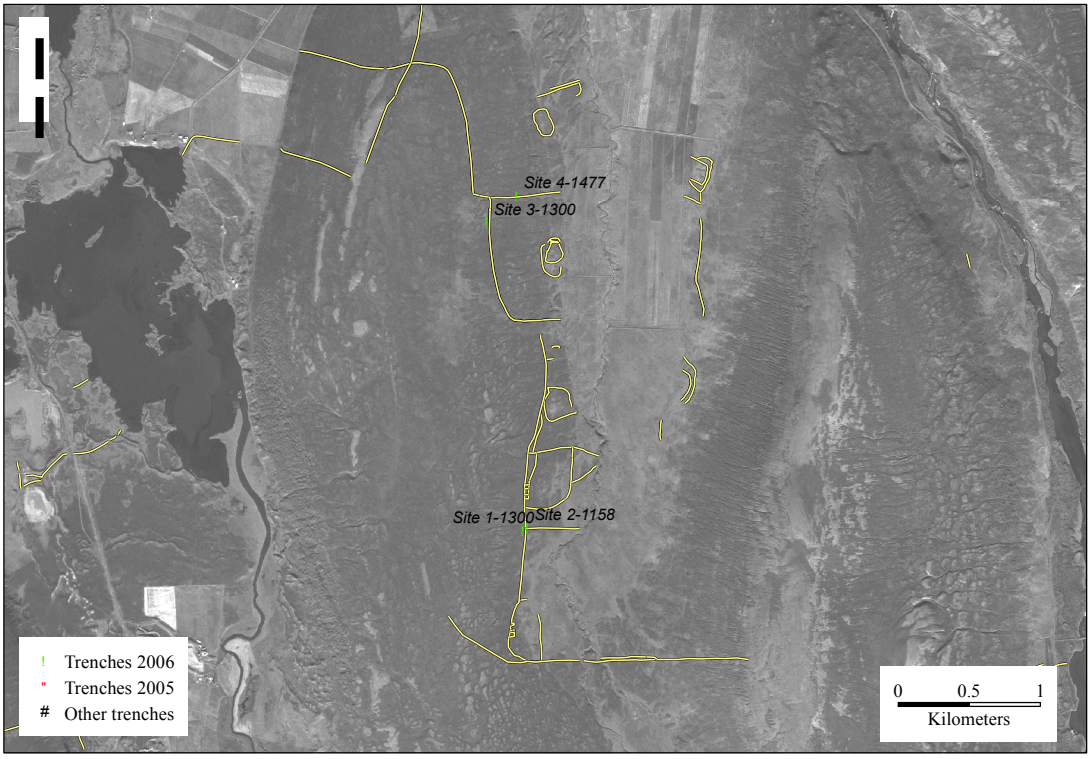


Figure 8. Þegjandadalur: trenches and boundaries.

Þegjandadalur is a small valley, which is today deserted except for several modern farms Múli and Kraunastaðir, at its far northern end, a short distance from Grenjaðarstaður. The valley south of these farms is entirely deserted, and was abandoned from the 16th century. The deserted farms lie on either side of a stream that divides the valley into two halves. The historical information concerning the naming of the farms is confusing, but research by Elín Hreiðarsdóttir suggest that the farms on the east side were called: Skárastaðir (SÞ-250b), Hólkot (SÞ-250c), Bjarkarstaðir (SÞ-250d), Ingiríðarstaðir (SÞ-250e), and Einarsstaðir (SÞ-250f). On the western side: Bjarnastaðir/Gíslastaðir (SÞ-224b), Hrísakot

(SÞ-224c), and Hrísar (SÞ-224d). The eastern side contains more deserted farms, as well as a greater density of human activity.

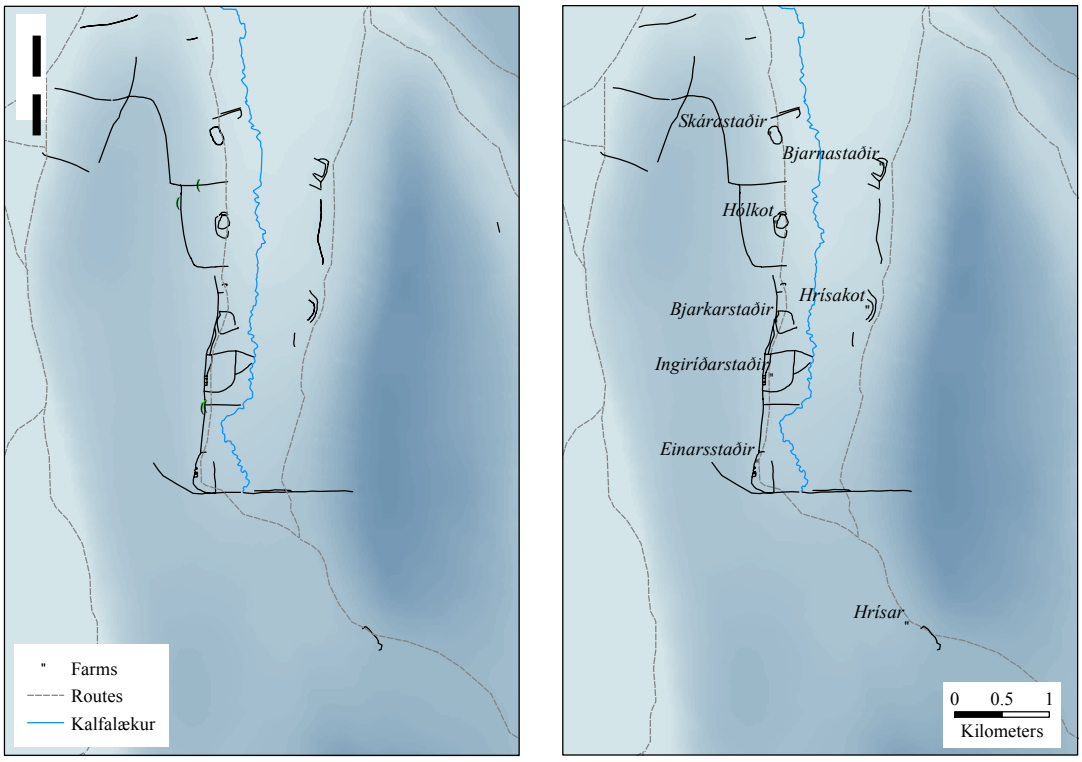


Figure 9. Þegjandadalur boundaries with trench locations 2006 (left) and abandoned farms (right).

For the boundary research of particular interest is the linear boundary that runs north to south on the western side of the valley. Several other boundaries run perpendicular towards the stream (Kálfalækur) from the linear boundary. This system divides the west side into distinct units, bounded on the west slope by a boundary running north to south and to the closed off to the north and south by another and with Kálfalækur on the east which divides the valley into two separate halves. Within these farm units there are other smaller boundaries that formed enclosures or partitions which were either attached to the outer farm unit boundaries or were separate infields, such as at Hólkot and Skárastaðir. The regularity of the system is not replicated on the eastern side of the valley, but there appears to be remnants of a linear boundary that runs north to south. However, the east to west divisions as seen on the western side seem not to have existed or at least are not

preserved today. The valley is closed at its southern end by a boundary which separates the main cluster of farms from Hrísar, an outlying farm c. 2 km south-east of Einarsstaðir.

There also seems to be some variation in the internal arrangement of the farms units in the southern end of the valley compared to the north end. The infield enclosures around the farms of Einarsstaðir and Ingiríðarstaðir, and to some extent Bjarkarstaðir are not isolated from the linear boundary that runs north to south, unlike Hólkot and Skárastaðir whose infield enclosures are c. 500m away from the linear boundary. The infield enclosure type of land organisation is similar to the boundary and farm layout on the western side of the valley, though the preservation makes it difficult to compare and interpret similarities.

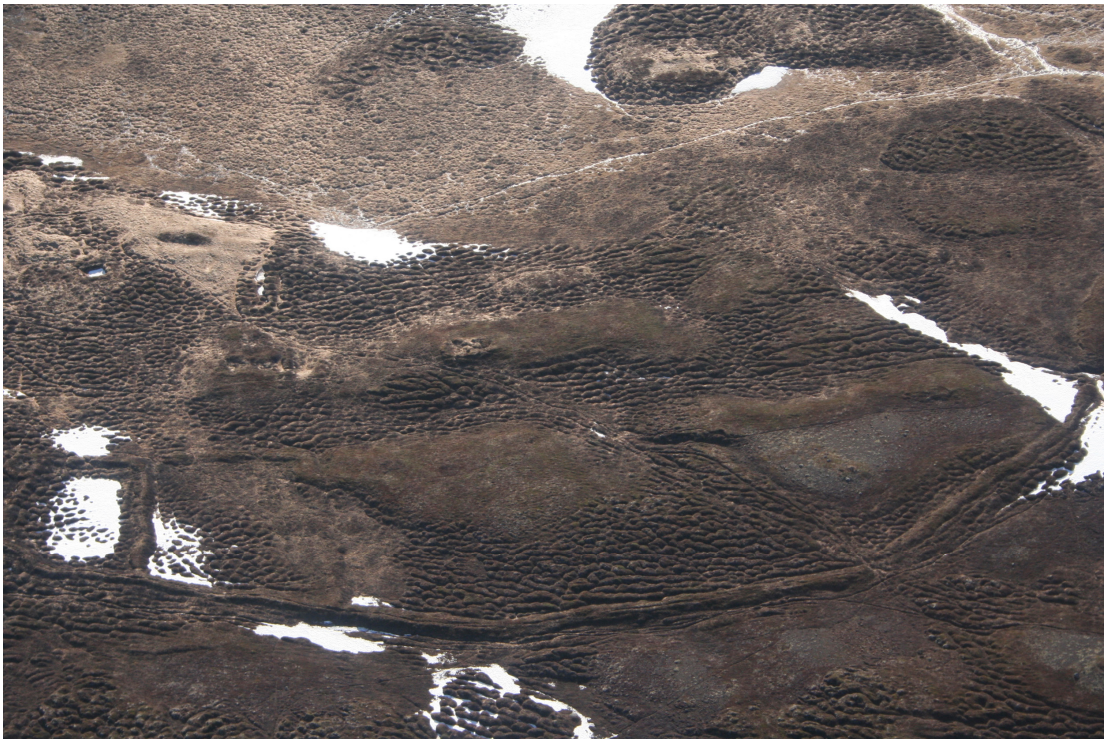


Figure 10. Aerial photograph of Einarsstaðir, looking east (Árni Einarsson May 2006).

