RANNSÓKNASKÝRSLUR FERÐAMÁLADEILDAR HÁSKÓLANS Á HÓLUM

Preliminary Report of the 2022 Field Season: Geophysics, Coring, and Excavations at Neðri-Ás, Kálfsstaðir, Hlíð, Hrafnhóll, Hvammur, Reykir, and Víðines, in Hjaltadalur

HJALTADALUR ARCHAEOLOGICAL SETTLEMENT PROJECT

By

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With an appendix by Magnús Á. Sigurgeirsson

HH 2023/3

Photo on front page – Ylfa Leifsdóttir records stratigraphy and flotation samples at Neðri-Ás TP2

HH 2023/3 (Hólar University Research Report no. 2023/3)

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Titill:	Preliminary Report 2022: Geophysics, Coring, and Excavations at Neðri-Ás, Kálfsstaðir, Hrappstaðir, Hrafnhóll, Hvammur, Reykir, and Víðines in Hjaltadalur in Hjaltadalur
Höfundur:	Guðný Zoëga and John M. Steinberg
ISBN	978-9935-9722-4-8
Ljósmyndir:	Guðný Zoëga, John Steinberg, Zachary Guttman, Florencia Bugallo. Gabríel A Ágústsson. Joseph P Aramini, Krista RichardsonCline, Mary D Armstrong Ylfa Leifsdottir

Acknowledgments

This 2023 work is part of a larger survey of Hjaltadalur called the Hjaltadal Archaeological Settlement Project (HASP) under the direction of Guðný Zoëga and John M. Steinberg. General permits for the survey of Hegranes and associated excavations were granted by The Cultural Heritage Agency of Iceland (permit # 202106-0097). The National Museum number for any artifacts recovered from this work is 2022-45.

We wish to thank Hólmfríður Sveinsdóttir and Ingibjörg Sigurðardóttir for their intellectual and logistical support. We also wish to thank Friðrik Steinsson, Hörður Jónsson, Erlingur Garðarsson, Sigurður Guðmundsson, Ingibjörg Sigurðardóttir, Sólberg Logi Sigurbergsson, Sigríður Björnsdóttir, Ólafur Sigurgeirsson, Ástvaldur Jóhannesson, and Stefanía Guðjónsdóttirfor for their kind permission to investigate their land. Hjalti Pálsson was also helpful for this work.

Besides the directors, Gabriel Ágústsson, Mia Armstrong, Joe Aramini, Flo Bugallo Zachary Guttman, Ylfa Leifsdóttir, and Krista Richardson-Cline worked on the project, and we appreciate their time, energy, and effort. Magnús Sigurgeirsson oversaw tephra analysis.

The work was supported by the US National Science Foundation (PLR # 2037737) in a joint project of Hólar University College and UMass Boston. We wish to thank the facility and staff at Hólar University for all their help and support, as well as Gústaf Gústafsson and the wonderful staff at Kaffi Hólar. We also appreciate the efforts of the UMass Boston faculty and staff at the Fiske Center, Anthropology, and ORSP for their help. In particular, we wish to thank, Melody Henkel, Dave Landon, and Maggie Mode.

Kathryn Catlin designed the scheme for displaying the coring data for her dissertation work (2019). Unless otherwise noted, the underlying data such as elevation land type are based on data from Landmælingar Íslands (the National Land Survey of Iceland). Images and data are used based on the terms of the License for National Land Survey of Iceland free data (https://www.lmi.is/is/moya/page/licence-for-national-land-survey-of-iceland-free-data). Aerial photographs, unless otherwise noted, are from Loftmyndir ehf. and in accordance with the educational license. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the individuals and institutions who support this work. Products, data, or instruments mentioned should not be construed as an endorsement.

Hólar University

Hólar University is located at Hólar in Hjaltadalur, North Iceland. For over 700 years Hólar was one of Iceland´s two episcopal sees and an important power base in North Iceland. The first school in Hólar was founded at the establishment of the bishopric in 1106 AD. It was renamed Hólar Agricultural College in 1882 and became Hólar University in 2007. Hólar offers education centered on rural communities and specializes in three areas: aquaculture, equine science, and rural tourism. Hólar houses the Center for the history of the Icelandic horse, Hólar Cathedral, and the turf house Nýibær.

Fiske Center for Archaeological Research

The Andrew Fiske Memorial Center for Archaeological Research at the University of Massachusetts Boston was established in 1999 through the generosity of the late Alice Fiske and her family as a living memorial to her late husband Andrew. As an international leader in interdisciplinary research, the Fiske Center promotes a vision of archaeology as a multi-faceted, theoretically rigorous field that integrates a variety of analytical perspectives into its studies of the cultural and biological dimensions of colonization, urbanization, and industrialization that have occurred over the past one thousand years in the Americas and the Atlantic World. As part of a public university, the Fiske Center maintains a program of local archaeology with a special emphasis on research that meets the needs of cities, towns, and Tribal Nations in New England and the greater Northeast. The Fiske Center also seeks to understand the local as part of a broader Atlantic World.

Hjaltadalur Archaeological Survey Project - HASP

The Hjaltadalur Archaeological Survey Project seeks to determine if Hólar, the historically important site of the northern bishopric, rose to political and religious primacy due to the conditions created during the initial settlement of Iceland around A.D. 870, or if it arose as part of a fundamental social reorganization associated with the later institutionalization of Christianity. Through a program of soil coring, geophysics, and test excavation, the project will chronicle the changing site size and relative importance of Hólar and its neighboring 20 farms. This will allow us to determine if the institutionalization of Christianity in the valley of Hjaltadalur was directly dependent on the conditions of the initial settlement, or if it was an outcome of the placement of the bishopric at an otherwise ordinary farm.

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Útdáttur (Icelandic Summary)

Í þessari skýrslu er gerð grein fyrir vettvangsvinnu sem fram fór sumarið 2022 á jörðunum Neðri Ási, Kálfsstöðum, Hlíð (í eldri heimildum kölluð Hrappsstaðir eða Hrafnsstaðir), Hrafnhóli, Hvammi, Reykjum og Víðinesi (með fornbýlinu Grófarstekk) í Hjaltadal. Vettvangsvinnan var annar hluti af verkefninu Hjaltadalur Archaeological Settlement Survey (HASP), sem stendur yfir árin 2021-2023. Um var að ræða annað sumarið af þremur as part of the Hjaltadalur Archaeological Survey Project (HASP). Tilgangur verkefnisins er að rannsaka landnám í næsta nágrenni Hólastaðar og bera saman við niðurstöður úr samskonar verkefnum sem farið hafa fram sl. 20 ár í Skagafirði. Allar átta jarðirnar sem rannsakaðar voru sumarið 2022 voru stofnaðar löngu fyrir gjóskufall úr Heklu 1104. Á Neðra Ási, Kálfsstöðum, and Víðinesi bentu jarðlög til samfelldrar búsetu á bæjarstæðunum allt frá upphafi byggðar fram til dagsins í dag. Á Hrafnhóli, Hvammi, Reykjum og í Hlíð virðast bæir hafa verið færðir til. Skriðuföll eru þekkt á þessum fjórum jörðum en eini bærinn sem hægt var að staðfesta með vissu að hefði færst til vegna skriðufalla var á Reykjum. Engin jarðanna virðist þó hafa farið í í eyði vegna skriðufalla. Fornbýlið Grófarstekkur var eina býlið sem sem fór snemma í eyði en þar voru engin ummerki um skriður.

Abstract

This report outlines the 2022 work at Neðri Ás, Kálfsstaðir, Hlíð (formally called both Hrappsstaðir and Hrafnsstaðir), Hrafnhóll, Hvammur, Reykir, and Víðines (including Grófarstekkur) in Hjaltadal as part of the Hjaltadalur Archaeological Survey Project (HASP). This is the second year of a scheduled three-year project. The purpose of the project is to outline the settlement sequence and regional development in Hólar and around Hjaltadal and compare them with similar studies that have been carried out in Skagafjörður. The eight farms investigated in 2022 all seem to have been established well before the Hekla 1104 (H1104) tephra fell. Neðri Ás, Kálfsstaðir, and Víðines have continuous sequences that indicate long-term stability. Hrafnhóll, Hvammur, and Reykir seem to have experienced substantial landslides but were resilient and farmstead settlement continues. The farmsteads at Reykir and Hlíð seem to relocate slightly over the sequence of their settlement. At Reykir, the relocation can be directly attributed to landslides. Grófarstekkur seems to be the only 2022 investigated farm that is abandoned early as a farmstead.

Introduction

The report details the results of the 2022 fieldwork at Neðri-Ás, Kálfsstaðir, Hlíð (or Hrappsstaðir), Víðines (along with Grófarstekkur), Hrafnhóll, Hvammur, Reykir, and in Hjaltadalur as part of the Hjaltadalur Archaeological Survey Project (HASP).

The original Hólar farmstead lay in the northwestern part of the current Hólar estate (Figure 1). The site is located on the northern slope in the valley of Hjaltadalur, a scree-lined glacial valley in the east of Skagafjörður, North Iceland. The farm becomes a bishopric in 1106. The goal of this research is to estimate the size of Hólar and the surrounding farmsteads and how they change over time. The project specifically targets three periods: pre-1104, 1104-1300, and post-1300. The project employs coring, geophysics, and small test trenches into midden and other non-structural deposits. In Appendix F – Radiocarbon (AMS) Results (page 93) dates from Neðri-Ás and the previous works at Hólar and Hof are modeled with important implications for the settlement sequence.

Geology and tephra in Hjaltadalur

The geology of the Hjaltadalur region is characterized by flows of Upper Tertiary basic and intermediate extrusive basalts (Feuillet, et al. 2012) interbedded with weak pulverized red vesicular basaltic strata (Decaulne, et al. 2016). The area was deglaciated by 6100 yr cal.BP and then subject to uplift (Cossart, et al. 2014). Hjaltadalur is a large scree-lined glacial valley with several distinct ecological zones corresponding to both highland and midland elevations. The midland areas are characterized by organic rich soils and iron, while highland areas have drier soils and dwarf birch forests (Carter 2010). Carter (2010) suggested that Hjaltadalur is naturally sheltered by large mountain ranges that results in a slow rate of erosion.

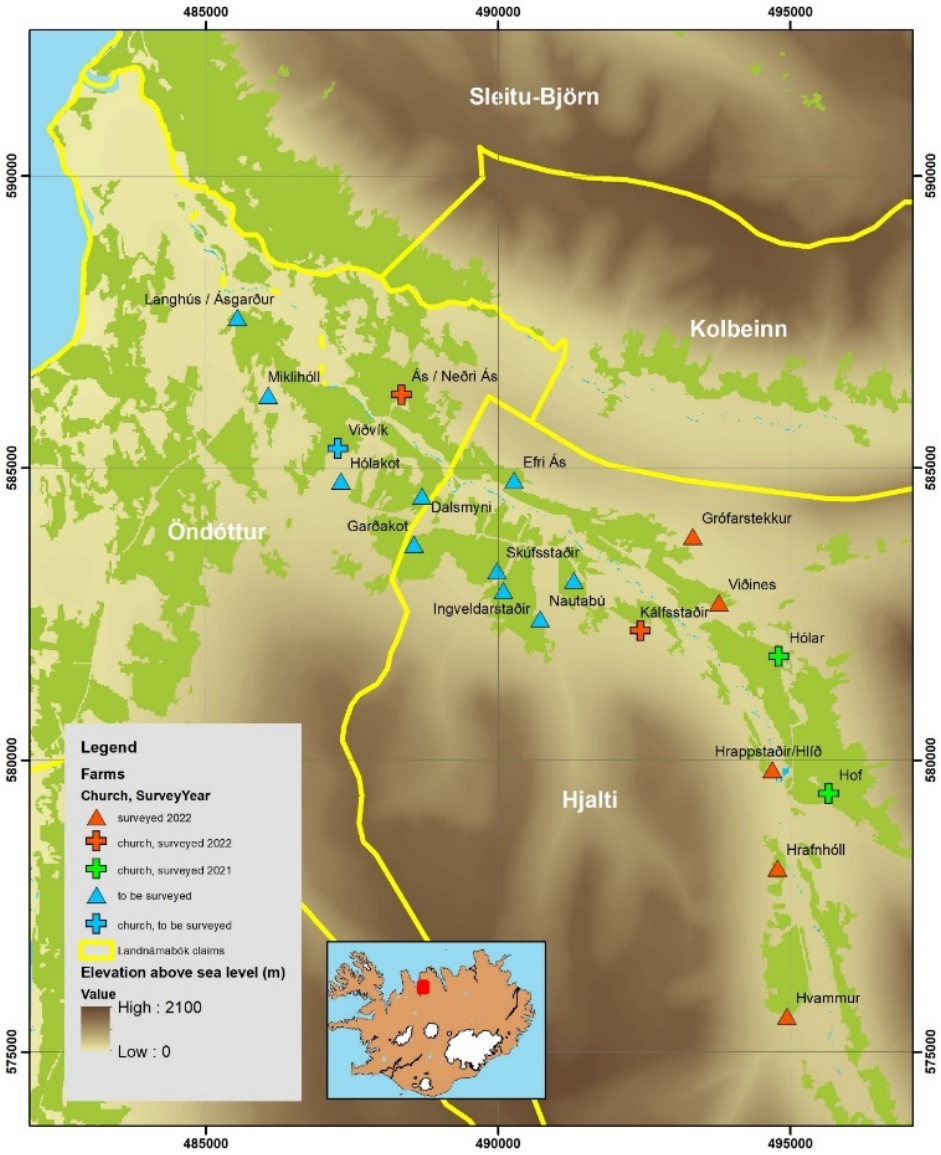

Figure 1. Map of Hjaltadalur, showing probable early land claims yellow. Farmsteads with churches are denoted by '+'. Farmsteads in blue have yet to be surveyed. Farmsteads in Green were surveyed in 2021. Farmsteads in red are detailed in this report. Grasslands are donated in green.

The natural stratigraphy of the near surface of the region consists of a rapidly formed sediment and soil with intermixed tephra layers, along with gravel layers and lenses of glacial origin. The soil is a brown andosol that derives from aeolian sediments of volcanic origin but is not the direct product of eruptions (Arnalds 2004, 2008; Arnalds, et al. 1995). The andosol is non-cohesive but has an extremely high water-retention capacity (Arnalds 2008).

Hjaltadalur is subject to substantial avalanches and landslides. This does not seem to be a recent phenomenon, as many of these events are described in early surveys (Johnsen 1847; Magnússon and Vídalín 1930). It is clear from the more recent work of Brynjólfsson, et al. (2019) that avalanches have been quite common in the southwestern part of Hjaltadalur (Figure 2). The impact of avalanches, landslides, & mudslides on farms and archaeological

sites is variable. For working farms, these events can result in just a few rocks scattered across a field that are easily cleaned up in a few hours. On the other hand, these sudden events can render larger areas permanently unproductive and destroy important infrastructure beyond grass fields (e.g., walls and structures). These earth movement events can form subsurface gravel layers of various thickness and, when covered over by later aeolian deposition and a grass surface layer, can be difficult to identify from the surface. Surface and subsurface gravel layers can have archaeological layers (and tephra layers) above and below them. For archaeological deposits, even small thin rock spews overlying sites can make their identification difficult. Substantial rock deposits from various earth movements can make site identification impossible. Not all these earth movements are sudden and dramatic. Slow land movements can shift large areas (e.g., 0.5 ha) 10’s of meters downhill over tens and even hundreds of years. These shifts can move large sections of archaeological deposits wholescale and create substantial discontinuities at their edges.