The excavations in Þegjandadalur were carried out at four sites, with the main aim of giving a chronology to the outer boundaries and establishing a development sequence. There were at least several different phases visible from a landscape stratigraphy analysis

alone, suggesting that a long boundary was laid out in the southern half of the western side with dividing boundaries extending at right angles. At site 1, the linear boundary that runs north to south was a 2 stack construction surviving to c. 0.6m high, with the 1300 tephra lying over it in collapse and soil wash. But the boundary at site 2, which was another 2 stack construction, this time had the 1158 tephra overlying it. This was surprising because the landscape stratigraphy suggested that the site 1, the north to south linear boundary, should be an earlier build. It is possible that tephra survival was an issue. However, several interpretations are speculated upon.

The first is that the dividing boundaries that run east to west across the slope in the valley were the earliest boundaries with the long linear boundary coming after the establishment of distinct land parcels; this reiterates the symbolic importance of separating one piece of land from another through boundary construction. The second is perhaps harder to demonstrate. Site 2 boundary was actually a remnant of an earlier scheme that was incorporated into a new boundary system; the site 2 boundary was similar to the one at the far southern end of Einarsstaðir. The site 3 boundary seems to be on a different alignment but may be reflecting topographic conditions rather than a different construction event. Site 3 boundary had a 1300 tephra over the boundary, and similar to site 1 boundary had a 2 stack construction. The boundary at site 4 was badly preserved, surviving to a height of c. 0.2m; only the 1477 tephra was visible, and preservation is a question here.

NARFASTAÐIR

Two trenches were opened in Narfastaðir. The first trench, site 10, was located across a boundary which related to a farm enclosure north of the enclosure that was investigated in 2005 (site 7). The boundary was well preserved standing to a height of 1.1m and the wall width 1.65m and 0.5m tall. The boundary wall contained 1 strengur turf stack which contained the 1300 tephra. Underneath the boundary the 1300 tephra was found *in situ* and the 1477 tephra lay over the boundary.

The second boundary was located upslope from site 10. The trench location was chosen based on its preservation. The full extent of the boundary height was 1m; the width of the wall was 0.8m and a height of 0.5m. Built using 1 stack, the 1158 tephra sealed the boundary. The 1300 and 1477 tephras were also seen. There was also a possible rebuild before 1158.

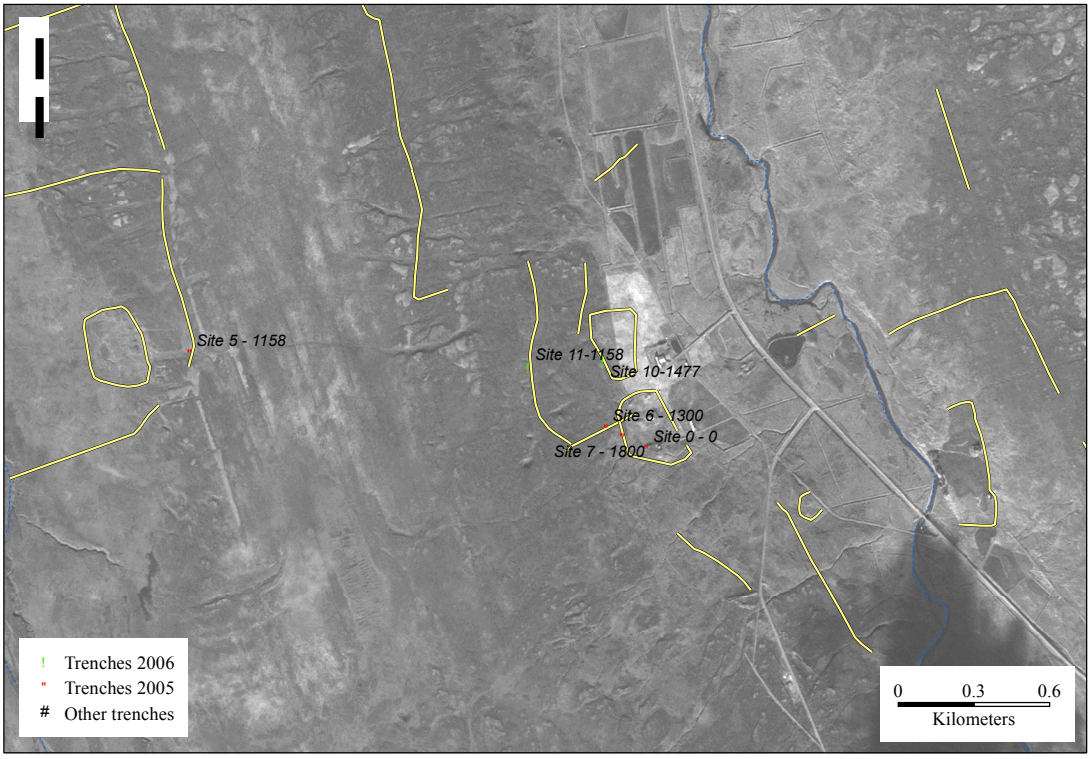


Figure 11. Narfastaðir boundaries.

CONCLUSIONS

There is still much work to do on the analysis of the boundaries and the data that has been collected about them over the last 3 years. As a result the 2006 interim report concentrates on the aspect of 2006 work. In summary, 2006 continued the project objectives by focusing on understanding the boundaries from several different perspectives. In developing our reflection on the research, the symposium was proved useful and was a productive day for all. Not only was the boundary research presented to

a wider general audience, but also it brought together a number of different specialists with their own interests in boundaries, that fostered discussion and debate. In particular the historical context of the archaeological data was discussed with reference to other regions that have relict boundaries, indicating the potential for this type of research to be conducted in other parts of Iceland.

One of the advantages of this type of archaeological research is that it can be carried out according to relative scales of detail. A quick survey of aerial photographic transcription achieves much in a very short time and at a relatively small cost. In the project supported by Rannís, we have gone beyond a level 1 mapping exercise (the basic rapid survey) and taken our results into the field, correcting, amending and adding to the boundary coverage based on newly collected evidence, and following this up with targeted excavations. The new knowledge about the boundaries in the north east has been derived from a variety of sources therefore: oblique aerial photography, field survey and GPS surveys as well as simple field observations. The complexity of multiple sources of information in mapping and understanding the boundaries has also led to the development of new techniques in documenting the information flow in order to make the *data* sources and the *events* of mapping that have contributed to the *object* – the boundaries – transparent and accessible to all (part of the outreach objectives of the project).

The results from 2005 and 2006 confirmed that 13 boundaries out of a total of 27 were dated before 1158 AD. A further 9 were dated before 1300 and 4 before 1477; and all of these except 2 were constructed over the landnám tephra (these 2 boundaries were over the 950 AD tephra at Nes, on the one hand and on the other over the 1300 tephra at Narfastaðir). Only one boundary was excavated that was built after 1717, and this was at Narfastaðir. Even though a small sample of the boundaries in the north east have been dated from tephra identification, it is likely that the majority of the boundaries have a pre-1300 date, if not at least half to before the 12th century. This has implications in beginning to understanding the relationship that these boundaries had with the landscape, in particular settlement and the processes connected with occupying and domesticating the land during its colonisation and settlement expansion. There was a huge investment in

labour in constructing these boundaries that was not extensively maintained with rebuilds or modifications. Only 3 sites in 2006 showed signs of rebuilding and maintenance; in 2005 there was one boundary that had a rebuild (after 1717), and 2 other boundaries that should signs of later activity, such as a charcoal pit (at Narfastaðasel) and a modification to an existing boundary alignment (at Rauðaskriða). Therefore the continued use of these boundaries as playing an active role in the landscape as boundaries, such as markers, or barriers, was not reiterated through rebuilding and maintenance. Rather they were built and left in most cases, and reused in the landscape as relict features that took on new or alternative meanings for people, such as walking boundaries, riding boundaries, or herding boundaries for example.

Much new knowledge has been gained from three years of research which will keep researchers busy for some time to come and will stand the testament of time as a novel and innovative approach to understanding archaeological landscapes in Iceland. One area in which the research has demonstrated quite clearly is that the boundary organisation is complex much more than can be evaluated in three years of research (derived from the mapping of aerial photographs and the detail from the excavations). Much of the complexity about the boundaries is still hidden, which in this first assessment has only begun to unravel. For example, the landscape stratigraphy approach has helped to assess in some examples boundary relationships which are simple, but it is not an effective method in decoding conflations inherent in many of the boundary joins and changes in alignments; for example on Fljótsheiði or in the variations between different ends of the same valley such as in Þegjandadalur.

Excavation is also problematic, especially with usually only one trench was excavated across a single boundary that can stretch across several kilometres. This is a major constraint on our ability to interpret a boundary, or a complex of boundaries that may extend across several kilometres; a single trench and its description become the inherent character of that boundary. But along that boundary there may have been rebuilds or additions that were constructed at a different time in history but are masked from the visible surface of the archaeological feature. Issues of tephra and boundary preservation,

consistency and uniformity in construction, as well as the relationship that boundaries have with other landscape features are all issues when considering the interpretation of the boundaries and their role in the landscape.

If we return to Þegjandadalur, an area where there has been a good deal of research, with a concentration of excavation, field and aerial surveys, an interpretive narrative can be written. Our knowledge of the boundaries is much greater than it was in 2002, but several aspects are still elusive. We know for example, that differences are visible in the layout scheme alone between the southern half of the valley (Einarsstaðir and Ingiríðarstaðir) compared to the northern half, and that the boundary building activity took place before the 16th century and probably before 1477. It is possible therefore to suggest a number of construction events taking place across the whole of the boundary system as it survives today. It is interesting to note that even though these occured at difference times there was still knowledge, and therefore use, of earlier boundaries; this is mainly apparent from the dis-continuous character of the system on the eastern side of the valley but one that reinforces them with only slight alignment digressions.

There were perhaps 2 - 3 phases of building, though it is difficult, even after excavation and tephra identification, to identify the specific periods of these processes: construction forms are similar and tephra preservation can be problematic. At least the earlier date in the southern end at site 2 suggests that the differences between the southern and northern ends represent 2 of these phases. Arguably, the southern end of the valley, which includes the farms of Einarsstaðir and Ingiríðarstaðir, were the earliest settlements and that their land division incorporated both turf built and natural boundaries such as the stream and the ridge to the west called Múlaheiði. At some point after, perhaps after 1158, a new boundary was built that ran north to south onto which the infield boundaries and small partitions were incorporated. Its extension was perhaps a consequence of new settlement at Bjarkarstaðir, and the establishment of Hólkot and Skárastaðir; the boundary with a slight alignment adjustment continued north to south. Hólkot and Skárastaðir positioned their infields away from this boundary, at a distance of c. 500m, and incorporated the

natural topography in to the construction with the westward turn of the boundary at the northern end of the Múlaheiði ridge.

This interpretation is based entirely on the 1158 date, and if preservation of tephra is an issue then the results from a single trench across a boundary will not be enough to secure interpretations like this one. It may be that the interpretation can be entirely switched based on new evidence, and it was perhaps the northern end that was developed first with the southern end following. With this notion in mind, the boundary work should be developed further, especially with respect to excavation, and in particular that the excavations should be carried out intensively in one area such as Fljótsheiði, an upland or seasonally used area, or in Þegjandadalur, a system that is connected to a settlement landscape, or perhaps a concentration around one farm, such as has occurred at Narfastaðir.

The research project over the 3 years has explored a variety of different approaches to studying extensive archaeological features in an entire region of Iceland. Whilst much new information has been collected and new methods created, there still is much work to do. Not only in the region in question, but also across Iceland. The Svarfaðardalur study for example has demonstrated the applicability of the approach and its easy application in other areas of Iceland where some knowledge of boundaries such as the ones in Suður-Þingeyjarsýsla exist. What should be done now is to develop the intensive study of an area whilst at the same time continuing the mapping of new areas for comparative study. Such an example could be in Kelduhverfi, a neighbouring landscape but one with no valleys, and, as suggested from a research aerial survey a different system of land organisation through boundary construction.

APPENDICES

1. CONTEXT DESCRIPTIONS FOR TRENCHES

Basic interpretative descriptions of contexts with additional information where observed.

Site 1 Þegjandadalur I
Figure 12

[1] Root mat
[2] V-1717 tephra
[3] Wind blown deposit
[4] V-1477
[5] Turf collapse
[6] Wind blown deposit
[7] Turf collapse
[8] Turf collapse
[9] Soil wash and wind blown
[10] Soil wash
[11] Soil wash
[12] Turf strengur x3
[13] Upcast
[14] Turf strengur x5
[15] Turf stack x2
[16] Turf stack x2
[17] Upcast infill
[18] 1300 tephra
[19] 1104 tephra
[20] Landnám

Other
Upcast layer between [15, 16] and [20]
Humic surface observed in [20] and in individual turves in turf core

Site 2 Þegjandadalur II
Figure 13

[1] Root mat
[2] V-1477 tephra
[3] Soil wash
[4] Turf collapse
[5] Turf collapse
[6] Soil wash
[7] Erosion face / collapse
[8] Erosion face / collapse
[9] Soil wash
[10] Upcast / soil wash / turf collapse
[11] Upcast / soil wash / turf collapse
[12] Turf strengur x3
[13] Upcast infill
[14] Turf stack x2
[15] Turf stack x2
[16] Landnám
[17] H-1158

Sit e 3 Þegjandadalur III
Figure 14

[1] Root mat
[2] V-1477 tephra
[3] 1300 tephra
[4] Wind blown deposit and soil wash
[5] Turf collapse
[6] Wind blown deposit and soil wash
[7] Upcast / soil wash / collapse
[8] Upcast / soil wash / collapse
[9] Upcast infill
[10] Turf stack x2
[11] Turf stack x3
[12] Landnám

Other
Possible patches of white yellow tephra seen on the west side; might be redposited H3

Site 4 Þegjandadalur IV
Figure 15

[1] Root mat
[2] Þufur - thufur
[3] V-1477
[4] Wind blown deposit
[5] Turf collapse
[6] Wind blown and soil wash
[7] Turf collapse
[8] Turf stack x1
[9] Upcast infill
[10] Landnám

Other

Heavily disturbed by path and freeze / thaw action

Site 5 Rauðaskriða I
Figure 16

[1] Root mat
[2] V-1477 tephra
[3] Turf collapse
[4] Wind blown deposit
[5] Wind blown and soil wash
[6] Turf stack x3
[7] Turf stack x3
[8] Landnám

Site 6 Rauðaskriða II
Figure 17

[1] Root mat
[2] Wind blown deposit and soil wash
[3] V-1477
[4] Tephra – lighter than [15]
[5] Turf collapse
[6] Turf collapse or wind blown deposit
[7] Turf stack x6 (rebuilt over earlier wall: cf [11, 12])
[8] Turf collapse: earlier wall [11, 12]
[9] Iron panning deposit: water bourne / bog deposit
[10] Turf stack x2: covering [11, 12]
[11] Turf stack x2
[12] Turf stack x3
[13] Iron panning
[14] Original surface: tephras
[15] 1300 tephra

Other
Some þufur- thufur disturbance at west end
Bog formed on east side against boundary

Site 7 Hamrar, Helgastaðir and Pálmholt I
Figure 18

[1] Root mat
[2] V-1717 tephra
[3] V-1477
[4] H-1300 tephra
[5] Coarse greyish green tephra
[6] Fine greyish green tephra
[7] Wind blown deposit
[8] Turf collapse and wind blown deposit
[9] Turf collapse and soil wash
[10] Wind blown and soil wash
[11] Soil wash
[12] Turf strengur x3
[13] Turf strengur x2-3
[14] Landnám

Other
Well preserved from surface: wind blown deposits on western side with actual boundary on the very eastern edge. In most other places there is extensive þúfur exposing it to erosion and further degradation.

Site 8 Hamrar, Helgastaðir, Pálmholt II
Figure 19

[1] Root mat
[2] V-1477 tephra
[3] H-1300 tephra
[4] H- 1158
[5] Wind blown silt (contains tephras)
[6] Turf collapse mixed with windblown silts
[7] Same as [6]
[8] Turf collapse
[9] Lensed soile wash
[10] Turf stack,
[11] Turf stack
[12] Landnám with trample/upcast surface on top

Site 9 Hamrar
Figure 20

[1] Root mat
[2] V-1477 tephra
[3] 1300 tephra
[4] H-1158
[5] Windblown, soilwash
[6] Turf - black tephra, rebuild top
[7] Soil wash, wind blown, turf collapse
[8] same as [7]
[9] Upcast
[10] Turf collapse
[11] H3 turf. Same as [12]
[12] Turf core – cairn stones – LNL in it
[13] Stone cairn base
[14] Soil wash
[15] Same as [14]

Site 10 Narfastaðir
Figure 21

[1] Topsoil
[2] 1477 tephra
[3] Wind blown

[4] Mixed slopewash
[5] 1300 in situ, fades out
[6] Turf collapse
[7] Mixed turf layer
[8] Mixed slopewash, windblown
[9] Windblown slopewash
[10] Landnám
[11] H-1158
[12] Wall with 1300

Site 11 Narfastaðir
Figure 22

[1] Root mat
[2] Wind blown
[3] Wind blown
[4] Turf cap
[5] Turf, possibly rebuild
[6] Turf collapse
[7] Soil wash
[8] Turf stack x2
[9] Wind blown
[10] Wind blown fill
[11] Collapse
[12] Wind blown
[13] Turf stack x3
[14] Soil wash

Other
H-1158 observed in [2]