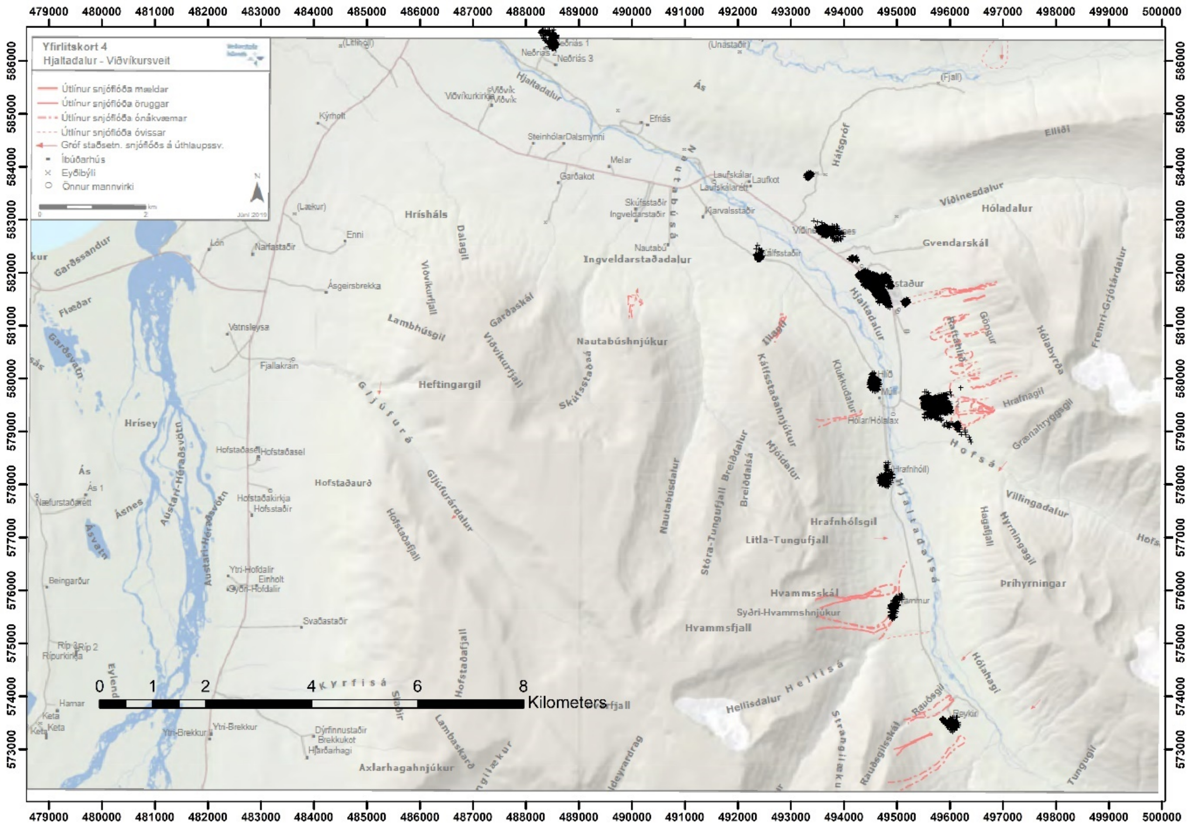

Figure 2. Cores (+) from 2021 & 2022 superimposed on map from Brynjólfsson, et al. (2019:124) which shows recent avalanches .

The Hjaltadalur Archaeological Survey Project relies heavily on tephra layers preserved in the soil. Skagafjörður has an early tephra sequence that allows for a fine-grained

chronology of the changes in early settlement patterns (Larsen *et al.* 2002). While tephra deposition can vary over small distances (Davies *et al.* 2010) the basic tephra sequence is found throughout Skagafjörður and allows for a common dating system among farms and farmsteads (Þórarinsson 1977). The geologist and tephra specialist Magnús Sigurgeirsson oversaw the analysis of tephra for the project (Appendix G - page 108).

- Historic:
  - Hekla A.D. 1766. A black tephra usually found in turf or in the upper 10 cm of the soil sequence (Kirkbride and Dugmore 2006; Þórarinsson 1967).
  - Hekla A.D. 1300: A gray-blue to dark black tephra (Larsen 1984; Larsen, et al. 1999; Larsen, et al. 2002; Larsen, et al. 2001; Sveinbjarnardóttir 1992).
  - Hekla A.D. 1104 (H1). This white or yellowish-white tephra is the most consistent in Skagafjörður (Eiriksson, et al. 2000) and is readily identifiable in both natural and cultural stratigraphic sequences.

- Landnám sequence (LNS):
  - Vj~1000 tephra. A blue to bluish-black layer whose source has not been determined but is likely to be either from a Grímsvötn and/or Veiðivötn eruption dated to approximately A.D. 1000 (Sigurgeirsson 2001). The layer was first suggested in two undergraduate theses (Jónsson 2005; Ólafsson 1985) and it has been proposed that this layer may be found in other areas (Aldred and Sigurgeirsson 2005; Lárusdóttir, et al. 2012). Preliminary analysis of the composition of volcanic glass shards by scanning electron microprobe (SEM) has identified a mixture of shards from both volcanic sources.
  - "Landnám" or "settlement" layer (LNL, LTL, also designated as 871). The layer is so-named for its association with the earliest settlements in Iceland (Dugmore and Newton 2012)) and is dated to A.D. 871 ±2, (Grönvold, et al. 1995), but could be dated to A.D. 877±4 (Schmid, et al. 2017; Zielinski, et al. 1997). The tephra originates from the Vatnaöldur fissure swarm associated with the Torfajökull and Bárðarbunga volcanos (Dugmore and Newton 2012; Larsen 1984). In general, this layer consists of two distinct tephras–an olive-green tephra overlying a white tephra. However, in Skagafjörður, only the green portion is present (cf. Hallsdóttir 1987). In many cases this layer and surrounding layers of the LNS are tightly spaced in a brown organic rich soil matrix associated with the environmental changes of colonization.

- Black tephra below the LNL (K600). The earliest tephra in this sequence is a dark black layer probably from the Katla volcano but is not well dated (Wastegard, et al. 2003).

❖ Prehistoric:

- Hekla 3 (H3). A thick (generally 2-3 cm) white or whitish-yellow tephra dating to about 950 B.C. (Dugmore, et al. 1995).

- Hekla 4 (H4). A thick (generally 1-3 cm) white or yellowish-white tephra dating to about 2300 B.C. (Eiriksson, et al. 2000).

Deposits are then periodized using these tephras (and AMS dates when available) in a sequence of date ranges. These ranges are not applied to tephra layers (which are given a single date). In the absence of a tephra layer, the latest date range is applied.

Farmstead stratigraphy

Chronological phasing of farmstead sizes primarily relies on two tephra layers: the white Hekla AD 1104 (H1) and the dark Hekla AD 1300. These layers are the ones most commonly found in cores and are often the easiest to identify of the historical tephras. H1 is presented twice as often as Hekla A.D. 1300. Using these tephra layers to date cultural deposits allows for the chronological phasing of farmstead sizes and for farmstead sizes to be compared across contemporary temporal horizons. Their presence also allows for the identification of changes in the size of individual farmsteads. Other tephra layers are used to help identify the overall stratigraphic sequence in the soil cores and to associate specific layers with historical periods. Deposits categorized by these temporal phases are based on whether or not they contained evidence of cultural material. The resulting chronology allows for the estimation of farmstead size for three primary periods:

- Pre-AD 1104
- AD 1104-1300
- Post-AD 1300

Short history of early Hjaltadlur

According to documentary sources, the Hjaltadlur valley refers to the land claim of Hjalti Þórðarson who settled at Hof. Hólar, by far the most important farm in Hjaltadlur, is not mentioned in the *Book of settlements* (Íslenzk fornrit I 1986), which recounts the details of

the initial settlement of Iceland and the land claims staked by the approximately 400 settlers starting in around A.D 870 (Smith 1995). According to *Landnámabók* (Íslenzk fornrit I 1986) , the first settler in the region was Sleitu-Björn Hróarsson whose extensive land claim was later subdivided roughly into fourths (Sleitu-Björn at Sleitu-Bjarnastaðir, Öndóttur at Viðvík, Kolbeinn somewhere in Kolbeinsdalur, and Hjalti at Hof in Hjaltadalur, Figure 2). Hjalti Þórðarson who took possession of the valley of Hjaltadalur was an influential and wealthy chief (Pálsson and Edwards 1972) and his settlement farm, Hof, is just south of Hólar. The general assumption has been that Hólar took over from Hof at some point in the 10th century as the main farm in Hjaltadalur, but no written sources throw light on how or when that happened.

The Saga of bishop Jón Ögmundarson contains the first mention of a church at Hólar. The church builder was Oxi Hjaltason, and in a footnote, Sigurðsson and Vigfússon (1858:163), the saga's editors, suggest that the church may have been built around AD 1050 and that Oxi was the grandson of Hjalti the settler at Hof. According to the saga, Oxi´s church was the largest in Iceland: a richly furnished timber structure with a lead-lined roof. That splendid church burned down and was replaced by a second pre-bishopric Hólar church.

A bishopric was established at Hólar in 1106. According to bishop Jóns saga, Hólar was the private farm property of priest Illugi Bjarnason, the only person in North Iceland willing to donate his farm (patrimony) to the Church to house the bishop's seat (Cormack 2000). No explanation is made of his generosity, other than it was for the glory of God and advancement of the Church (Sigurðsson and Vifgússon 1858), although he may have had another farm to retire to (Vésteinsson 2000:35). The first bishop at Hólar, Jón Ögmundarson (1052-1123), was not from North Iceland. He was a student of the first bishop at Skálholt, Ísleifur Gissurarson, and was appointed to manage Hólar by the second bishop, Ísleifur's son, Gissur. Bishop Jón had a new church built at Hólar and established a school.

In 1388 about 70 people were working at Hólar—on the same scale as the other bishopric at Skálholt (Júlíusson 2010). The first land registry (from 1714) (Magnússon and Vídalín 1930, 218), was recorded about the time Hólar began to fall from its zenith, states that Hólar owned 179 farmsteads in Skagafjörður worth over 4000 hundreds.

In 1824 Benedikt Vigfússon purchased the Hólar estate which had been deteriorating and lost the see in 1801. He started to rehabilitate the property. In 1860 Vigfússon had the Nýibær turf house constructed.

Neðri-Ás

Two test pits were excavated, and a substantial profile was examined along with an intensive coring survey of the main area around the farm mound and reconstructed church during the 2022 field season.

History and previous work

The farm was originally named Ás until it was split up into Neðri-Ás and Efri-Ás, probably in the 11th or 12th centuries. Now Neðri-Ás is subdivided into I and II (Neðri-Ás I is the main farm). The farm is situated on the western slope of a low hill—the eponymous Ás. The farm of Ás is mentioned in *Kristnisaga* (Grønlie 2006) and *Þorvalds þáttur víðförla* (Porter 1997), both thought to have been penned in the 13th century. Like most farms in Hjaltadalur, the farm is mentioned in the Hólar 1388 property registry and by then it had been divided into Efri and Neðri Ás. The original value of the farm is uncertain but in 1849 it is valued at 40 hundreds reduced to 35,6 in 1861 (Pálsson 2011). In the late 1990's the church area and partially the cemetery, were excavated and reconstructed (Gestsdóttir 1998; Roberts 1998; Vésteinsson 1998; Vésteinsson, et al. 2000) Bone preservation was rather poor. All of the examined graves were overlain by an in situ H-1104 indicating that no burials took place in the churchyard after that date. Selective coring took place at Neðri-Ás as part of the preparation for the Hólahreppur volume of the Byggðasaga Skagafjarðar series (Pálsson 2011).

Coring

At Neðri-Ás 463 cores were taken (Table 5) and of those, 67 encountered midden deposits at a mean depth of 0.59 m (Table 6). Turf was widespread and observed in 59 cores (Table 7). The distribution of the coring results suggests that the farmstead has maintained essentially the same footprint and the same size. Not investigated with a test pit was a distinct and substantial pile of post-1300 midden at the northern periphery of the farm mound. This seems to be in the area of the stream that is now filled in that flowed through the main farm mound (Figure 42).

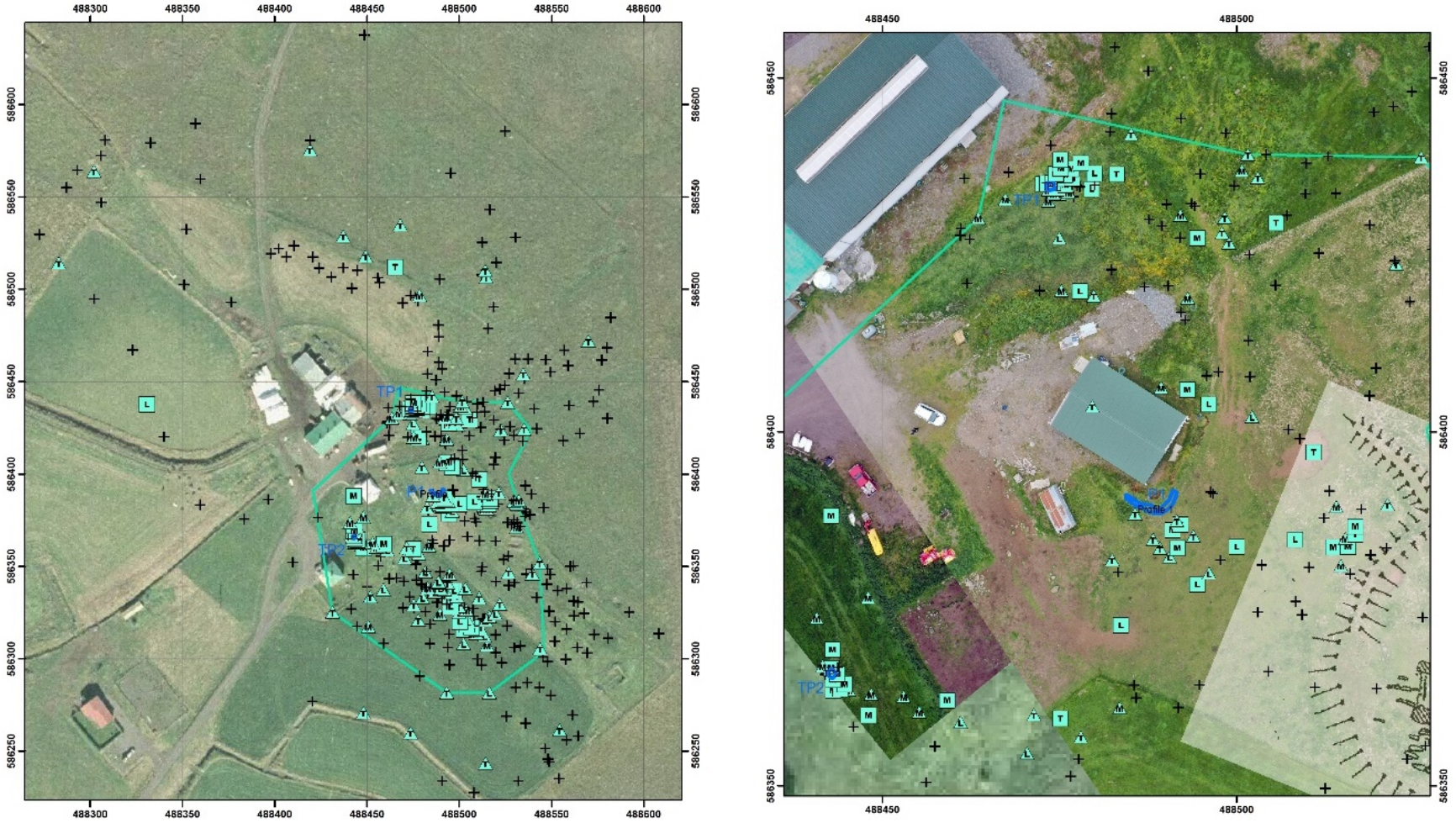

Figure 3. Right: map of Neðri-Ás pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. The test pit locations are in blue. Left: closeup of the main farm mound with figure 1 from Vésteinsson, et al. (2000:6) georeferenced.

Excavations

There were two excavations and one profile drawn and sampled for flotation at Neðri-Ás in 2022 (Figure 3). Test pit 1 (TP1) was placed in a substantial cultural deposit that is largely confined to the northern area of the interpolated farm mound. This deposit was interpreted as a possible cluster of cooking-pits. The midden was primarily charcoal. Test pit 2 (TP2) was placed on the site of the traditional ash midden. It was primarily peat-ash but was highly variable and well stratified. Profile 1 is a curved irregular cut created by machine as part of the construction of a shed. The curved profile cut through floors, bench deposits, and turf walls, capped by an in situ H-1104. The profile was drawn and sampled for flotation.

Test pit 1

TP1 was placed based on coring data. Cores in this area, along with a cut for the new milking barn, confirmed a possible pre-1104 midden and suggested no post-1104 cultural deposits (Figure 3). For example, Core 222293, which intersected the wall of test pit 1 near the NE corner, had pre-1104 midden and Core 222273, which intersected the wall near the NW corner, and contained pre-1104 Low density cultural (LDC) are both consistent with the sequence found in TP1.

The sequence of TP1 (Figure 4) started with a root mat [101] overtop of a disturbed deposit [161]. This disturbed deposit contained some charcoal and bone inclusions. Beneath the disturbed deposit were two aeolian deposits [162, 163]. These two deposits were separated due to the presence of what appeared to be lenses of 1300 tephra in the NW and SW corners at the bottom of Context 162. Context 163 was originally differentiated as "Aeolian below 1300" but was combined with Context 162 on the profile. This fleeting H-1300 tephra was not definitive enough to mark on the profile, and its depth was inconsistent with Core 222273 and 222268, which both intersected the test unit and had 1300 tephra higher in the profile. The next deposit in the sequence was the 1104 tephra layer at a depth of 28-33 cm bgs. This was followed by another aeolian deposit [164] containing some bone, charcoal, and grey nodules that appeared to be seeping up from earlier contexts. These nodules may be bits of 1300 tephra originating from the bottom of [162]. It is also possible that this grey material was mistaken for the 1000 tephra in Core 222293, which occurred at around this depth. Below the aeolian deposit was a midden deposit [166] characterized by darker brown soil with charcoal and peat ash. The bottom of this midden deposit became more mottled with darker brown/black areas and lighter orange colored peat ash and aeolian.

The amount of animal bones and rocks increased with depth. The potential cooking pit midden [167] was next in the sequence, characterized by a much darker color from wood ash and charcoal with abundant burned bone and fire cracked rock and limited soil mottling. The final context was another midden (Figure 5) layer [168]. This was originally broken up into three different sub contexts due to its complex nature. Context 168a was a grey colored ash layer that existed mainly on the west side of the unit. It appears as the top (latest) layer from context 168, on the left side of the profile. Context 168b was a tan colored ash layer beneath 168a. Context 168c was a darker colored midden layer beneath the tan layer, although it only appeared on the west side of the unit. On the east side of the unit, the sequence only consisted of the tan layer above the LOE. For simplicity, these three sub-contexts should be viewed together as one midden deposit on the profile. The excavation in TP1 was ended when aeolian subsoil was reached. There were some lenses of Landnám tephra directly on top of the closing aeolian beneath Context 168.

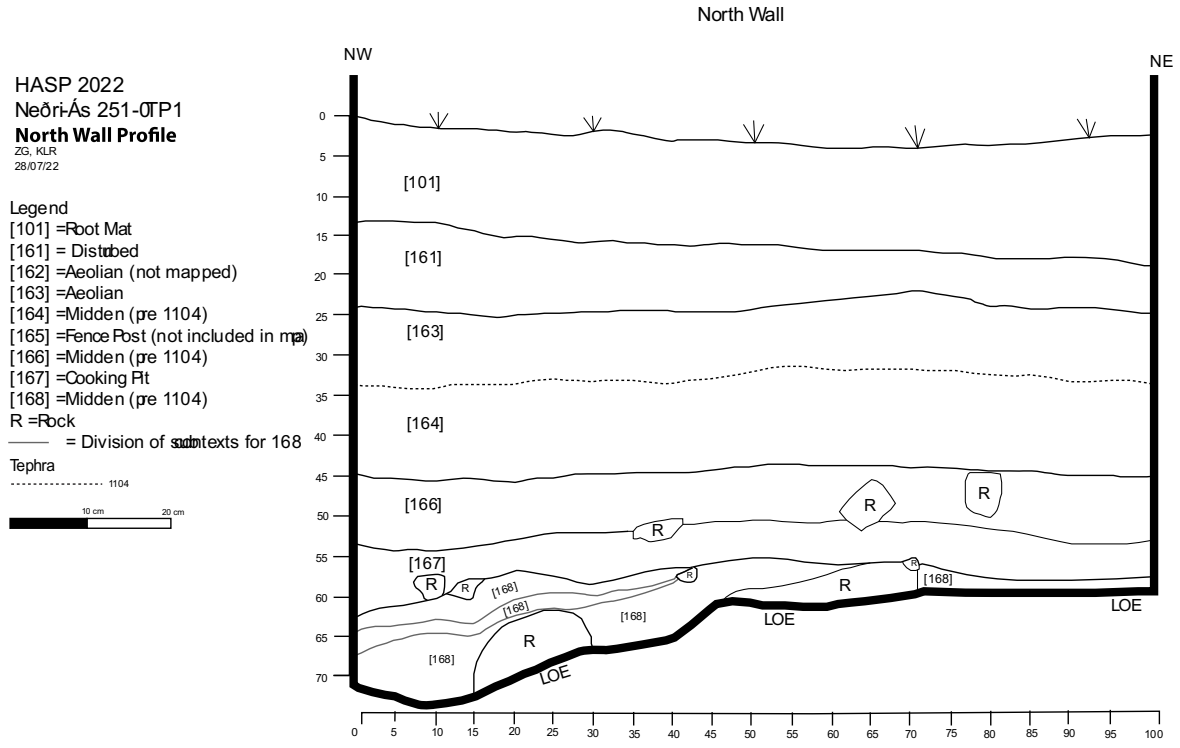

Figure 4. North wall profile of Neðri-Ás test pit 1.

Interpretation: The sequence of TP1 suggests a significant pre-1104 occupation at this part of the site. Context 164, while identified as Aeolian, could also have been characterized as LDC due to the presence of charcoal and bone. It seems that occupation could have continued in this location until around 1104, although it would have been at a

reduced scale by the end of this tenure. The prospect of pre-1104 cooking pits is significant as no other examples have been identified in Hjaltadalur. It is possible that the midden and cooking pits are associated with the pre-1104 longhouse at the site, which may have been located to the south-east indicated by Profile 1 (page 14).

Figure 5. Photograph of the top of context 168 looking north

Test pit 2

TP2 was a 1x1m test pit (Figure 6), placed based on multiple cores containing a midden deposit (Figure 3). Three JMC cores in particular ended up bounding the corners of the unit (222299, 222319, 222297), and showed a midden deposit beginning at roughly 20 cm bgs. All of these cores displayed an in-situ H1300, H1104, and, in the case of core 222319, a 1000 layer. Notably, this test pit was placed 85 m due east of the reconstructed church.

Under the root mat [101], there was a disturbed aeolian layer [201]. Under this disturbed layer, the midden deposit began [202, 203]. There was an in-situ H1300, followed by continued midden deposition [204-206]. Below this was an in-situ H1104 (Figure 7) followed by more midden [207]. Beneath this was an aeolian layer [208]. There was a small deposit of LDC [209] before the LNS was reached and excavation was terminated.

Interpretation: The initial levels of midden deposit in this test pit are post-1300 [202, 203]. This midden deposit was continuous throughout the period from 1104-1300 [204-206], as well as before 1104 [207]. Settlement at this part of Neðri-Ás likely started in the very early part of the Viking Age. However, a ≈7 cm thick aeolian deposit [208] separates the main body of the midden from the LDC deposit [209] directly on top of the LNS layer. The potential break in the cultural activity displayed in this pit is interesting considering the presence of a possible structure in P1, as well as the possible cooking pit and sheet midden identified in TP1, probably indicating a shift in location of a main dwelling.

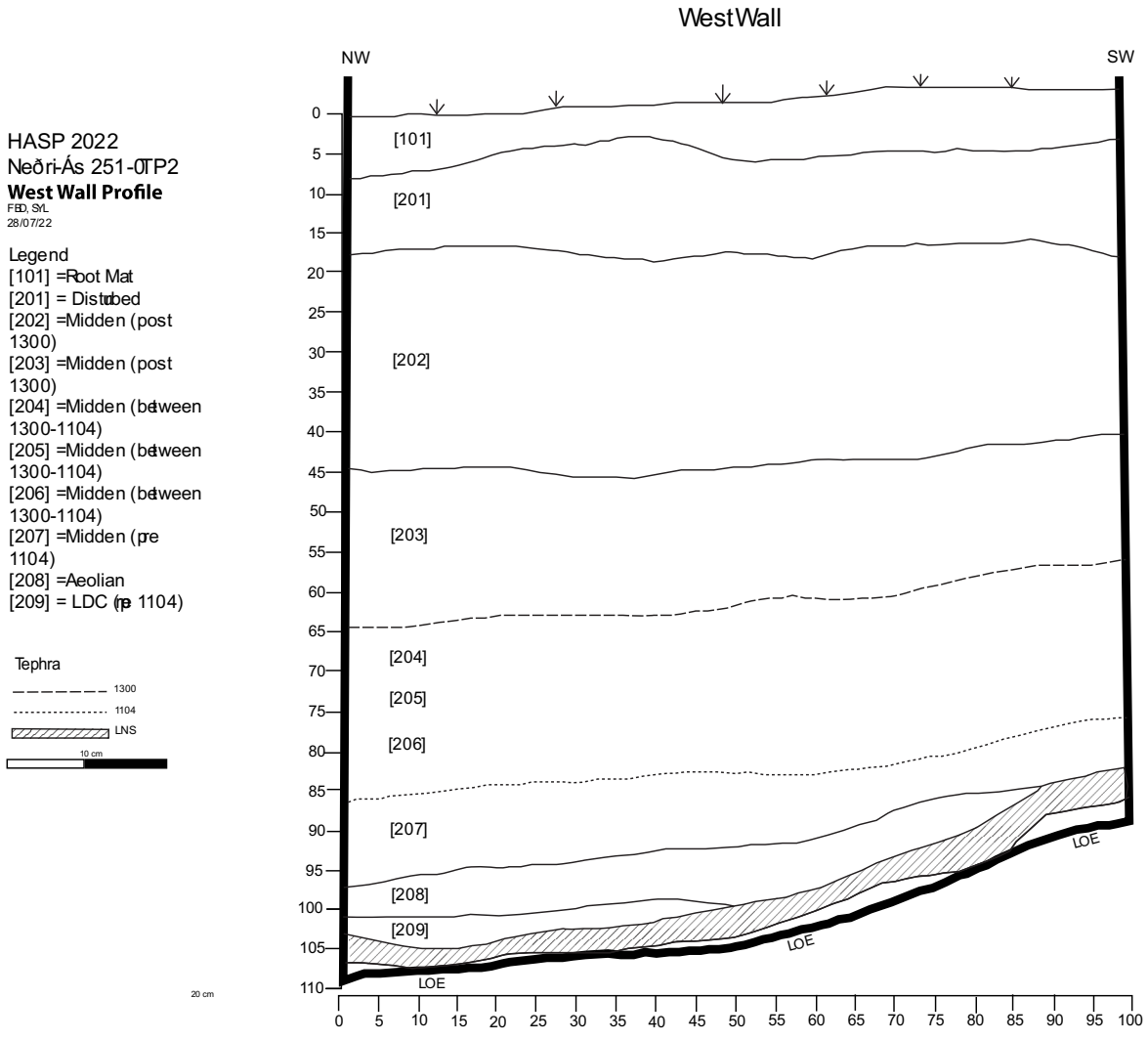

Figure 6. West wall profile of Neðri-Ás test pit 2.

Figure 7. Photograph of the top the H-1104 tephra layer looking east

Profile 1 – Viking-Age dwelling

Profile 1 had been created when a foundation trench had been dug as a part of the construction of the teal green storage shed sometime after 2019. The profile was cleaned, registered and samples taken from the floor. Figure 3 (right) shows the area before the construction of the storage shed and the new milking barn. Figure 8 uses a georeferenced HASP project drone air photograph that shows the location of the new shed, relative to Profile 1 and the previously excavated church.

Overall, the profile is mainly a single component turf structure cut through by a backhoe in preparation for shed construction (Table 1). The entire structure overlies a natural aeolian deposit, but no tephra was observed in this underlying deposit. From left to right along the profile (Figure 9) the turf wall [172] adjacent to a bench [175] overlying a series of rocks marks the northwest wall of the house. The [172] turf wall has collapsed [173] over the [175] bench. At the same spot that the floor drops, the turf collapse changes to a more intact turf [177]. Within this more extensive turf collapse is a distinct section of turf and stones [174] that may represents roof collapse. The profile superimposed on the photograph highlights the flat nature and coherent organization of these stones (Figure 10). Turf layer [177] broadly covers the [176] main floor extent. The main [176] floor ranges from 3-8cm in

thickness. In the middle of the floor is a concentration of charcoal and peatash indicate the presence of a central fireplace, although no definite fireplace structure was found. The overall width and angles suggest that the main floor might be about 3 m wide, but the curve profile and an odd angle make spatial extrapolation difficult. At the right edge, the turf and floor transition to turf wall collapse [179] overlies a slightly raised natural deposit. The southeast wall of the house is defined by a well-preserved turf wall [180], which, like its counterpart [172] does not have H-1104 on top of it. Conversely, the large extent of [177] turf collapse has a distinct capping H-1104 tephra layer which is overlain by a disturbed [171] layer.

Interpretation: the structure seems like a typical Viking Age turf longhouse with a 3 m wide floor edged by benches and surrounded by turf walls that are at least 1 m thick. The orientation appears to have long axes pointing towards the south wall of the reconstructed church. The coring suggests that the associated deposits continue for at least 20 m (Figure 3) toward the church, but no sign of an end turf wall was found in the coring. The curvature and coring distribution suggest at least a 25 m long axes, but at this early stage of investigation, that is very speculative.

The pre-AD 1104 dating of the structure is straightforward. Teasing out the exact sequence within that period is more difficult. The still standing turf walls do not have any tephra in them. It is difficult to say exactly when the structure collapsed. Specifically, it is not clear if the H-1104 fell on an already collapsed building or if the H-1104 fell on the top of the standing structure and that top layer was then incorporated into the longhouse when the structure collapsed. The building does show some signs of being intentionally collapsed and filled in. However, the H-1300 tephra layer is not visible nor are there signs of intentional levelling above the structure. In general, the longhouse in Profile 1 seems to be broadly contemporaneous with the deposits in TP1 and TP2 as well as with the burials in the church which mostly pre-dated AD 1104. This building may therefore be contemporaneous with the church.