2. SECTION GRAPHICS (digitised by Óskar Gísli Sveinbjarnarson)

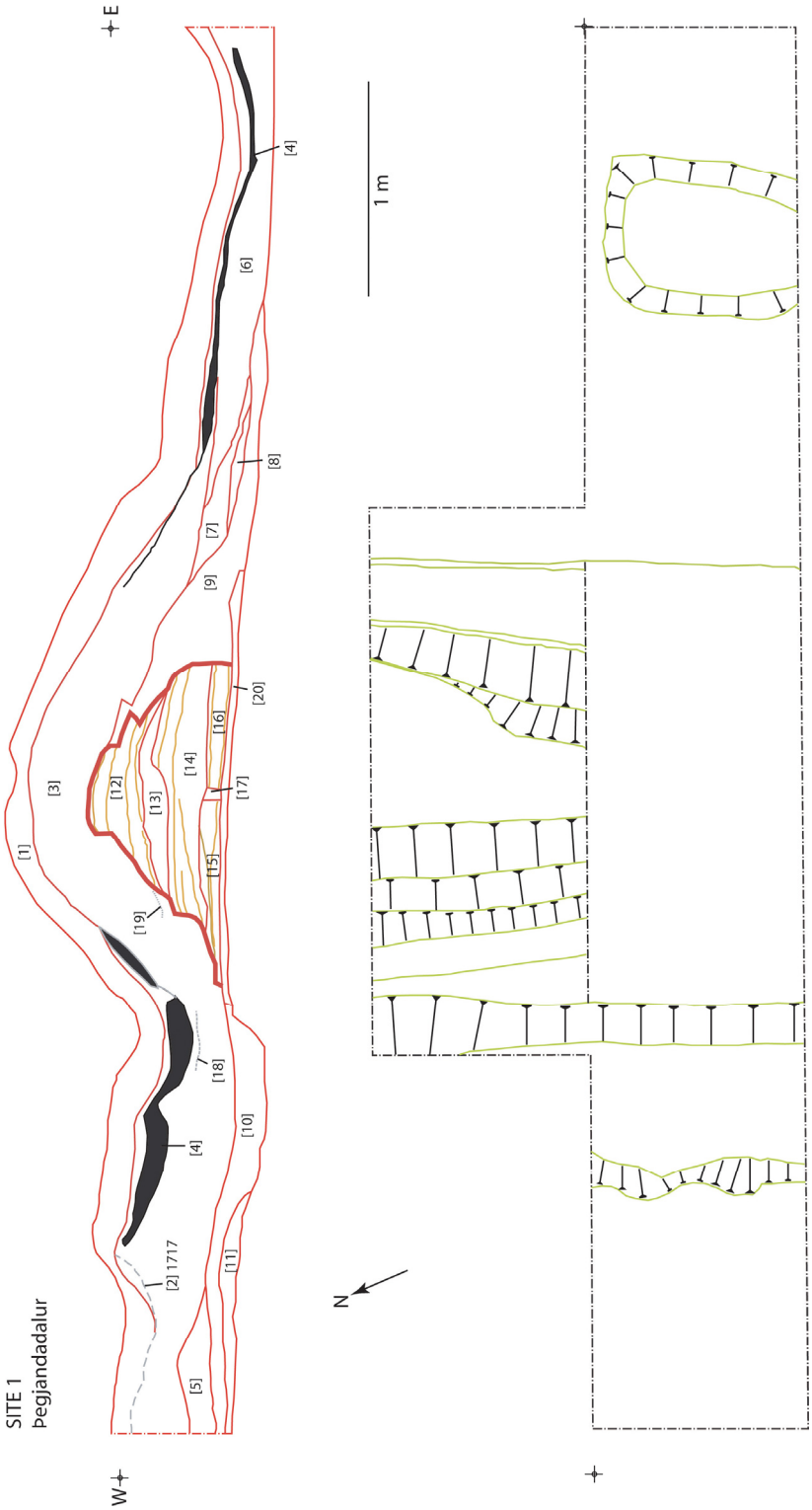


Figure 12. Þegjandadalur I

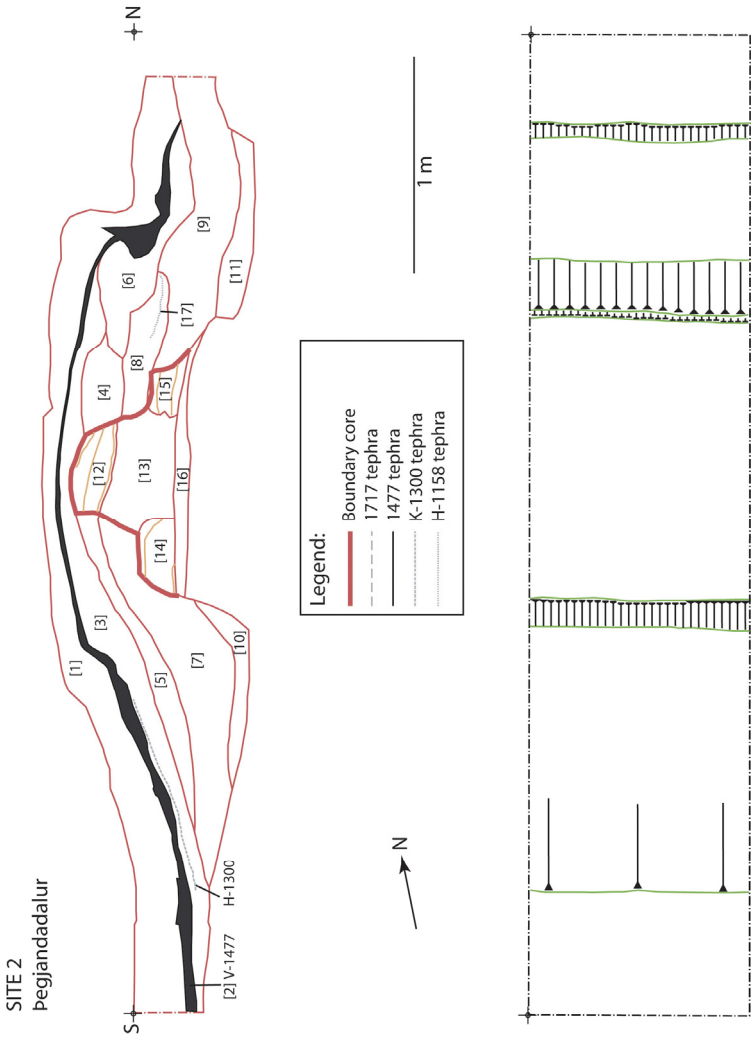


Figure 13. Þegjandadalur II

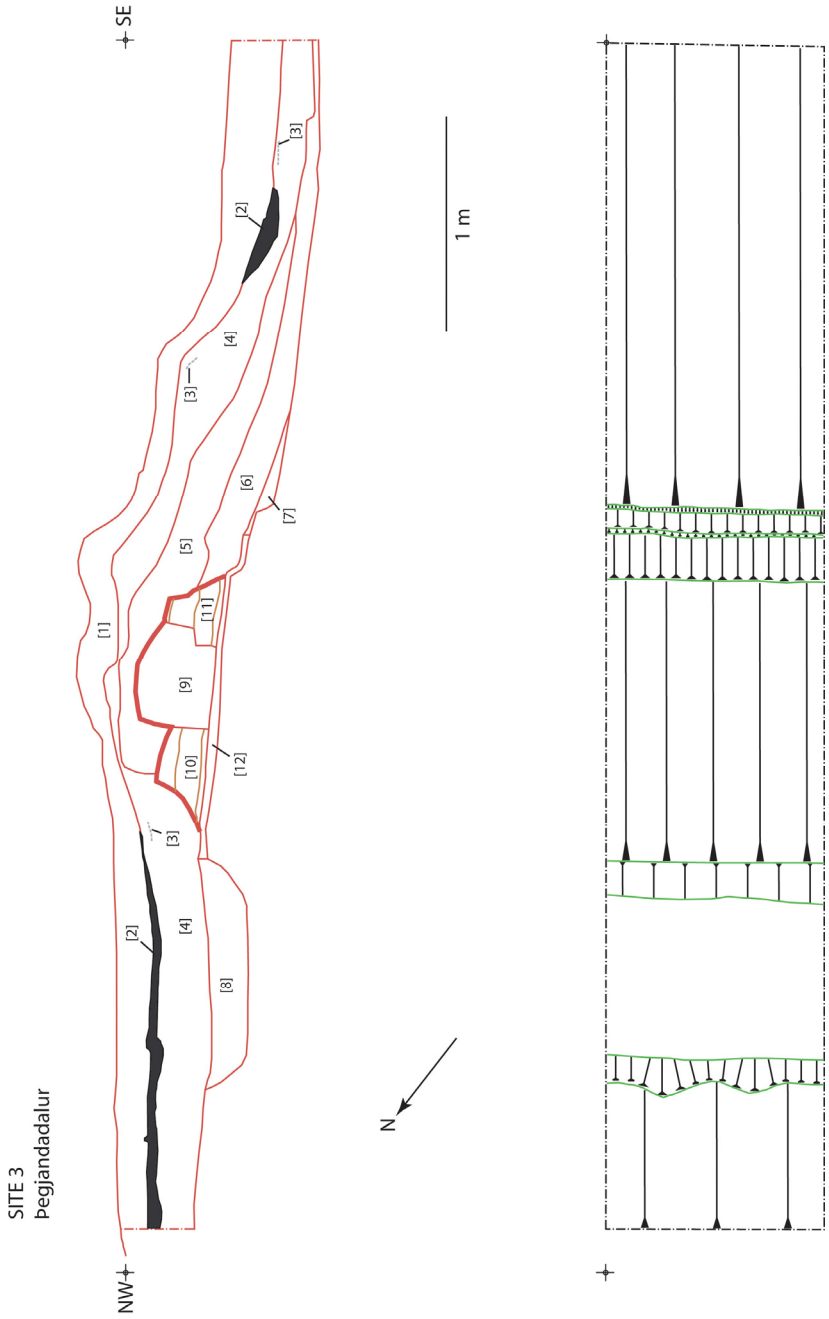


Figure 14. Þegjandadalur III

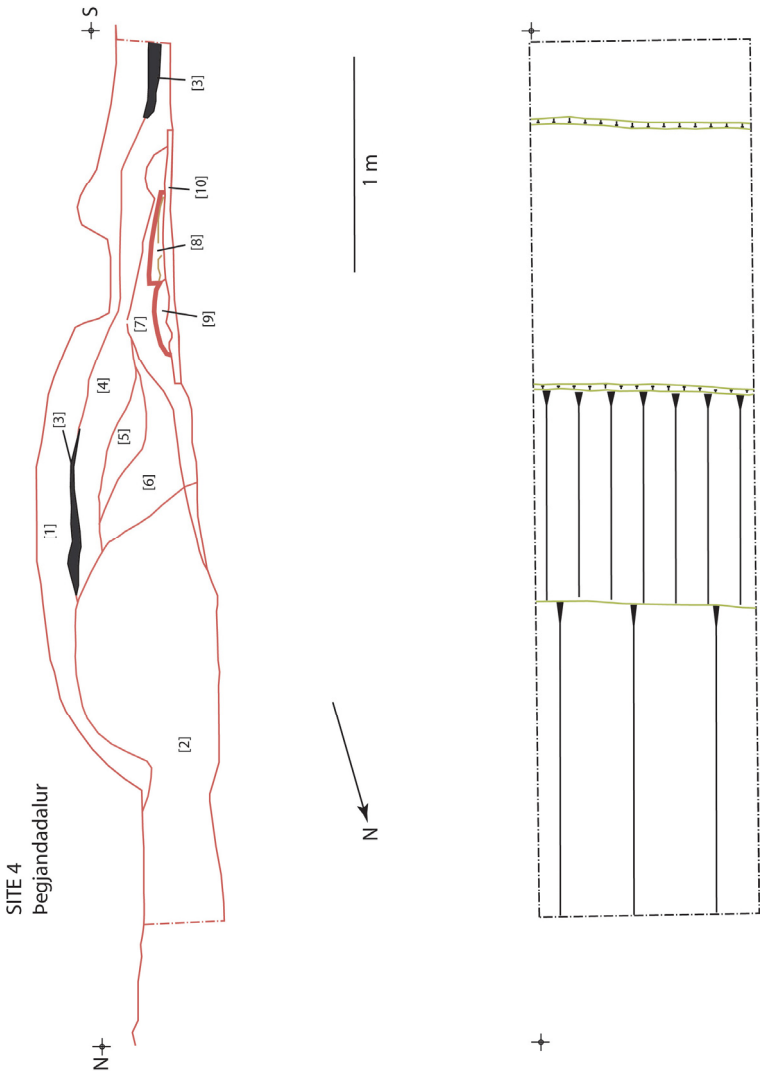


Figure 15. Þegjandadalur IV

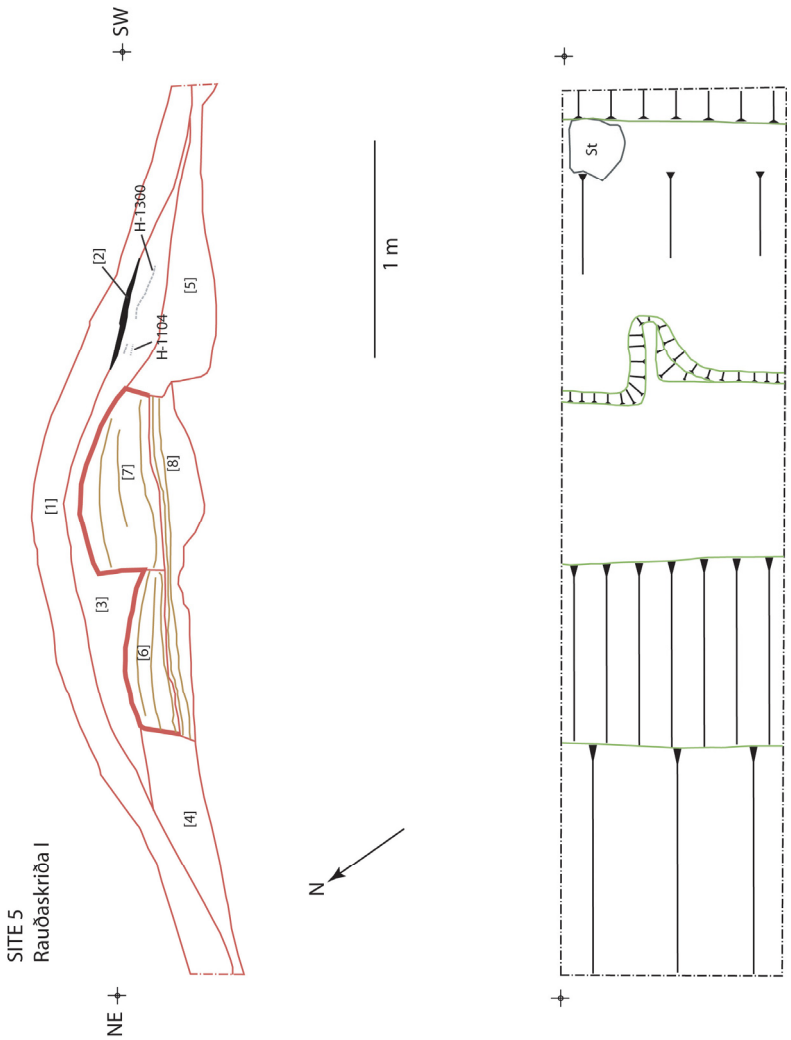


Figure 16. Rauðaskriða I

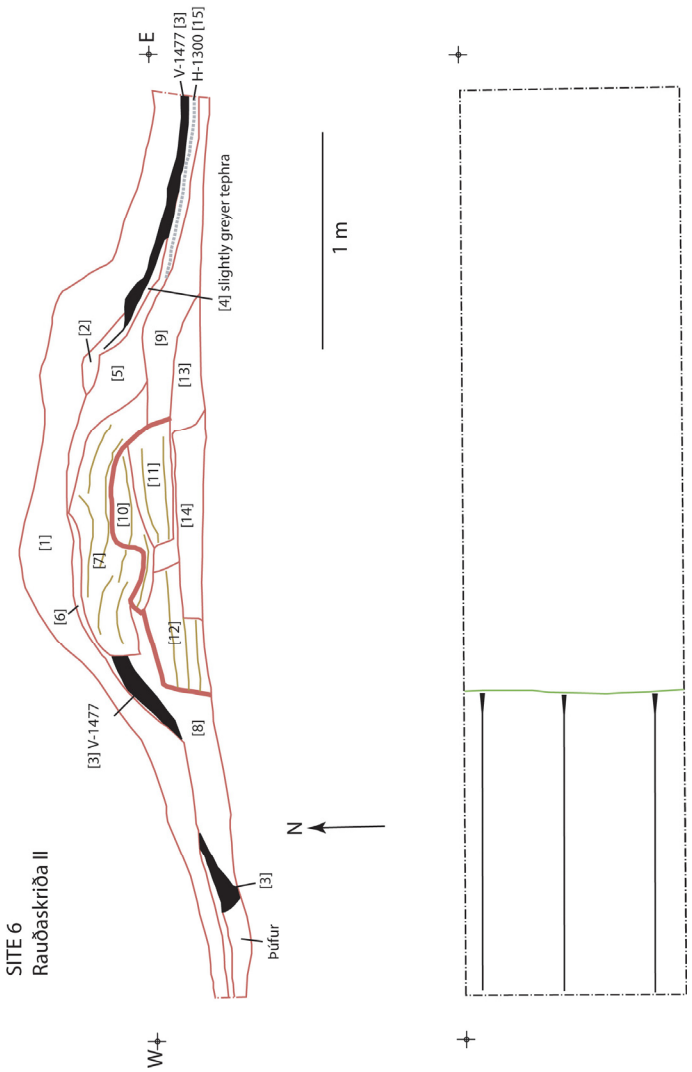


Figure 17. Rauðaskriða II

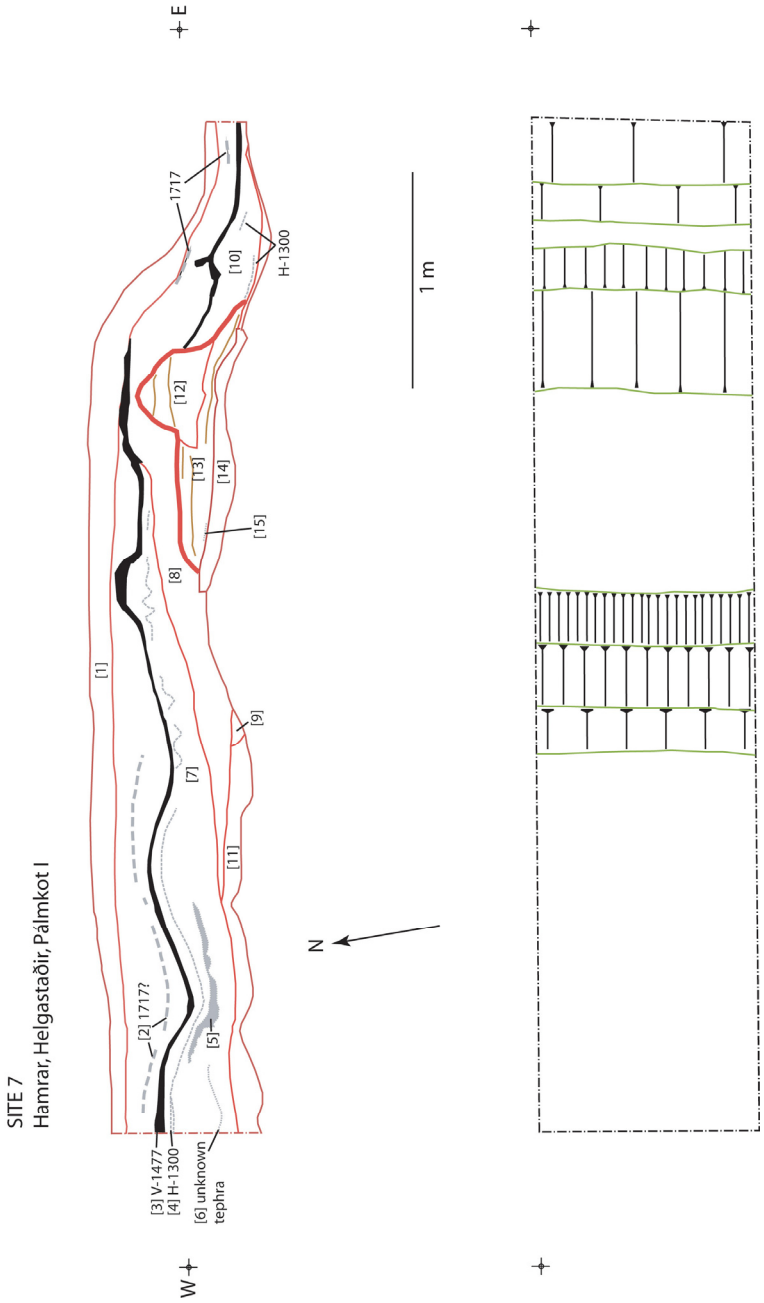


Figure 18. Hamrar, Helgastaðir and Pálmholt I

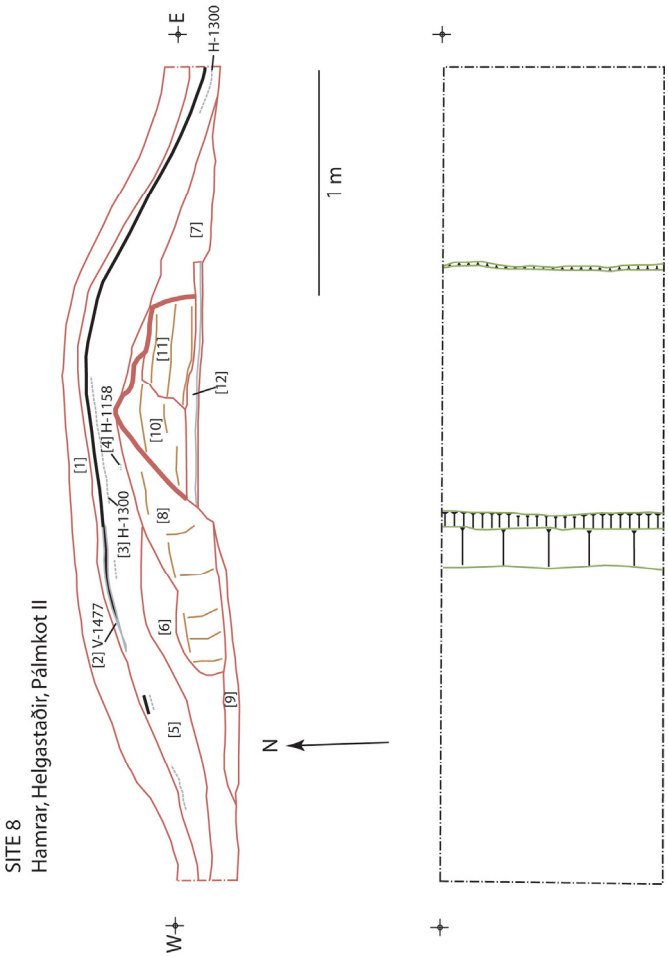


Figure 19. Hamrar, Helgastaðir and Pálmholt II

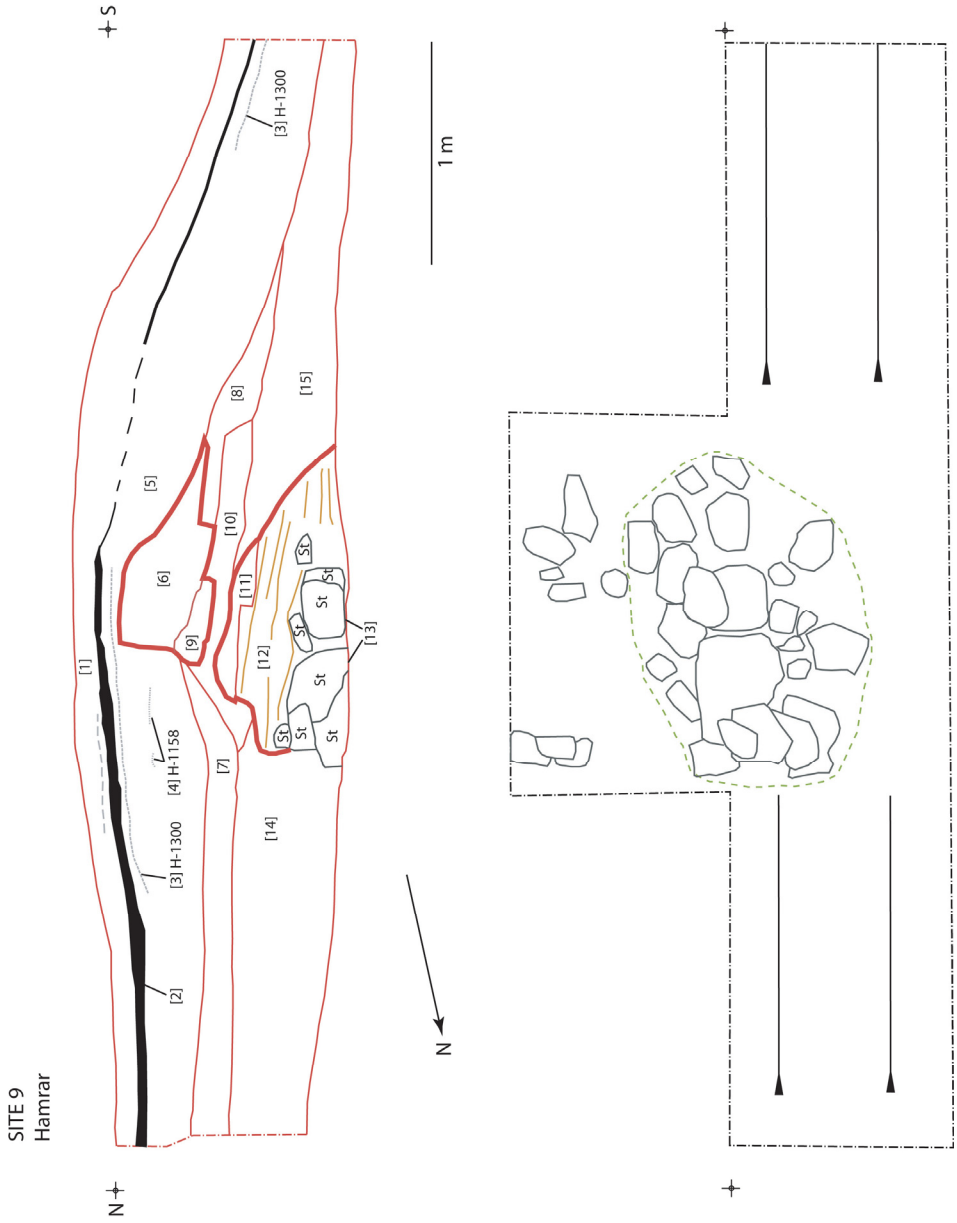


Figure 20. Hamrar I

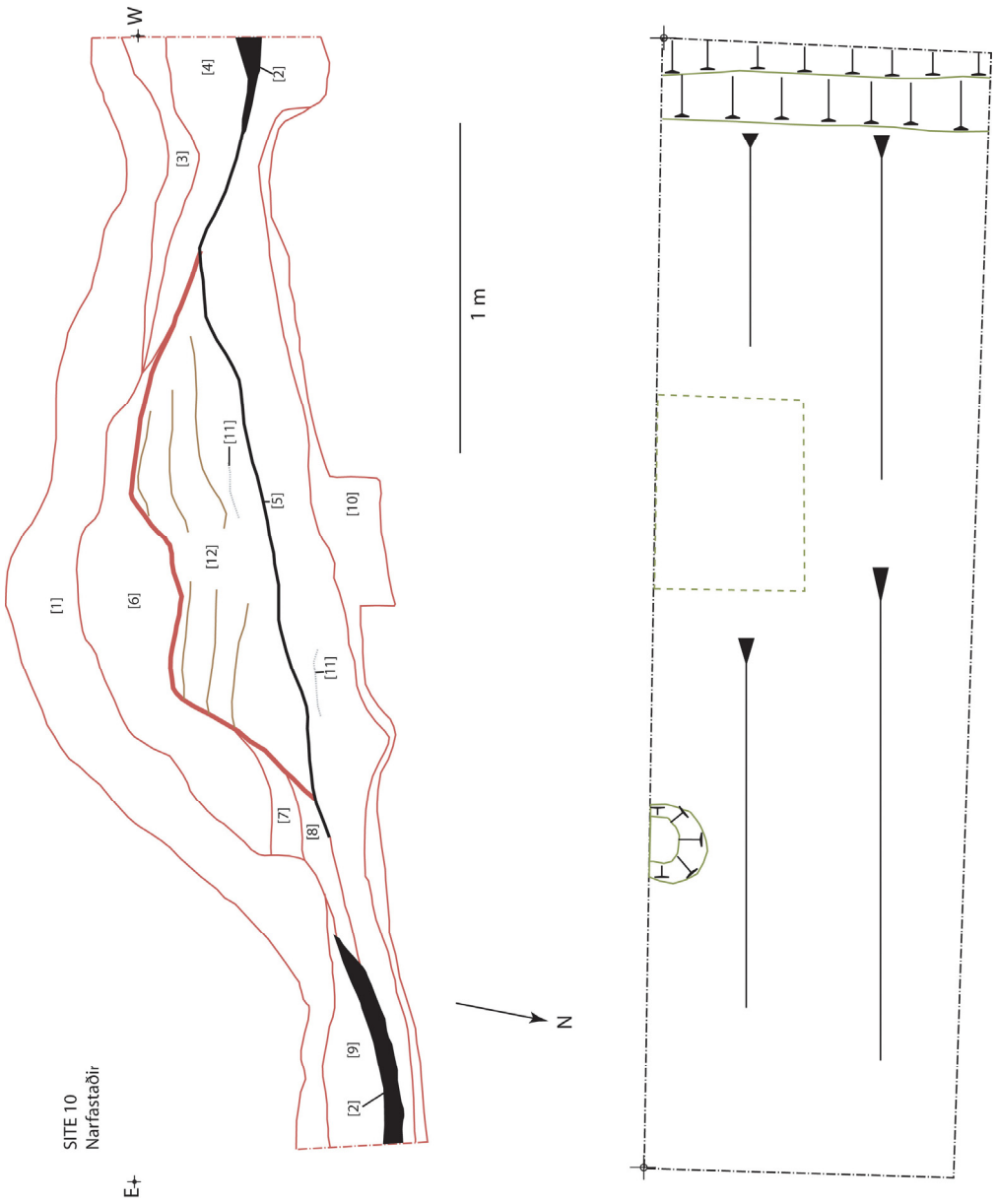


Figure 21. Narfastaðir I

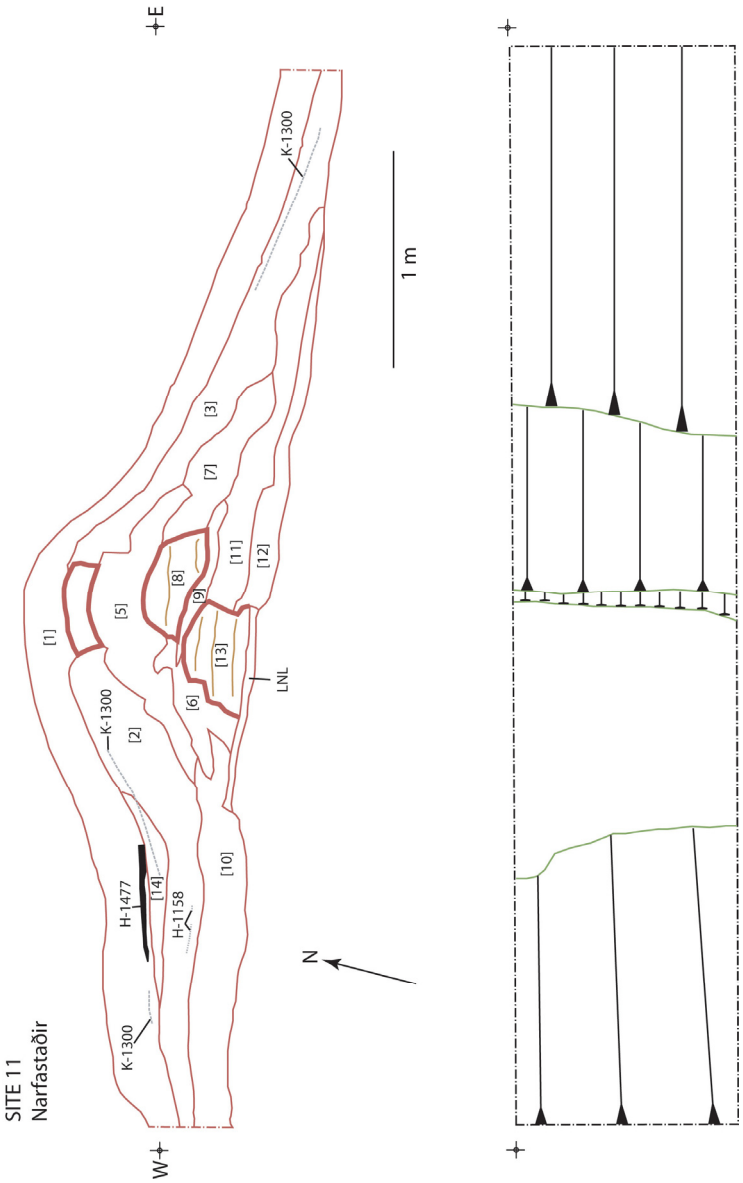


Figure 22. Narfastaðir II

3. TEPHRA REPORT

Forn garðlög í Suður-Þingeyjarsýslu

Gjóskulagagreining

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