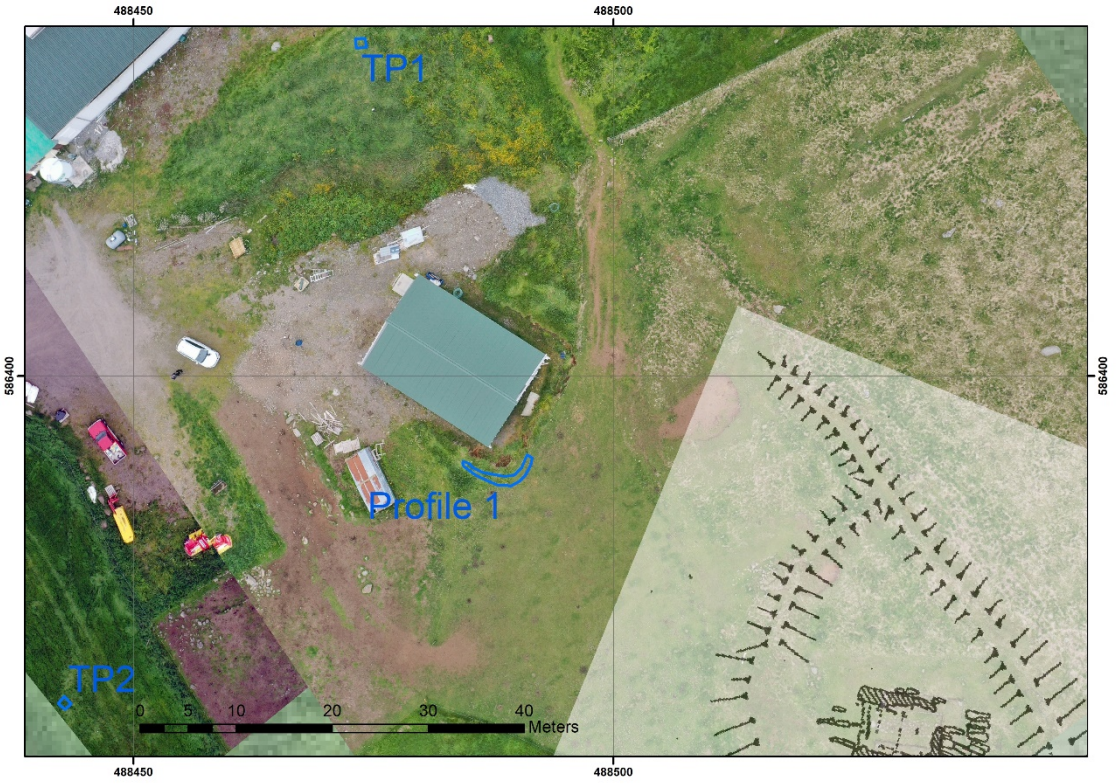

Figure 8. Locations of Profile 1 relative to TP 1 and TP2 and the church excavated in the late 1990's (Vésteinsson, et al. 2000) at Neðri-Ás.

Table 1. Context list for Profile 1 at Neðri-Ás

PlaceName	Excavation	Context	Class	Descripiton	Date_Range	Context Above	Context Below
Neðri-Ás	P1	101	Root Mat	Root mat	1766-Present		172
Neðri-Ás	P1	171	Disturbed	Disturbed	1300-1766	101	173
Neðri-Ás	P1	172	Turf	Turf wall	1104-1300	171	173
Neðri-Ás	P1	173	Turf	Turf collapse	870-1104	173	175
Neðri-Ás	P1	174	Turf	Turf collapse with stones	1000-1104	177	177
Neðri-Ás	P1	175	Floor	Floor	870-1104	173	Natural
Neðri-Ás	P1	176	Floor	Floor/midden	870-1104	177	Natural
Neðri-Ás	P1	177	Turf	Turf collapse- better turf	1000-1104	171	174
Neðri-Ás	P1	178	Aeolian Deposit	Aeolian	870-1104	176	Natural
Neðri-Ás	P1	179	Turf	Turf wall collpase	1000-1104	171	Natural
Neðri-Ás	P1	180	Turf	Turf wall	870-1104	101	Natural
Neðri-Ás	P1	1104	Tephra	1104	1104-1300	171	173

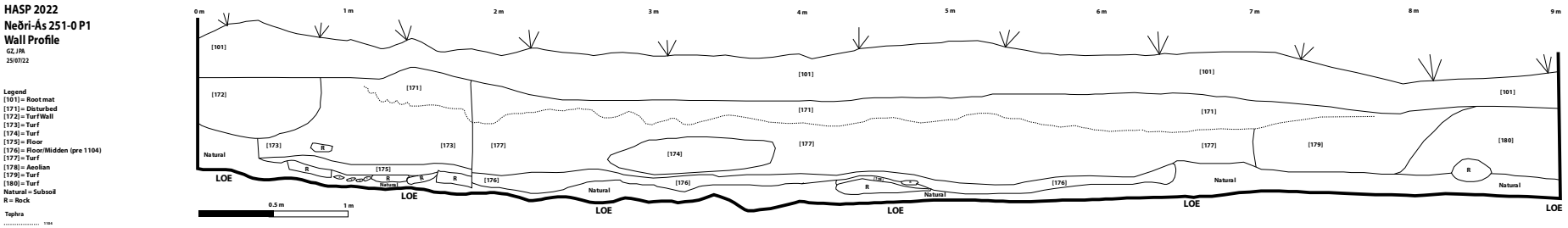

Figure 9. Profile 1 at Neðri-Ás

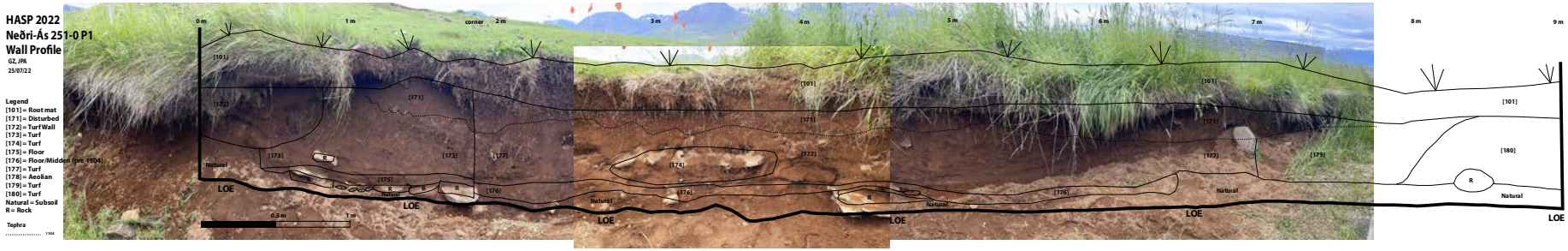

Figure 10. Profile 1 superimposed on three photos looking southeast toward the church at Neðri-Ás.

Kálfsstaðir

During the 2022 field season, a single, but deep test pit was excavated at Kálfsstaðir and two GPR surveys conducted over the churchyard identified in the previous year's work. The results suggest that the location and footprint have remained constant over the course of the long settlement.

History and previous work

Kálfsstaðir is first mentioned in the *Saga of Þórður hreða* (Attwood 1997) and the *Saga of the Sturlungs* (McGrew 1970). The farm is owned by Hólar in the 1388 land registry and like other Hólar properties it was sold at an auction in 1802 (Pálsson 2011:84) The property was originally valued at 60 hundreds which makes it a large estate (1861). In 1849 it was estimated at 50 hundreds, but in 1861 the value had been lowered to 25,6. In the saga of *Þórður hreða* the deacon at Hólar, a wealthy and well-connected man, is said to have lived at Kálfsstaðir. The saga mentions a church at Kálfsstaðir in 1255. The land registry of 1709 also mentions the place name "Bænhúshóll" or Church knoll with the ruin of a possible church of an unknown age. A church ruin was visible (Ísaksson 2008) in the field 40 m below the current farmhouse until 1977 when the knoll was levelled to make a better hay field (Pálsson 2011:86). The place name registry for the farm mentions four possible sharecropper farms, Kringlugerði (Kringla), Rófa, Völkutóftir (Völkukofar) and Grjótgarður (Grjótstekkur). At Kringlugerði and Völkutótir there are visible ruins within a walled field. At Grjótgarður, the only remains visible on the surface is a drystone corral. Rófa has been totally levelled into a field. Rófa was the only sharecropper farm site cored in the summer of 2022. The Kálfsstaðir farm is still occupied. Initial archaeological geophysics using a conductivity meter was conducted at Kálfsstaðir in 2021 (Zoëga and Steinberg 2022)

Coring

At Kálfsstaðir 142 cores were taken (Table 5) and of those, 37 encountered pre-1104 deposits (Table 6). Midden deposits were common (n= 47) at a mean depth of 0.89 m. Turf deposits were rather limited and observed only in 15 cores (Table 7). The distribution of the coring results suggests that the farmstead has maintained essentially the same footprint and the same size (Figure 11, Figure 43, and Figure 44).

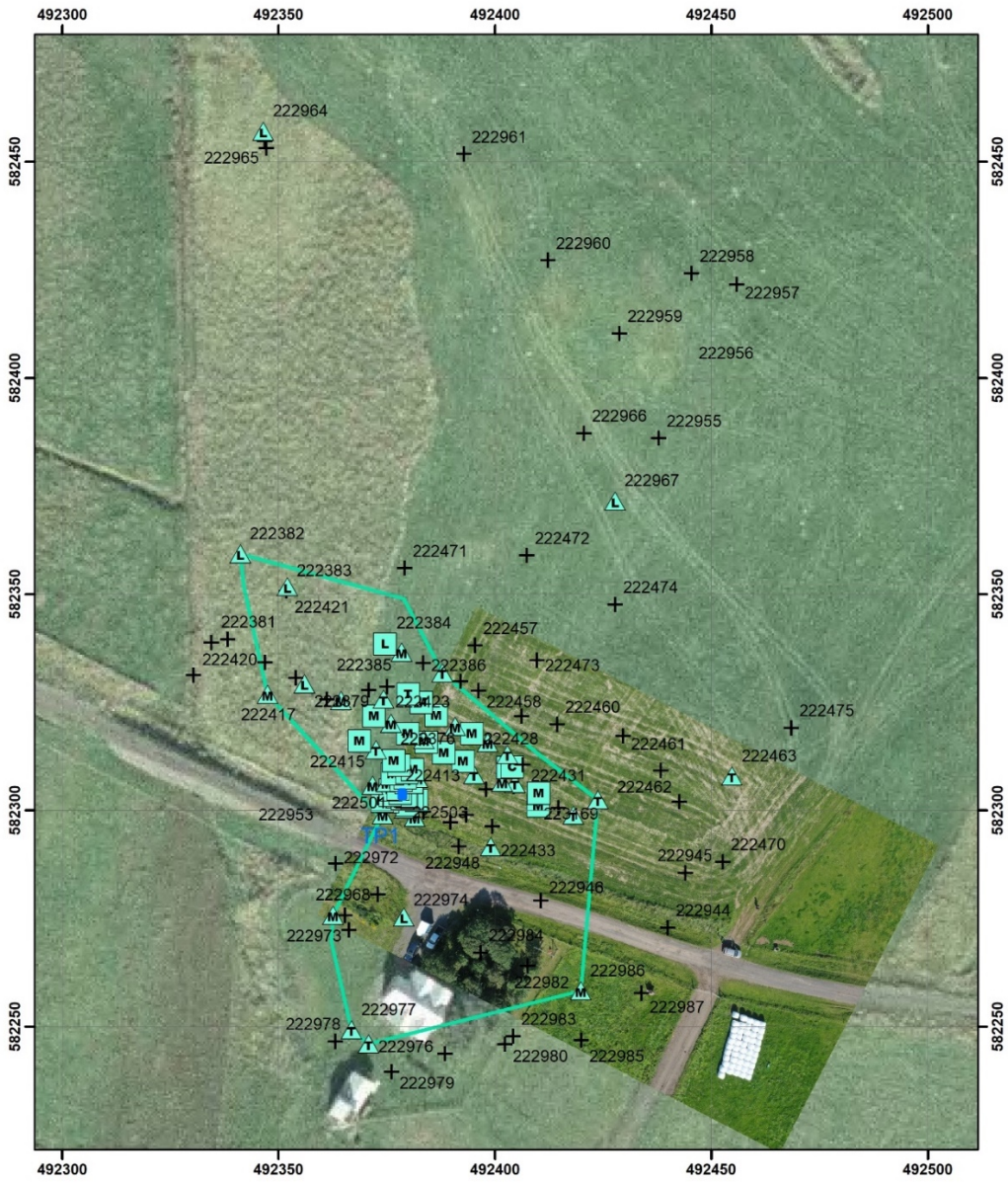

Figure 11. Map of Kálfsstaðir pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. The test pit location is in blue.

Excavations

A 1x1.5m test pit was placed about 20m southwest of the known church site and across the road from the Kálfsstaðir farmhouse. Test Pit 1 was placed based on the results of multiple cores containing midden, including one 6 cm wide Eijkelkamp core (222541). This core displayed midden beginning at 35cm bgs and ending at 153 cm bgs. This core also contained an H1300 layer at 57cm bgs, an H1104 layer at 90cm bgs, and an Vj 1000 layer at 133cm bgs. It was the only core taken at Kálfsstaðir to present with the Vj 1000 (Table 5).

Kálfsstaðir Test pit 1 presented a deep and complete sequence (Figure 12). Under the root mat [101], there was a disturbed layer [221]. Under this, the post-1300 midden [222]

began. There was an in-situ H1300 layer, followed by more midden deposition [223]. There was an in-situ H1104, and, again, it was followed by continued midden deposition [224]. The midden terminated with a bog layer [225]. This layer contained the LNS, and the pit was terminated shortly after.

Interpretation: The disturbance in the early layers [101, 221] was likely due to the bulldozing that occurred on the property and buried the church remains. Dating in this pit was very straightforward due to the in-situ H1300 and H1104 layers. There was continuous midden deposition from pre-1104 [224], to the period between 1104 and 1300 [223], and finally to the post-1300 period [222]. Based on this data, settlement at Kálfsstaðir began in the Late Viking age and has continued uninterrupted until well after AD 1300 . There was no evidence of the 1000 layer in the test pit.

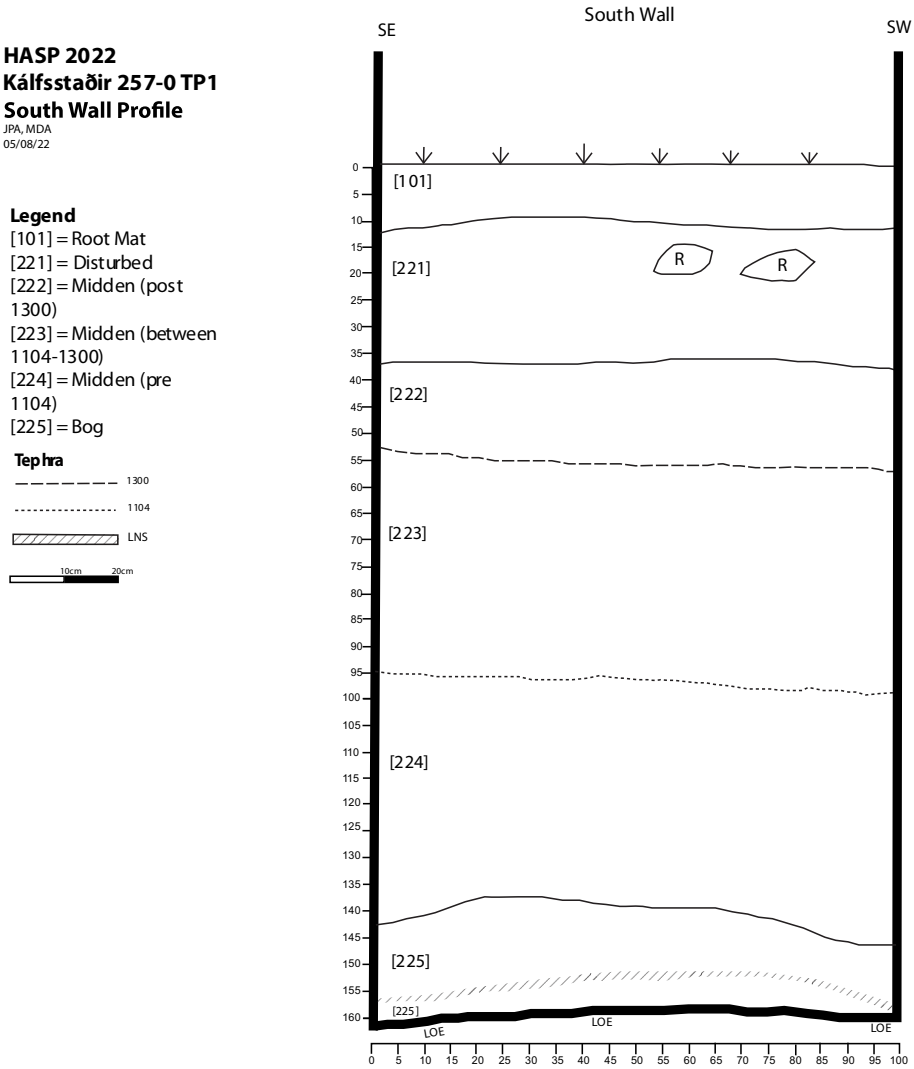

Figure 12. South wall profile of Kálfsstaðir test pit 1.

Ground Penetrating Radar (GPR)

Two GPR surveys were carried out at Kálfsstaðir in 2022 in order to test GPR for identification of burials and churchyard turf walls. Today, there is no surface sign of the church (Figure 13), but it has been visible in the past (Ísaksson 2008) and the outline can be seen on older air photos (Figure 16 right). The first survey was done at 50 cm transect spacing (Figure 14 left) and a second, just over the churchyard area, at 20 cm transect spacing (Figure 14 right). Interestingly, the resolution of the structure was not substantially better with the smaller transect spacing. That being said, both slices show the church and church wall structures as strong reflectors. The midden deposit is quite clear but does not seem to correspond to the boundaries as outlined in the coring. Thus, it is unclear what is causing the strong reflector seen just west of the churchyard.

Only the northeast half of the round churchyard wall is apparent in the GPR as a strong reflector. This same outline and extent was also present in the 2020 CMD work (Zoëga and Steinberg 2022). Unfortunately, the GPR readings do not shed much light on the absence of the southwest churchyard wall. The one core in the area (222170) has 80 cm of post 1104 turf in it (Figure 43 and Figure 44) which hints that there may be some later disturbance. The absent southeast churchyard wall could also be due to the 1977 land leveling.

Two cores encountered potential grave fill, 223173 and 222174. The radargram from transect 492403 that goes over that spot does have a very faint anomaly at the location and depth of the grave fill in the core (Figure 15). While along that transect, the churchyard wall and church are apparent, there are relatively few anomalies within the defined graveyard area. It is not obvious that the bottom of graves are visible in the GPR slice images. Figure 16 (right) at 1 m bgs has no obvious anomalies associated with graves and the 20 cm spacing grid at that same depth shows even more attenuation. However, the 50 cm spacing does suggest an outer ring broadly surrounding the more obvious inner churchyard wall (Figure 16 left)

Figure 13. Photograph looking north of the Mala X3 equipped with a 450 MHz antenna at 20 cm transect spacing. The utility line is marked with pink flags.

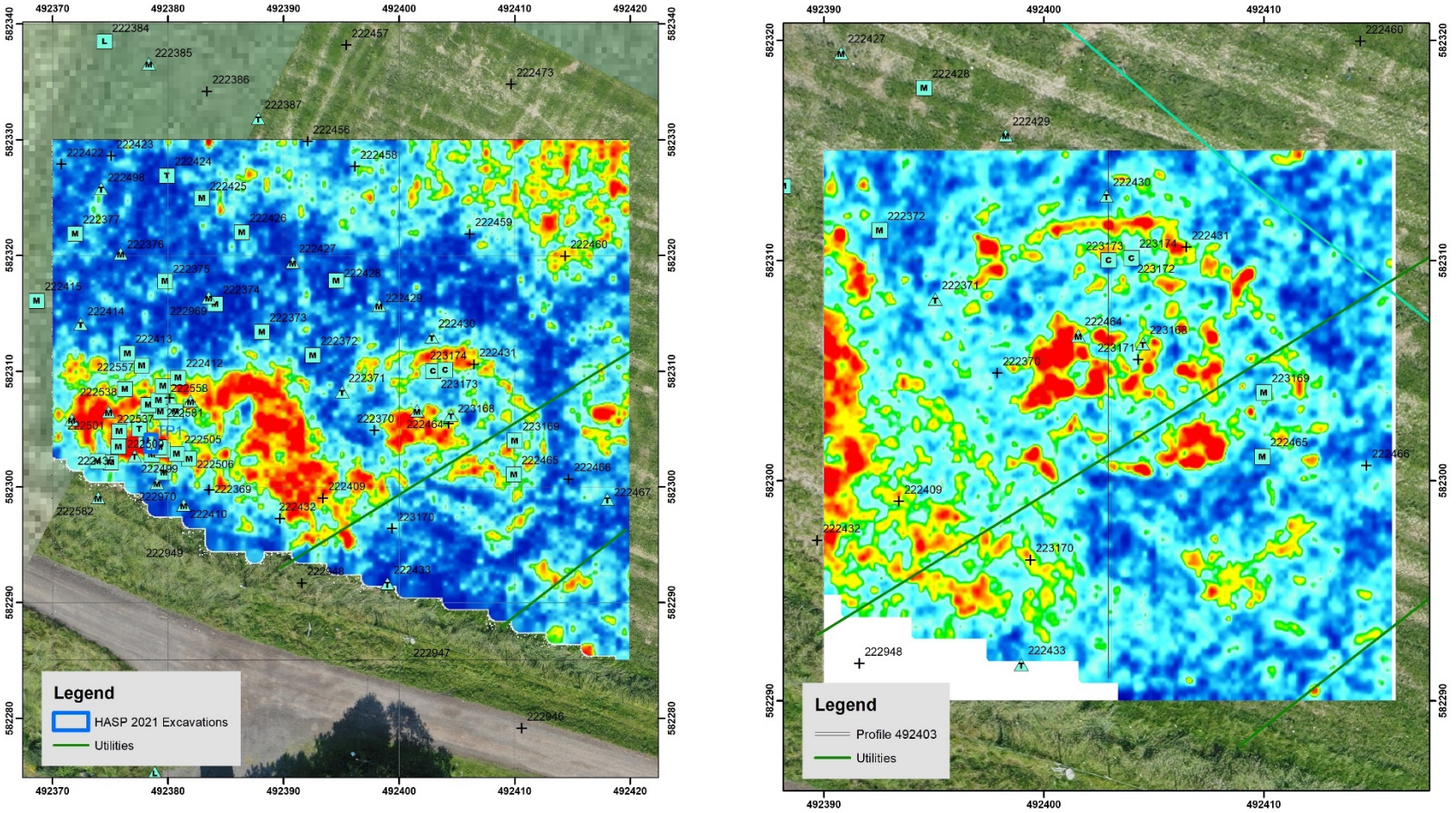

Figure 14. Left GPR slice image of 0.4-0.5 m bgs with 50 cm transect spacing. The image shows both the midden and church area. Right 0.5-0.6 m GPR Slice image showing churchyard area. Transect 492403 (radargram in Figure 15) is outlined.

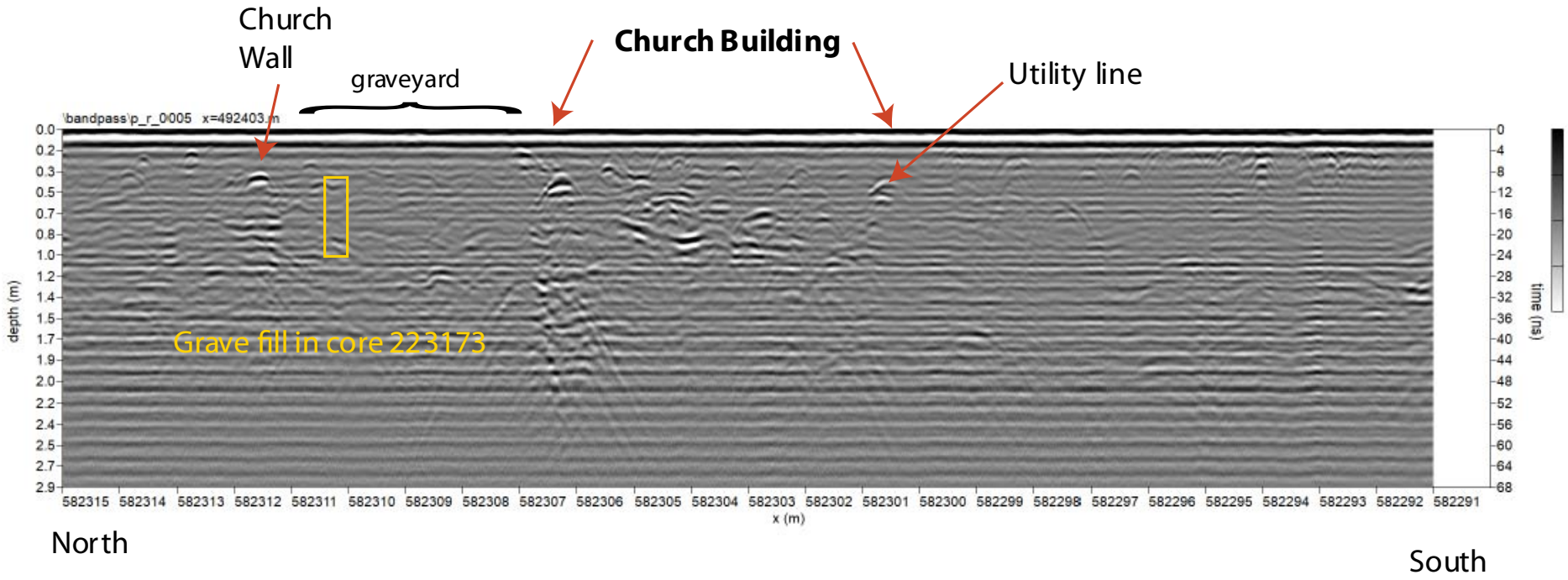

Figure 15. GPR radargram profile along the 492403 E transect showing church wall, graveyard area and church building. The location and depth of Core 223173, which encountered grave fill, is highlighted in yellow.

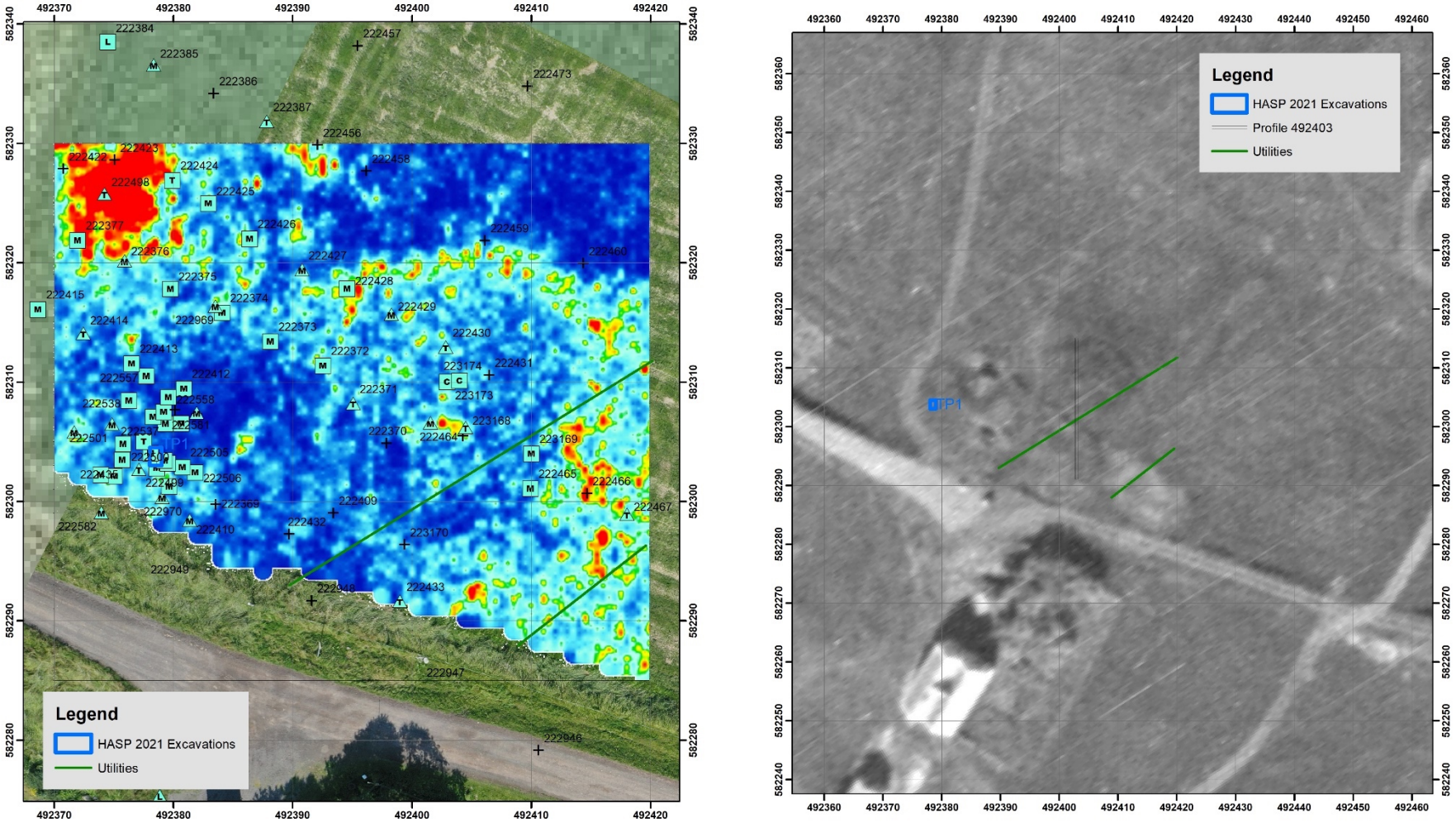

Figure 16. Left: GPR slice image of 1 m bgs with 50 cm transect spacing. The image shows an outer ring of strong reflectors surrounding the identified churchyard. Right: a georeferenced 1954 Air photograph showing the now bulldozed ash pile. The church wall can be seen as a dark ring just to the north of the ash pile.

Hlíð (Hrappsstaðir/Hrafnsstaðir)

During the 2022 field season, the area around Hlíð was intensively cored and two test pits excavated. Test pit 1 suggests a distinct and separate pre-AD 1104 occupation and test pit 2 the post AD-1104 occupation. This strongly suggests that the farmstead moves, about 65 m to the north at about AD 1104 (Figure 17).

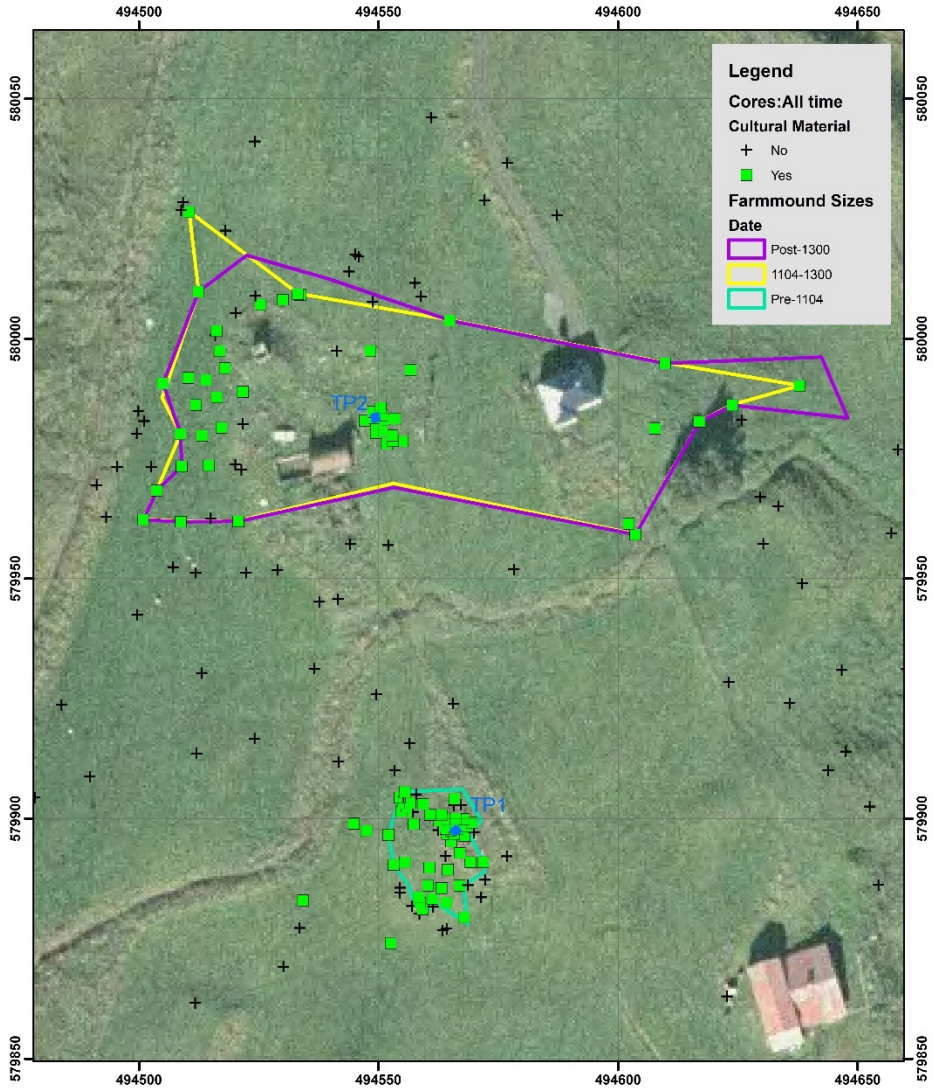

Figure 17. Locations of TP 1 and TP 2 (in blue) with cores at Hlið with farmstead area outlines

History

The farm Hlíð was formerly called Hrafnsstaðir, and for a brief period in the 19th century Hrappsstaðir. As with most farms in Hjaltadalur, Hrafnsstaðir are first mentioned in the Hólar property registry from 1388 (Íslenzkt fornbréfasafn 1896:410). In 1849, the farm was valued at 30 hundred (1861:266). The remains of possible sharecropper´s farm, Settutóttir, is

mentioned in the 1709 land registry, said to have mostly disappeared under landslides (Íslenzkt fornbréfasafn 1896:95). The farm is now unoccupied.