Farin var vettvangsferð í Suður-Þingeyjarsýslu dagana 3.-4. ágúst 2006. Skoðuð voru alls sjö snið á þremur svæðum, þ.e. á Fljótsheiði, í Þegjandadal og við Narfastaði í Reykjadal. Snið voru teiknuð á öllum stöðum og sýni tekin úr gjóskulögum þar sem ástæða þótti til.

Fyrri rannsóknir

Við greiningu gjóskulaganna er stuðst við fyrri rannsóknir á gjóskulögum á Norður- og Norðausturlandi, 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 nýtast 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 2-3 eldri lögum mynda fremur auðþekkjanlega syrpu gjóskulaga sem nefnd hefur verið Landnámssyrpan (LNS). Litaskil eru yfirleitt í jarðvegi við Landnámslagið. Aldur rústa á eyðibýlinu Einarsstöðum í Þegjandadal var kannaður með hjálp gjóskulaga af Sigurði Þórarinssyni sumarið 1974 (Sigurður Þórarinsson 1976).

NIÐURSTÖÐUR ATHUGANA

Sniðteikningar eru sýndar á myndum 1 og 2. Þar koma fram niðurstöður gjóskulagagreiningar og afstaða gjóskulaga til torflaga.

Fljótsheiði

Skurður nr. 9: Landnámssyrpan er ekki sjáanleg undir garðinum en er hins vegar áberandi í torfinu. Hekla-1158 er rekjanlegt á 0,5 m kafla norðan við garðinn, yfir torfhruni. Lagið er slitrótt og hugsanlegt er að það hafi sest til í gömlu rofi. Yfir torfinu eru gjóskulögin H-1300, V-1477 og V-1717. Garðurinn er frá því fyrir 1150.

Skurður nr. 8: Undir garðinum er LNS óslitin á um 1,1 m kafla. Þrjú dökk gjóskulög eru sjáanleg í LNS. Heklu-1158 er hægt að rekja á um 10 cm kafla yfir torfhruni vestan við garðinn. Yfir garðinum eru gjóskulögin H-1300 og V-1717. Garðurinn er frá því fyrir 1150.

Skurður nr. 7: Þrjú gjóskulög eru sjáanleg í LNS undir garðinum. Torfið leggst næst ofan á LNS. Gjóskulagið H-1158 er ekki sjáanlegt. Yfir garðinum eru gjóskulögin H-1300, V-1477 og V-1717. Athygli vekur að H-1300 er um 9 cm yfir torfhruni sem bendir til að garðurinn sé verulega eldri en gjóskulagið. Garðurinn er að öllum líkindum frá því fyrir 1200.

Þegjandadalur

Skurður nr. 3: Landnámssyrpan er undir torfi. Hún er einnig í torfinu ásamt slitrum af Heklu-3. Yfir torfinu eru H-1300, V-1477 og V-1717. Torfið leggst næst ofan á LNS. Garðurinn er talsvert eldri en H-1300.