Coring

At Hlíð 228 cores were taken (Table 5) and of those, 20 encountered pre-1104 deposits (Table 6). Midden deposits were scattered in two different locations (n= 50) at a mean depth of 0.56 m. Turf deposits were rather limited and observed only in 23 cores (Table 7). The distribution of the coring results suggests that the farmstead has dramatically increased in size and moved about 65 m north after AD 1104(Figure 18). After 1104, Hlíð had the same footprint and location from 1104-1300 (Figure 45) and post-1300 (Figure 46).

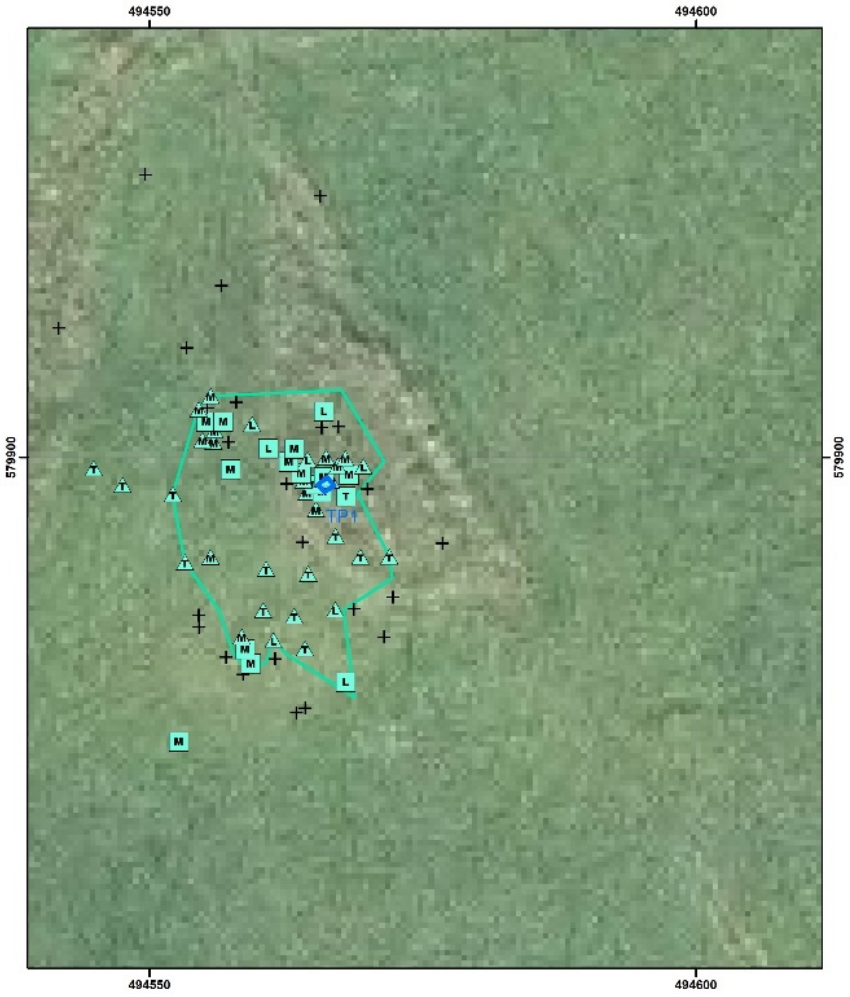

Figure 18 map of Hlíð pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented.

Excavations

TP1 at Hlíð was located on a slope south of the main farmhouse. The unit was placed based on the presence of cores with confirmed pre-1104 midden. Three cores in particular (222856,

222879, and 222904) were located adjacent to the SW, NW, and NE corners of the unit, respectively. There was no surface sign of any cultural deposits in the area around TP1.

TP2 was located approximately 87 meters North of TP1, just west of the main farmhouse and in front of the standing barn. This pit was placed according to coring data, which showed confirmed 1104-1300 midden. In particular, core 222924 had midden starting above and terminating exactly at the 1104 tephra layer with only aeolian beneath it.

Test pit 1

The sequence of TP1 started with the root mat [101] followed by a disturbed deposit [221]. The 1104 tephra was below this disturbed deposit and extended across the entire unit. The next layer was a thick deposit of LDC [222] containing charcoal. This LDC layer contained a large block of turf in the middle of the unit. The turf contained some lenses of LNL tephra, which originated from earlier deposits. Below the LDC was a midden [223] characterized by peat ash, charcoal and bone. This midden was much thinner in the middle of the unit. This could have been caused by someone digging a hole into the midden, which was then filled with the turf block and LDC. The midden rested upon the Landnám tephra, which was directly over H3. These two tephra layers were grouped together as Context [224].

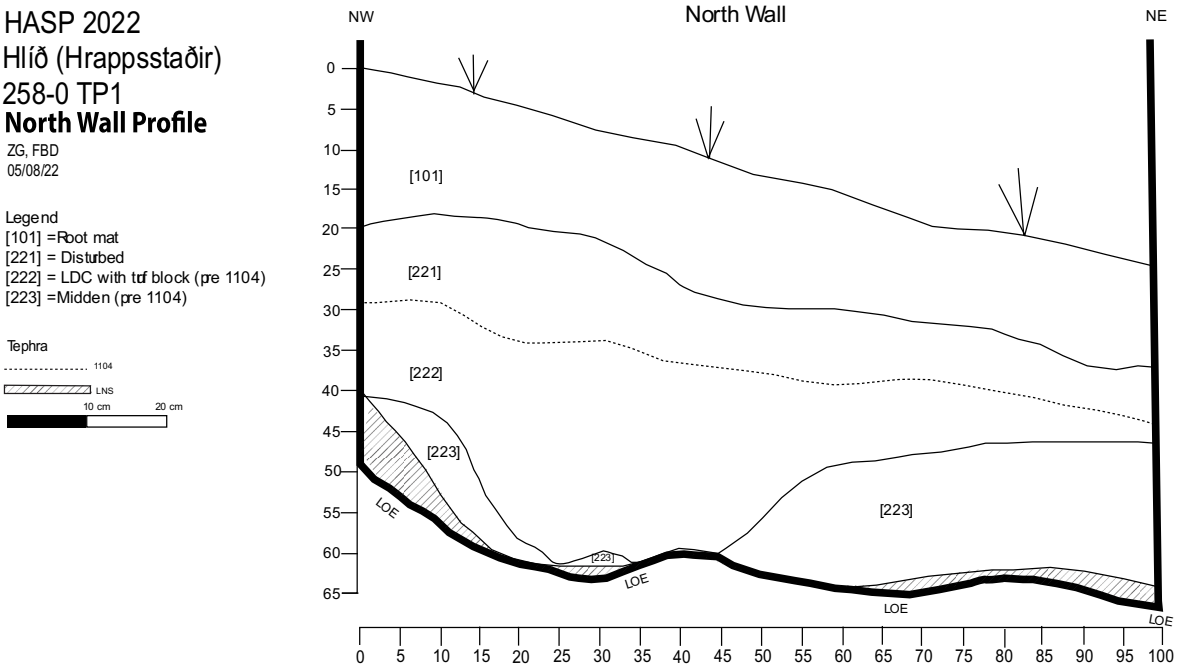

Figure 19. North wall profile of Hlíð test pit 1.

The presence of midden below the 1104 tephra layer indicates that the site was settled before 1104. The lack of cultural deposits above the 1104 tephra suggests that this occupation ceased around AD 1104. The depth of the Landnám tephra context is extremely variable with some parts much higher than others. This is likely due to an uneven ground surface, a fact supported by the presence of large rocks at the bottom of the unit. The abandonment at this location may have been caused by scree from the slopes rising above the farmstead.

Test pit 2

The sequence of TP2 started with a relatively thick root mat around 15-20cm thick. This was followed by a midden deposit [230] with charcoal and bone, the top of which was partially disturbed. Below this midden was the 1300 tephra layer, which was around 2 cm thick and covered the entire unit. Another midden deposit [231] existed beneath the tephra layer. A piece of copper attached to some fabric and an iron hook were both found in this context. The lower midden rested on a layer of upcast [232] consisting mainly of yellowish brown aeolian with H3 patches. There were some areas in the east and west of the unit where this aeolian was overlain by upcast patches of mixed 1104 and Landnám tephra. This latter upcast component was clearly derived from the next deposit, a mixed a layer of 1104 and Landnám tephra. Beneath this mixed tephra was a layer of aeolian with H3 patches [233]. This bottom context was clearly the same material as the later upcast.

In contrast to the sequence in TP1, the occupation at TP2 appears to have begun soon after 1104 and terminated sometime after 1300. Given the close proximity of the two test pits, it seems likely that the initial occupants of the site moved from the location of TP1 to TP2 around 1104, suggesting that the site was not actually abandoned. This move could have been caused by environmental factors such as scree. However, because no scree layers were found in the sequence of either test pit, it is possible that landslides could have altered the course of the stream.

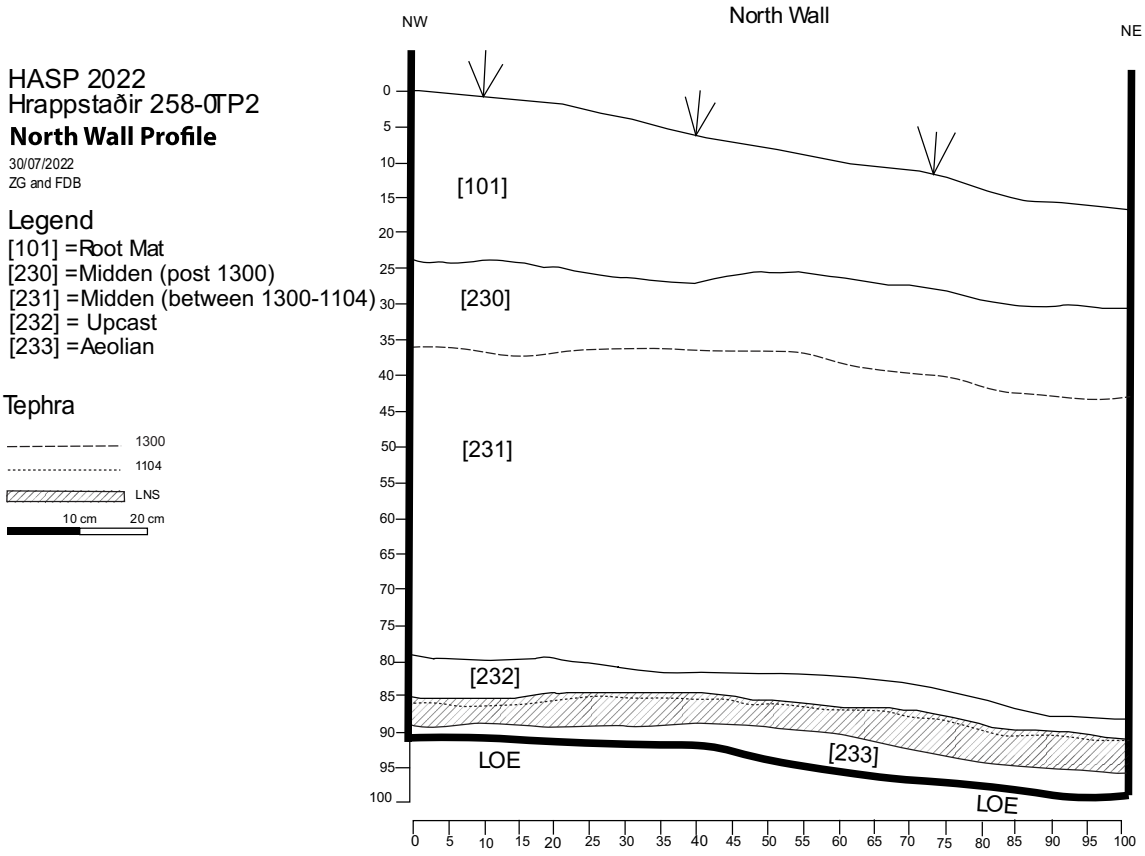

Figure 20. North wall profile of Hlíð test pit 2.

Hrafnhóll

During the 2022 field season, the area around Hrafnhóll was intensively cored and a single test pit excavated. The test pit suggests the site was settled well before AD 1104, but the test pit also suggested that a landslide occurred between the LNL and the start of the dwelling that later became an ash midden pile.

History

The site of the farmstead Hrafnhóll sits on a hillslope on the western side of Hjaltadalur, flanked by the farm Hvammur to the south and Hlíð to the north. The farm is first mentioned in the Hólar property registry of 1388 (Íslenzkt fornbréfasafn 1896:410). In 1802 it was sold through an auction of Hólar properties (Pálsson 2011:99). The farm was always small, its value in 1849 only being 10 hundreds.

Coring

At Hrafnhóll 193 cores were taken (Table 5) and of those, 12 encountered pre-1104 deposits (Table 6). Midden deposits (n= 11) were concentrated in a small area at the shallowest mean

depth of any site investigated in 2023 (0.39 m). Turf deposits were also limited (n=14) and very shallow (mean depth of .0.34 m, Table 7). The distribution of the coring results suggests that the farmstead has remained stable and almost exactly in the same location from its settlement to is abandonment (Figure 21, Figure 47, and Figure 48).

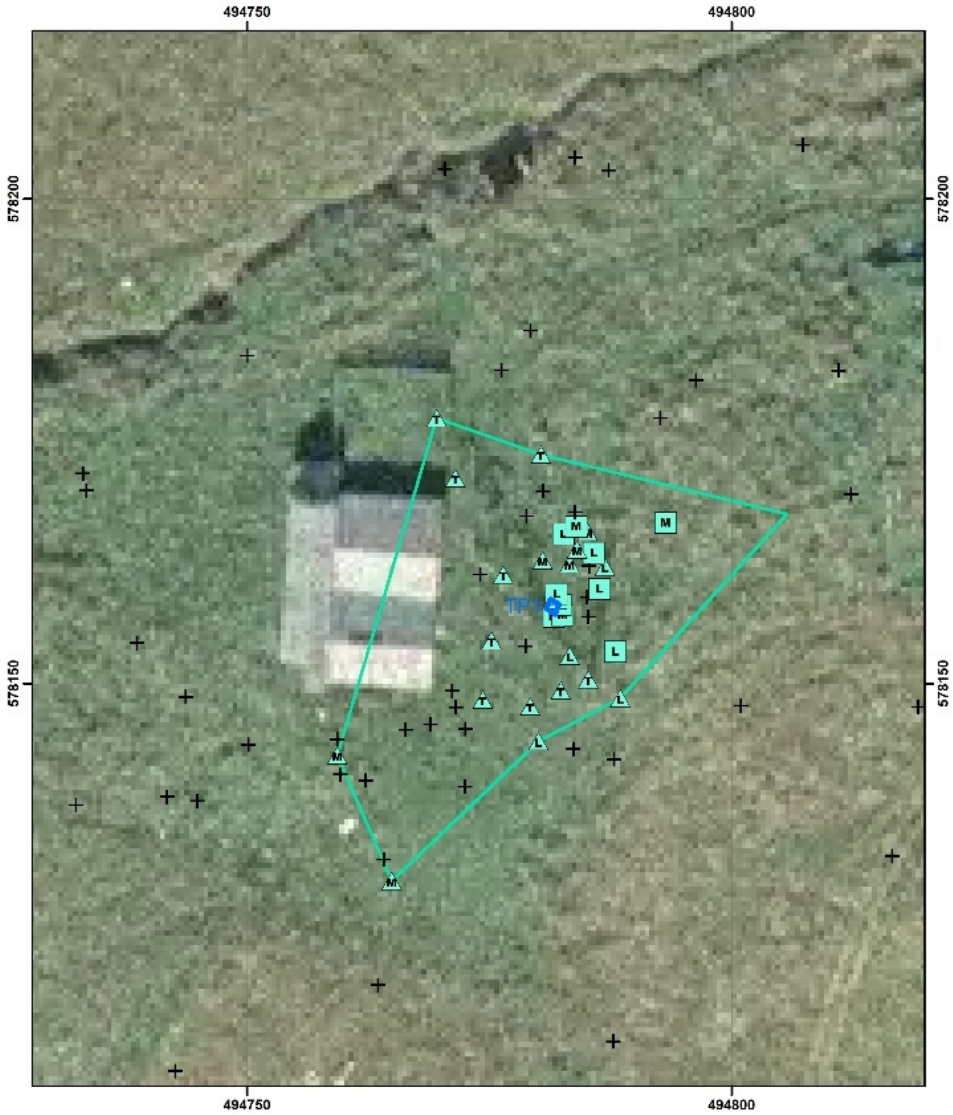

Figure 21 map of Hrafnhóll pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented.

Excavations

A 1x1m test pit was placed based on the results of a series of cores containing midden and LDC, including multiple 6 cm wide Eijkelkamp cores (220923, 220957, 220958, 220985, 220986), all of which showed the presence of a cultural layer at around 30cm bgs. This was along with a gravel layer, (hereafter referred to as “scree”), which was consistently found at

around 50 cm bgs. Also of note, this unit was placed roughly 10m east of a modern-day sheep barn.

Below the rootmat [101] there was a layer of disturbed aeolian [131, 132]. A very fragmented 1766 tephra was found in the eastern wall that formally separated these disturbed aeolian levels. Under the disturbed aeolian there was post-1300 midden [133, 134] which was characterized by the presence of charcoal and peat ash. H1300 was not found in-situ but was discovered in the eastern wall with continued midden below it [135]. In-situ H1104 covered the entire unit. Below this was the terminal level of the midden [136]. Below this midden layer in the northern end of the unit, there was a possible floor deposit [137], which tapered out before reaching the eastern wall. A small lens of H1000 tephra was found in the eastern wall, near the termination of the floor deposit. Under this was a scree layer [138], which continued until the LNS was found. Excavation terminated at the aeolian layer below the LNS [140], except in the northeast corner where a small area was further excavated until H3 tephra was reached.

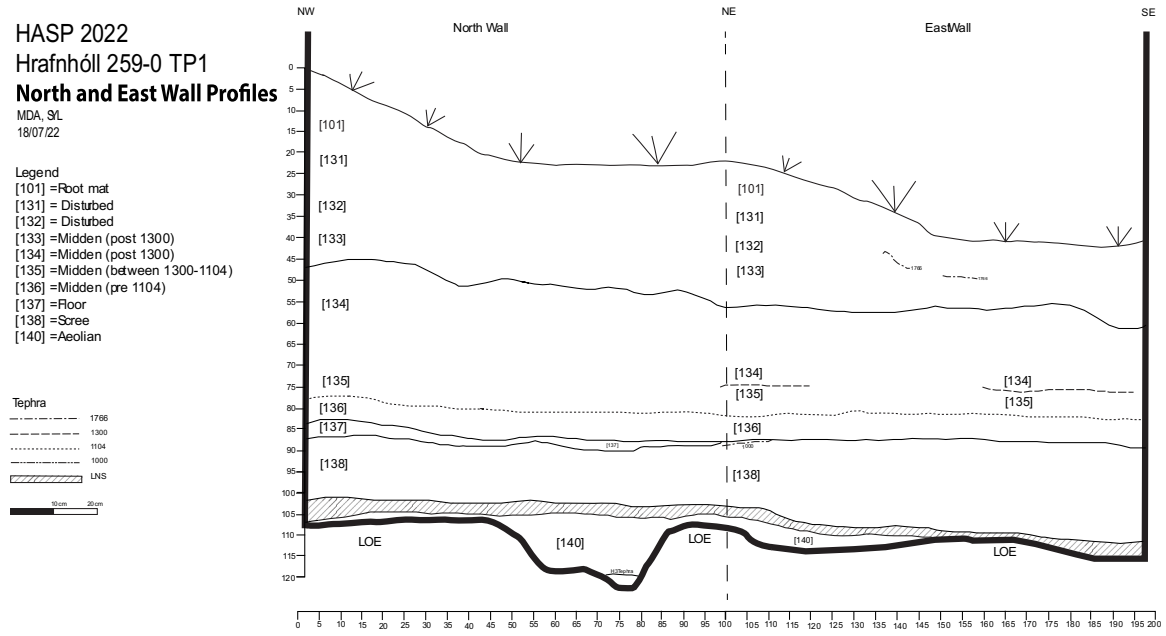

Figure 22. Profile of North and East walls of at Hrafnhóll test pit 1.

Interpretation: The disturbed layers at the top of this unit [131, 132] are likely a result of modern construction on the property, as it contained modern trash, even in the layer below where 1766 tephra was noted within the wall. The midden deposition was continuous, ranging from post-1300 [133, 134] to the 1104-1300 period [135] to pre-1104 [136]. This

pre-1104 midden [136] along with the floor deposit in the northern end of the unit [137] demonstrate that settlement was continuous at Hrafnhóll and likely began shortly after the deposition of H1000, as both of these levels are on top of the small sliver of H1000 discovered in the eastern wall. Interestingly, it appeared this initial settlement happened after a rockslide event, as the midden and floor levels [136, 137] are directly on top of the scree layer [138].

Hvammur

During the 2022 field season, the area around Hvammur was intensively cored and a single test pit excavated. Hvammur is the best candidate for a post AD 1104 initial settlement date (see AMS model on page 106). However, the results are ambiguous because of significant landslides. We currently outline a pre-1104 farmstead phase with continuous overlying cultural deposits. However, only the bottom contexts of Hvammur TP1 (the bottom half of a thin midden and the underlying scree deposit) is currently designated pre-1104.

History and previous work

The farm of Hvammur is located on the western slope of Hjaltadalur, the second to last farm south of the Hjaltadalur river. Hvammur is first mentioned in the Hólar property registry of 1388 (Íslenzkt fornbréfasafn 1896:410). In 1802 it was sold through an auction of Hólar properties (Pálsson 2011:104). Originally, the farm was valued at 40 hundreds, which is above the average in the Skagafjörður region. The land registry of 1709, however, mentions that the land of Hvammur is heavily affected by landslides. This is reiterated in a parish description from 1849. Despite the description of landslides, the farm is described as having adequate outfields for animal grazing as well as having good haying potential. About 700m north of the farmstead are the remains of an walled site with a number of ruins, possibly the farmstead Hvammsgerði mentioned as recently abandoned in the 1709 land registry (Magnússon and Vídalín 1930:216). The farm has been uninhabited since 2007.

Coring

At Hvammur 141 cores were taken (Table 5). In only 6 cores was the H-1104 even encountered. Of those cores with H-1104 only two encountered pre-1104 cultural deposits (Table 6). Midden deposits were concentrated (n= 26) at a mean depth of 0.84 m. Turf deposits were rather limited and observed only in 21 cores (Table 7). However, there was a consistent post-1300 turf deposits identified near the standing barn (Figure 50). The

distribution of the coring results suggests that the farmstead has remained constant in size and footprint (Figure 23, Figure 49, and Figure 50). At other sites, where farmsteads have moved and there is only a post-1104 occupation, there has been strong evidence in the coring for the absence of early settlement, in the form of cores with non-cultural deposits below an in situ H-1104. Hlíð is such an example (Figure 38). There are only a few cores with H-1104 and cultural deposits other than turf, and none of them and none of them indicate sterile deposits below the H-1104 (Figure 39). Thus there is a remarkable number of pre-1104 “maybe” cores at Hvammur (Figure 23).

Figure 23. Map of Hvammur pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented.

Excavations

TP1 at Hvammur was located approximately 31 meters northeast of the farmhouse. The unit was placed based on Eijkelkamp 6cm cores that showed midden on top of a gravel layer. One

of these cores (221277), which intersected the northwest corner of the unit, had confirmed pre-1104 midden as the 1104 tephra was found within a midden deposit. This core, as well as core 221278, located just outside of the southwest wall of the unit, both had gravel starting around 80cm bgs. Another Eijkelkamp 6cm core further uphill (221228) contained a sequence of midden, gravel, midden, and gravel. One goal of the excavation was to determine if we could replicate this sequence and identify another midden deposit beneath the bottom gravel layer in cores 221277 and 221278.

Test pit 1

The sequence of TP1 began with the root mat [101] and a disturbed deposit [141]. This was followed by a midden [142] with peat ash, charcoal, and some bone. Below this midden were whisps of what initially appeared to be the 1766 tephra. However, this turned out to be turf with 1300 tephra in it [143]. The next context [144], which was initially mistaken as midden below the tephra, was also turf with 1300 in it. A midden [145] existed beneath the turf, which contained areas of crumbly grey clay material, potentially from the movement of water downslope or bioturbation. The 1766 tephra was next in the sequence, extending across the entire unit. Another midden deposit [146], containing a bronze artifact, was found below this tephra layer. This midden was covering the in-situ 1300 tephra layer, from which a possible half of a bead was recovered. A final midden deposit [148] was beneath the 1300 layer. The 1104 tephra was found in the lower half of this midden deposit (Sigurgeirsson 2023). This early midden was deposited on top of scree [149], which generally consisted of rocks ranging from gravel (<2cm) to cobbles 10cm in length. The rocks grew larger with depth, with the largest measuring greater than 20cm in length. We attempted to find midden beneath this scree, but after digging down approximately 30cm it was assumed that none existed.

Interpretation: The excavation of TP1 determined that Hvammur was likely settled before 1104 and continuously occupied until after 1766. Like other farms at the end of the valley, it seems that the initial occupation occurred on top of scree. Because no midden was found beneath the scree, it may be possible that the additional gravel layer within the midden in core 221228 may have stopped before reaching this point on the slope. In this case, the scree in TP1 could represent the same scree as the deepest gravel layer at the bottom of the 221228 core. This scenario provides a potential estimate for the extent of a landslide at the farm. It is notable that the farm was not abandoned given the presence of these gravel layers.

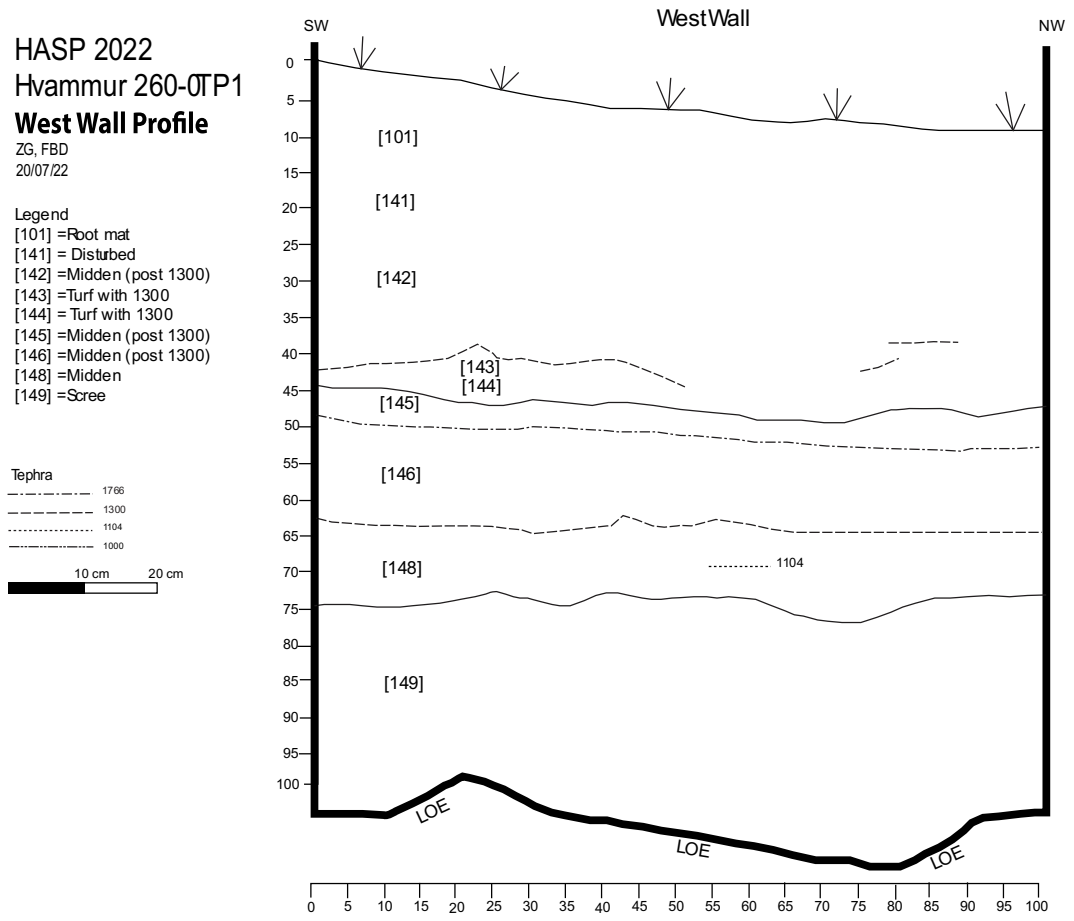

Figure 24. Profile of west wall of at Hvammur test pit 1.

Reykir

During the 2022 field season, the area around Reykir was intensively cored and a single test pit excavated. The test pit suggests the site was settled well before AD 1104. The test pit shows evidence that post 1300, the area of TP1 was abandoned and later reoccupied. The reconstructed post-1300 movement, based on the coring, seems to suggest two farmstead movements, before returning to the location of TP1 (Figure 25).