Skurður nr. 1: Landnámssyrpan er varðveitt undir garðinum. Torf er með slitrum úr LNS og Heklu-3. Gjóskulagið V~950 finnst ekki þrátt fyrir nokkra leit. Yfir garðinum eru gjóskulögin H-1300 og V-1477. Gjóskulagið H-1300 er um 12 cm yfir torfhruni. Garðurinn er að öllum líkindum frá því fyrir 1200.

Skurður nr. 2: LNS er varðveitt undir garðinum. Torf er með slitrum úr LNS. Yfir garðinum má sjá H-1300, V-1477 og V-1717. Yfir og að hluta í torfhruni norðan við garðinn eru slitrur af súrri gjósku sem að öllum líkindum tilheyra gjóskulaginu H-1158 (sýni tekið). Bendir því flest til að garðurinn hafi verið farinn að spillast og kominn úr notkun talsvert fyrir 1158. Eitthvað hefur hrunið úr garðinum eftir 1158, til þess benda torfsneplar yfir gjóskulaginu. Garðurinn er frá því fyrir 1150.

Narfastaðir í Reykjadal

Skurður nr. 10: undir garðinum má sjá H-1158 og H-1300. Í garðinum er torf með slitrum af H-1300. Yfir garðinum er V-1477. Næst undir garðinum er 6-7 cm þykkt lag sem ber merki um mannvist. Garðurinn er frá því eftir 1300 og nokkru fyrir 1477, sennilega 14. öld.

SAMANTEKT OG UMRÆÐA

Á Fljótsheiði og í Þegjandadal fannst gjóskulagið H-1158 í tengslum við þrjá af þeim sex görðum sem skoðaðir voru. Yfir hinum þremur görðunum er gjóskulagið H-1300. Landnámslagið er í öllum tilvikum, nema einu, í jarðvegi undir görðunum og í torfi. Gjóskulagið V~950 var ekki sjáanlegt í sniðunum þrátt fyrir talsverða leit. Neðsta torfið í görðunum liggur yfirleitt því sem næst ofan á LNS. Efsta gjóskulag í LNS er Landnámslagið eftir því sem best verður séð. Jarðvegur á milli LNL og torfs er sjaldan meira en 0,5-1 cm sem bendir það til að garðarnir séu hlaðnir eigi löngu eftir 870. Greinilegt er að talsverður tími líður frá því garðarnir eru úr sér gengnir þar til gjóskulögin H-1158 og H-1300 falla. Þeir eru þá fallnir fyrir löngu og mjög útflattir. Skipta má sögu garðanna í þrjú mismunandi skeið:
a. notkunarskeið / garður reistur og hann notaður
b. hrunskeið / garður kominn úr notkun og hrun byrjar (torfhrun við jaðra garðsins)
c. eyðingaskeið / garður hruninn, jarðvegssöfnun, garður verður ógreinilegur (fokefni oft blandað torfsneplum, með gjóskulögum)

Erfitt er að segja til um hversu lengi hvert skeið varir. Helst er hægt að fá upplýsingar um síðasttalda skeiðið, þar sem gjóskulög koma að góðu gagni. Í einstaka tilviki er að finna gjósku tilheyrandi hrunskeiðinu, t.d. í skurði nr. 2 í Þegjandadal en þar eru slitrur af H-1158 efst í torfhruni. Um lengd notkunarskeiðs garða er mikil óvissa.

Í lósi þess sem hér hefur verið tíundað verður að telja afar líklegt að garðarnir á Fljótsheiði og í Þegjandadal séu reistir eigi síðar en á 10. öld.

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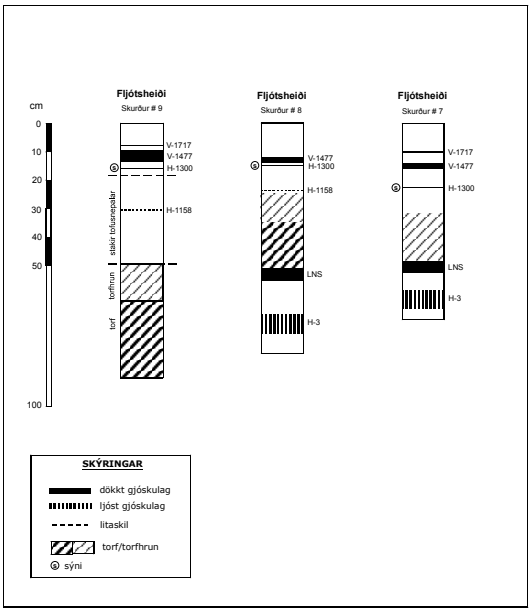
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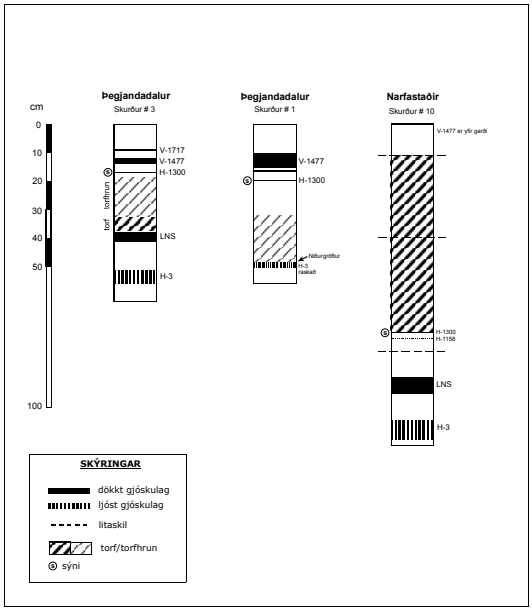
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4



Mynd 1. Jarðvegssnið frá Fljótsheiði í S-Þingeyjarsýslu.

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Mynd 2. Jarðvegssnið frá Þegjandadal og Narfastöðum í Reykjadal

GREINARGERÐ 03/2006

Figure 23. Schematic profiles indicating tephra sequences from 6 trenches.

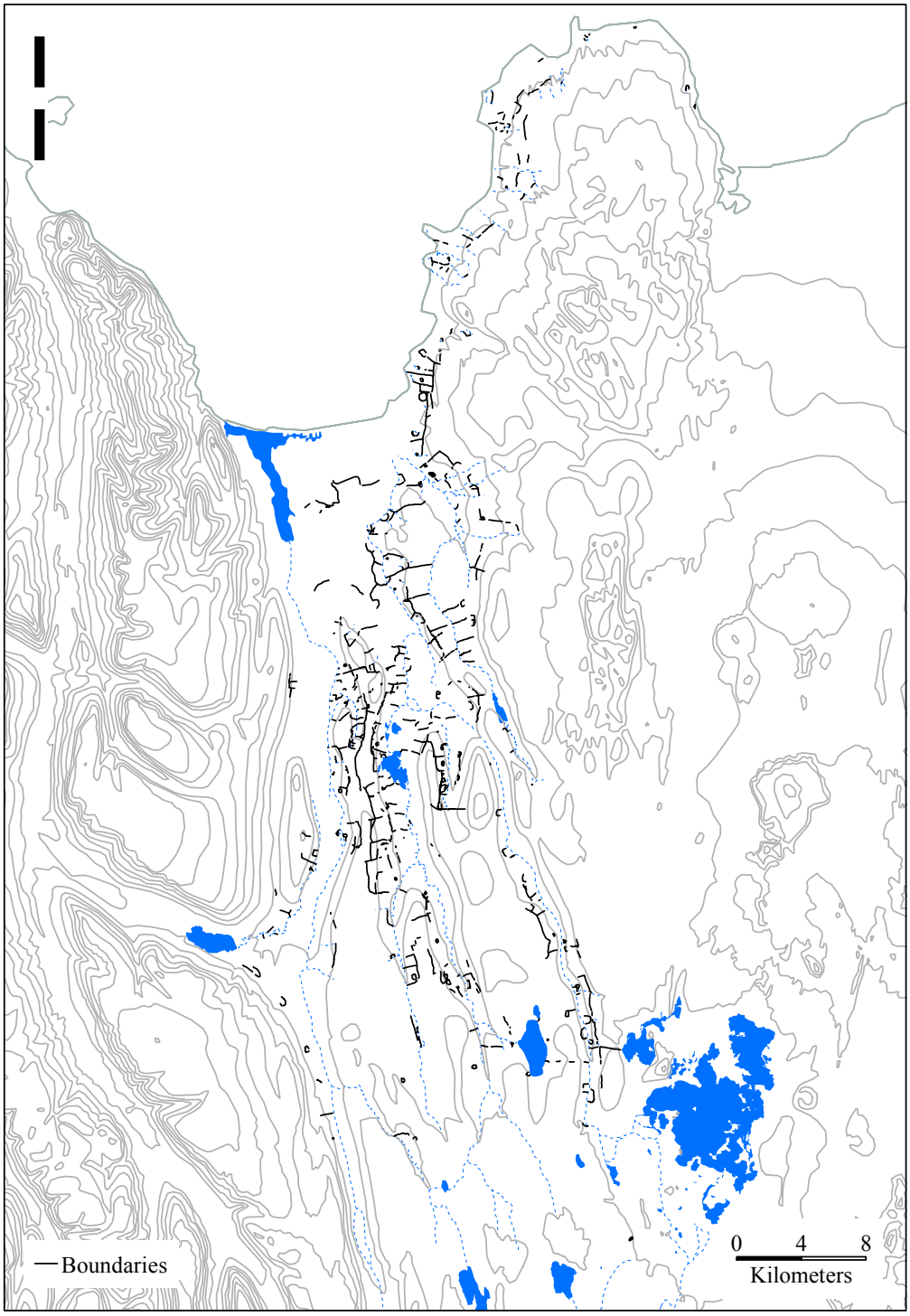


Figure 24. The project study area.

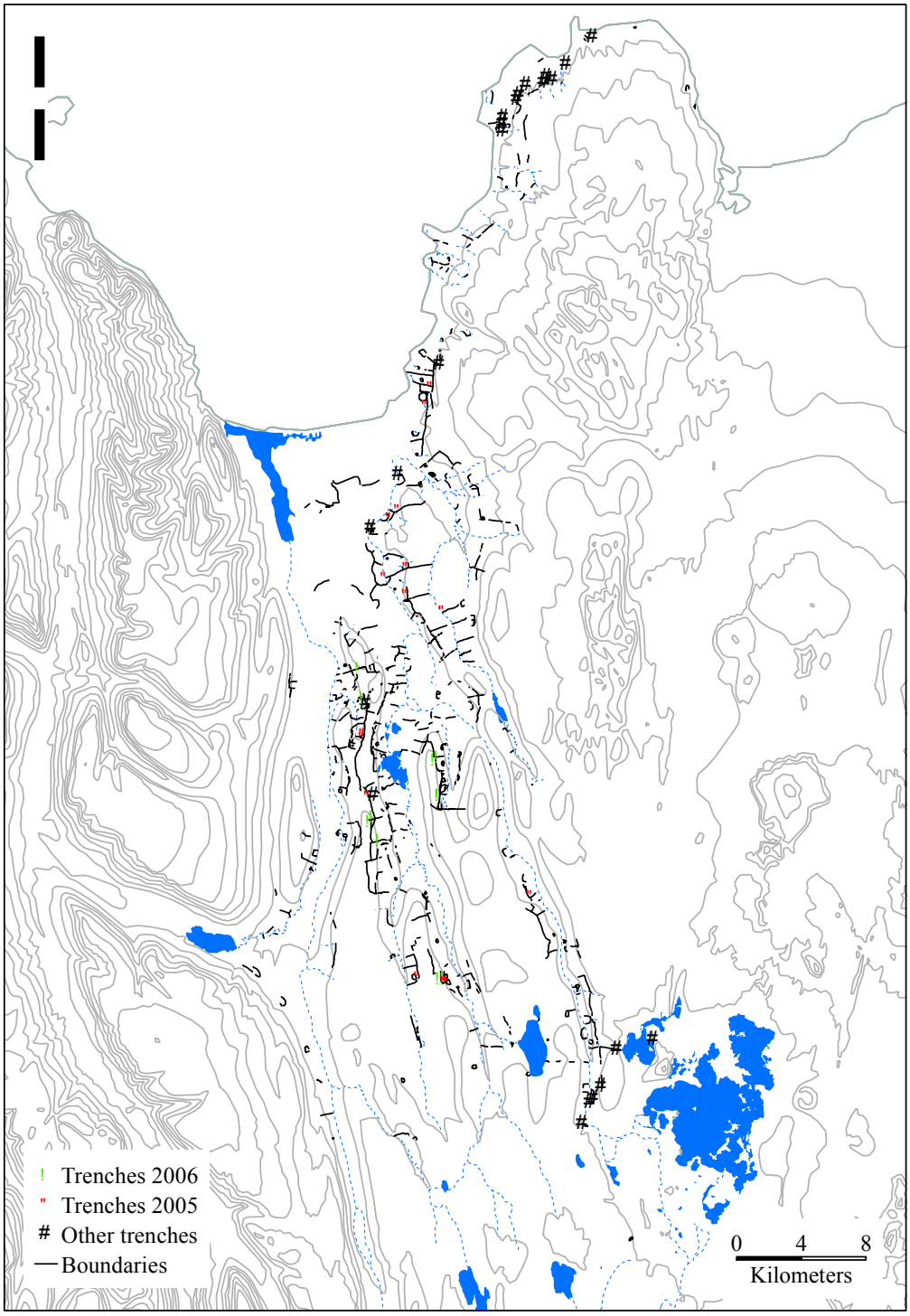


Figure 25. Trenches across boundaries during the Rannís funded project (between 2005 - 2006) and before.

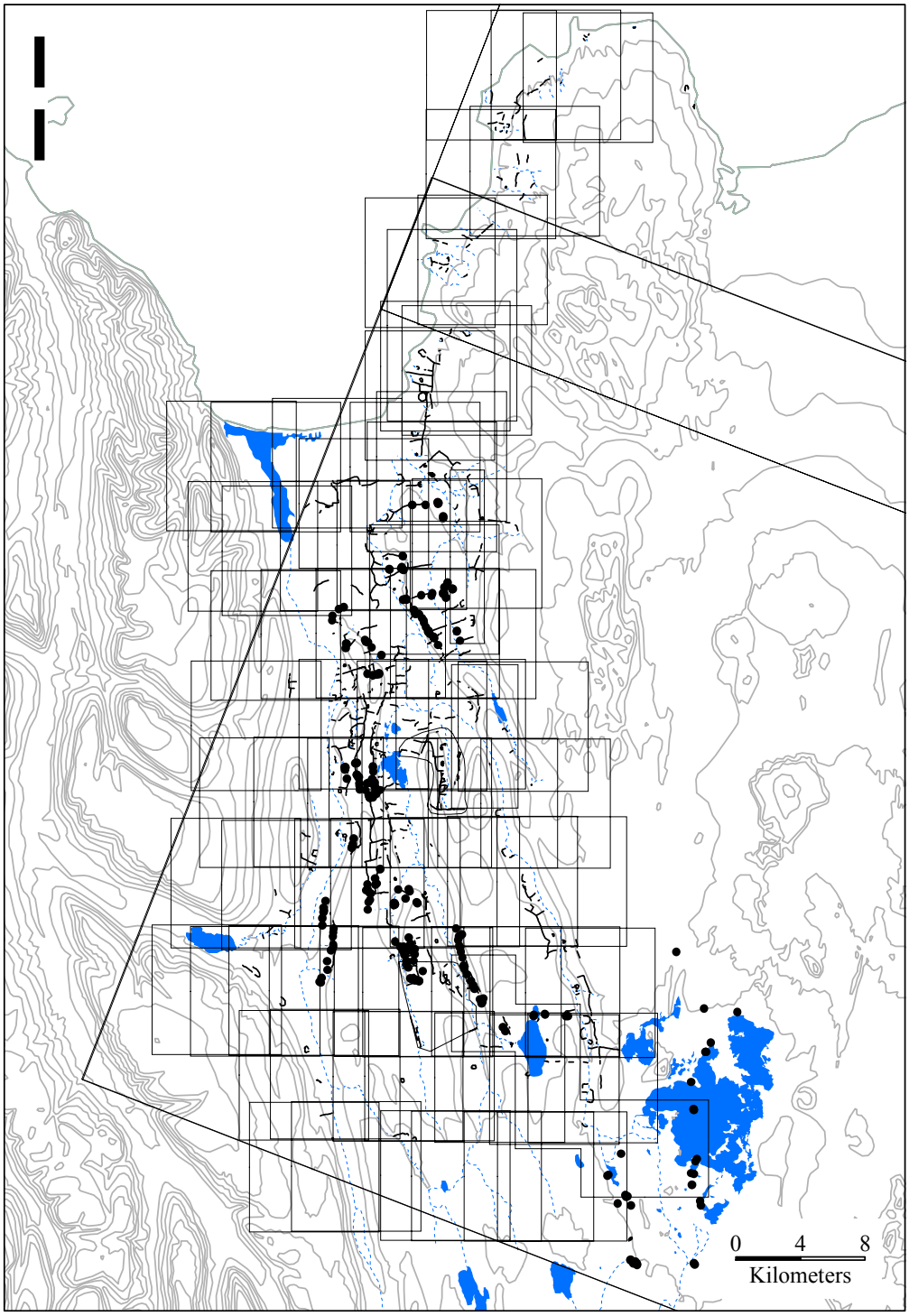


Figure 26. Data sources consulted during the mapping of boundaries (dots are partial mapping of oblique aerial photographs taken over a 5 year period).

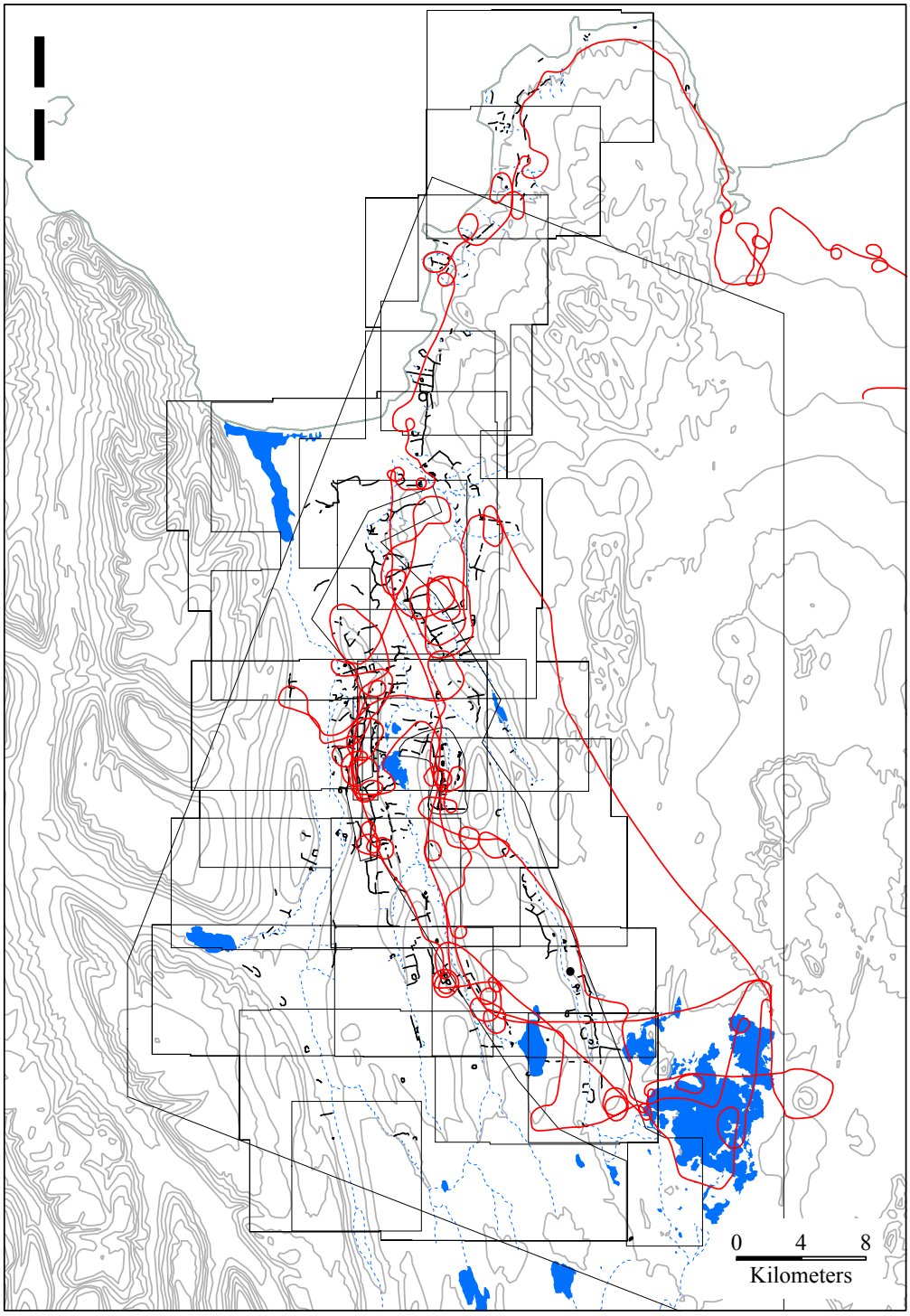


Figure 27. Mapping events that have contributed towards the mapping of individual boundaries during the project (red lines are GPS tracks of aerial surveys since 2005).