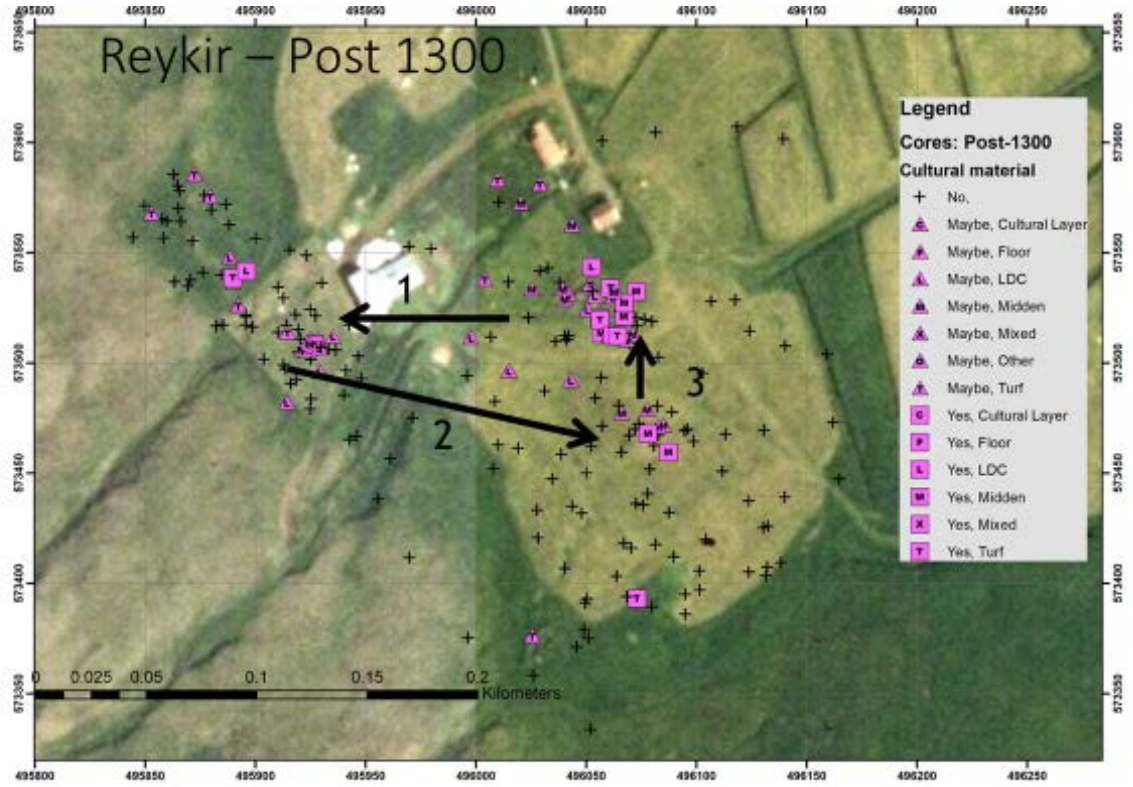

Figure 25. Schematic of post-1300 Reykir farm movement based on coring stratigraphy. For relocation 1, the relocation seems to have happened about AD 1300; relocation 2 seems to have happened about 1766 and relocation 3 seems to be a pre-modern shift.

History

Reykir is the innermost farm in Hjaltadalur, located on the western side of the valley. The farm is first mentioned in *Bolla Þáttur Bollason* from the early 14th century (Kunz and Kristjánsdóttir 2008) and then in the Hólar property registry of 1388 (Íslenzkt fornbréfasafn 1896:410). It was originally under private ownership but by 1388 it is under Hólar ownership. The farm was sold in and auction of Hólar properties in 1802 (Pálsson 2011:111). The original value of the farm is not known but in and 17th century land registry it is considered 35 hundreds which, in 1861, was devalued to 25,6 hundreds (1861; Lárusson 1967) . Historically, Reykir has been afflicted by landslides and other earth movement, to the degree that most of the homefield was damaged and the location of the farmstead had to be moved. The farm is still under threat from screes (Magnússon and Vídalín 1930; Pálsson 2011) There are no historical mentions of subsidiary farmsteads but a collection of unnamed ruins about 1 km north of the farm may be remains of a small satellite farm (Pálsson 2011:117).

Coring

At Reykir 232 cores were taken (Table 5) and of those, 51 encountered pre-1104 deposits (Table 6). Midden deposits (n= 30) were concentrated in 3 distinct areas. Mean depth of cores with midden is (0.64 m). Turf deposits were relatively limited (n=16) and very shallow (mean depth of .0.26 m, Table 7). The distribution of the coring results suggests that the farmstead remained stable up until about AD 1300 (Figure 26 and Figure 51). After 1300, there seem to be three spatially and temporally distinct post-1300 areas of midden and cultural layers (Figure 25 and Figure 52).

The post-1300 relocation sequence (Figure 25) is based on the observations that the recent [152] midden in TP1 seems to be very modern (but no later tephra layers) and the midden in location 2 in Figure 25 is immediately above a distinct H-1300 tephra layer. The midden in the 3rd relocation in Figure 25 seems to be below the 1766 tephra layer (cores 221479 & 221496) and above the 1300.

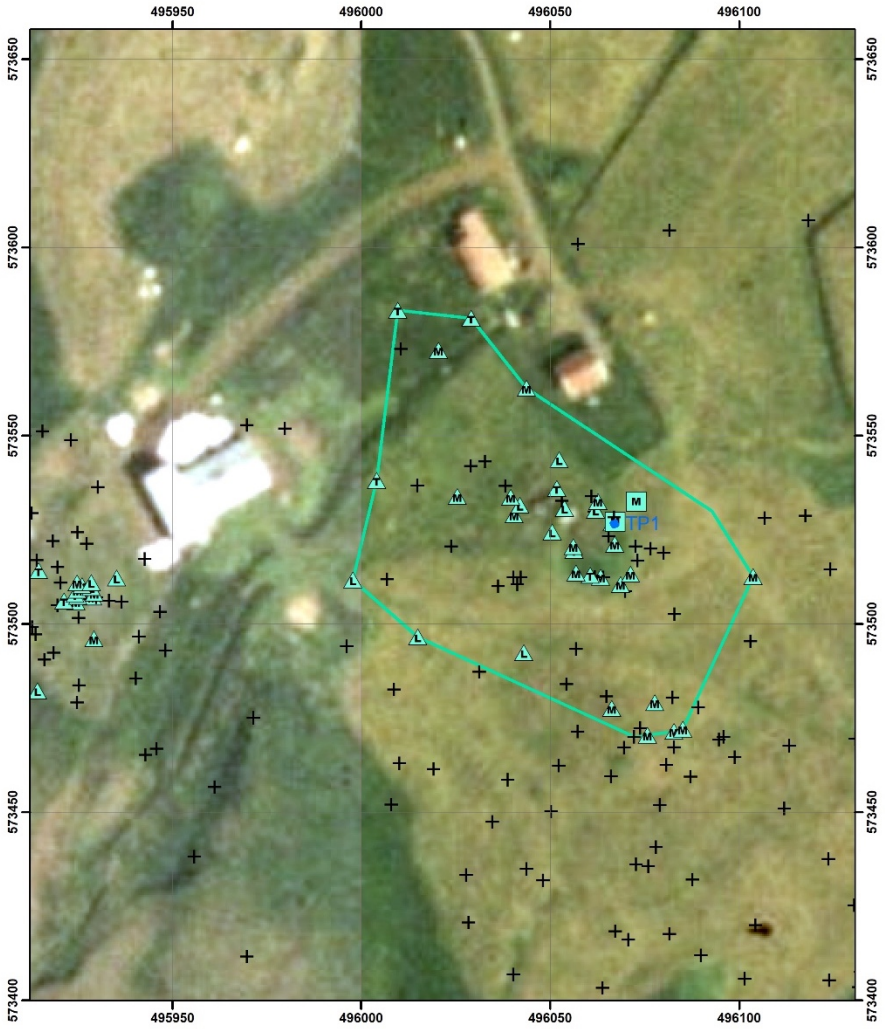

Figure 26. Map of Reykir pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented.

Excavations

A 1x1m test pit was placed based on the results of two cores containing midden: one JMC core (221623) and one 6 cm Eijkelkamp core (221661). Core 221623 contained midden beginning at 40cm bgs, going down to 60cm bgs and terminating with a rock impasse. Using the 6 cm Eijkelkamp core (221661), midden was discovered at 30cm bgs, terminating with a gravel layer at 62cm bgs. However, below this gravel layer, there was additional midden discovered beginning at 85cm bgs. Core 221661 also contained an H1300 layer at 85cm bgs, an H1104 layer at 91cm bgs, and an H3 layer at 95cm bgs.

Test pit 1

Beneath the root mat [101], there was a layer of disturbed aeolian soil [151]. The most recent midden deposit [152] is immediately below the disturbed aeolian. This [152] midden seems to be associated with the adjacent visible turf structures to the east of the test pit (Figure 26). Below the midden deposit in the southwestern corner of the unit, a pit feature developed [153]. This pit feature terminated at the LOE. Across the rest of the unit, there was a scree level [154]. This scree rested on top of a well-preserved in-situ H1300 tephra. Below the H-1300 tephra layer was another midden layer [155]. Below the midden was in-situ H-1104, followed by another midden deposit [156]. Under this layer, there was dispersed H1000, though this was only found within the eastern wall. There was a terminal section of the midden [157] before excavation was completed due to another thick rock layer which is probably scree. The bottom midden layer is a good candidate for a pre-1000 cultural deposit.

Interpretation: The first midden layer [152] at Reykir is post-1300. This midden deposit also points to settlement on top of a landslide, like the settlement at Hrafnhóll, as there is a scree layer directly below it [154]. This scree layer, as well as the pit feature in the southwest of the unit [153] are post-1300 (Figure 36). Interestingly, it seems that the rockslide event represented by the scree level [154] occurred in the middle of occupation, as the midden continues below it. There is both 1104-1300 midden [155] and pre-1104 midden [156, 157]. This indicates that there was settlement before 1104 (and probably before 1000 [157])—despite rockslide events. The fact that the unit terminated with another rocky layer indicates that the initial settlement may have also been on top of a landslide layer, again resembling the settlement pattern at Hrafnhóll.

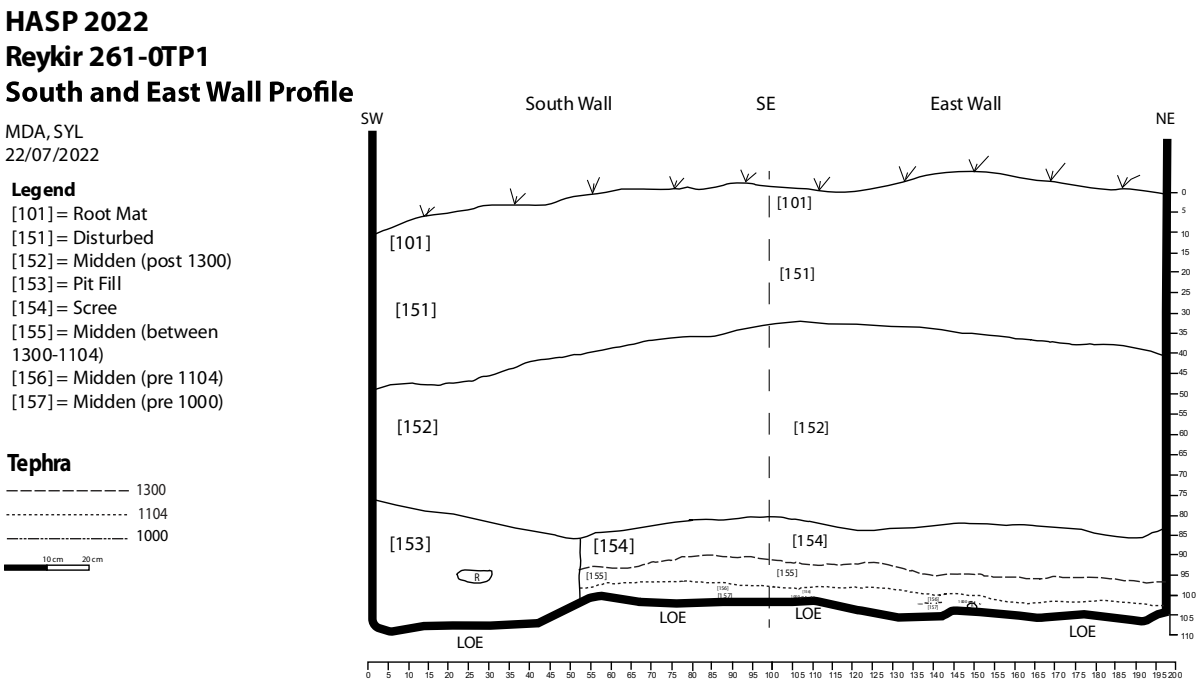

Figure 27. Profile of south and east walls of Reykir test pit 1.

Víðines

At Víðines during the 2022 season, a series of extensive cores were placed over a large area surrounding Víðines I and Víðines II. A single excavation test pit was placed near the standing framhús. The cores and test pit suggest that the farmstead was established well before 1000 and that the farmstead has maintained the same location and footprint since that time, with a slight northward expansion post-1300.

History

Víðines is the next farm just west of the Hólar estate. The site name is first mentioned in the *Saga of the Sturlungs* as the location of one of the big battles of the Age of the Sturlungs: Víðinesbardagi (Jóhannesson, et al. 1946:248) The farm, however, is first mentioned in a property registry of the Hólar estate from 1388 (Íslenzkt fornbréfasafn 1896:410) and was under Hólar ownership until 1805 when Hólar properties were auctioned off. Since 1922 the farm has been under dual ownership as Víðines I and Víðines II. (Pálsson 2011:238) The value of the farm before 1800 but at that time it was considered 20 hundreds, below average for the area of Skagafjörður. Today, the remains of a timber house (framhús), which was in front of the old turf dwelling, remains in place, as well as various other drystone walls and ruins of the old farm mound. When the farm was sold in 1802, it was sold with the two

sharecroppers, Brekkukot (now Laufskálar) and Grafarkot (position unknown). What the relationship was between the sharecropper farms before the ownership of Hólar is also unknown. In a Hólar registry from 1628-1632, there is a mention of a small subsidiary farm called Víðineskot. The knowledge of the farm's location has been lost but it may have been either of the sharecropper farms mentioned above. Within the modern-day farm boundary of Víðnes are the remains of two walled off sites, Grjótgerði and Grófarstekkur. Research conducted in 2011 established that Grjótgerði had most likely never had a dwelling, but Grófarstekkur was obviously the remains of an ancient farmstead. (Pálsson 2011:242-255) Further discussion of the 2022 research at Grófarstekkur follows below.

Coring

During the 2022 field season, 275 cores were taken around Víðines in an area over 13.4 ha. The coring results suggest that the cultural deposits run from pre-H1104 to post H1766 and are primarily and tightly concentrated around the old framhús, the wooden front of the old turf farmhouse (Figure 30). No definitive pre- H1104 cultural deposits were found outside this area. There are a few small areas of H1104-H1300 and post-H1300 low-density cultural deposits outside the farm mound area, but not significant enough to suggest that there are parts of Víðines farm, other than around the framhús, with important occupation deposits (besides a scattering of poorly preserved ephemeral turf walls).

Only 32 cores had any cultural material at all, and most of that is undiagnostic turf deposits. Ten of the Víðines cores had good ("yes") evidence of cultural deposits before H1104, all of which were floor, midden or low-density cultural layers. Another 29 cores showed ambiguous ("maybe") evidence of cultural activity below H1104. No Víðines cores exhibited a full tephra sequence and 158 cores presented with no tephra layers whatsoever. Most of the cores that exhibited pre H1104 cultural deposits also had H1104-H1300 and post-H1300 deposits.

In general tephra preservation is rather poor at Víðines. Only eight cores presented with the LNS/LNT at Víðines, and four cores presented with the Vj-1000 tephra. Thirty-eight cores had the H1104 and 16 with the H1300. Only six cores had both the H1104 and H1300 tephra layers. Six cores had the H1766 tephra.

Most of the cultural material spread around Víðines are turf deposits, none of which could be dated with cores. Away from the farmstead, there are no deposits of cultural material below the H1104 tephra (Figure 28). There are hints of low numbers of later, thin, low-density cultural deposits in a few locations spread around the site (e.g., core #220345).

The most substantial potential H1104-H1300 cultural deposits were recovered from core #220350 and #220351, 120 m north of the farmstead (Figure 53). About 420 m to the west of the farmstead surrounding core #220485 is a potential post-H1300 deposit (Figure 54). Additional cores taken around both of these low-density cultural deposits did not confirm any substantial human activity. Neither area was further investigated.

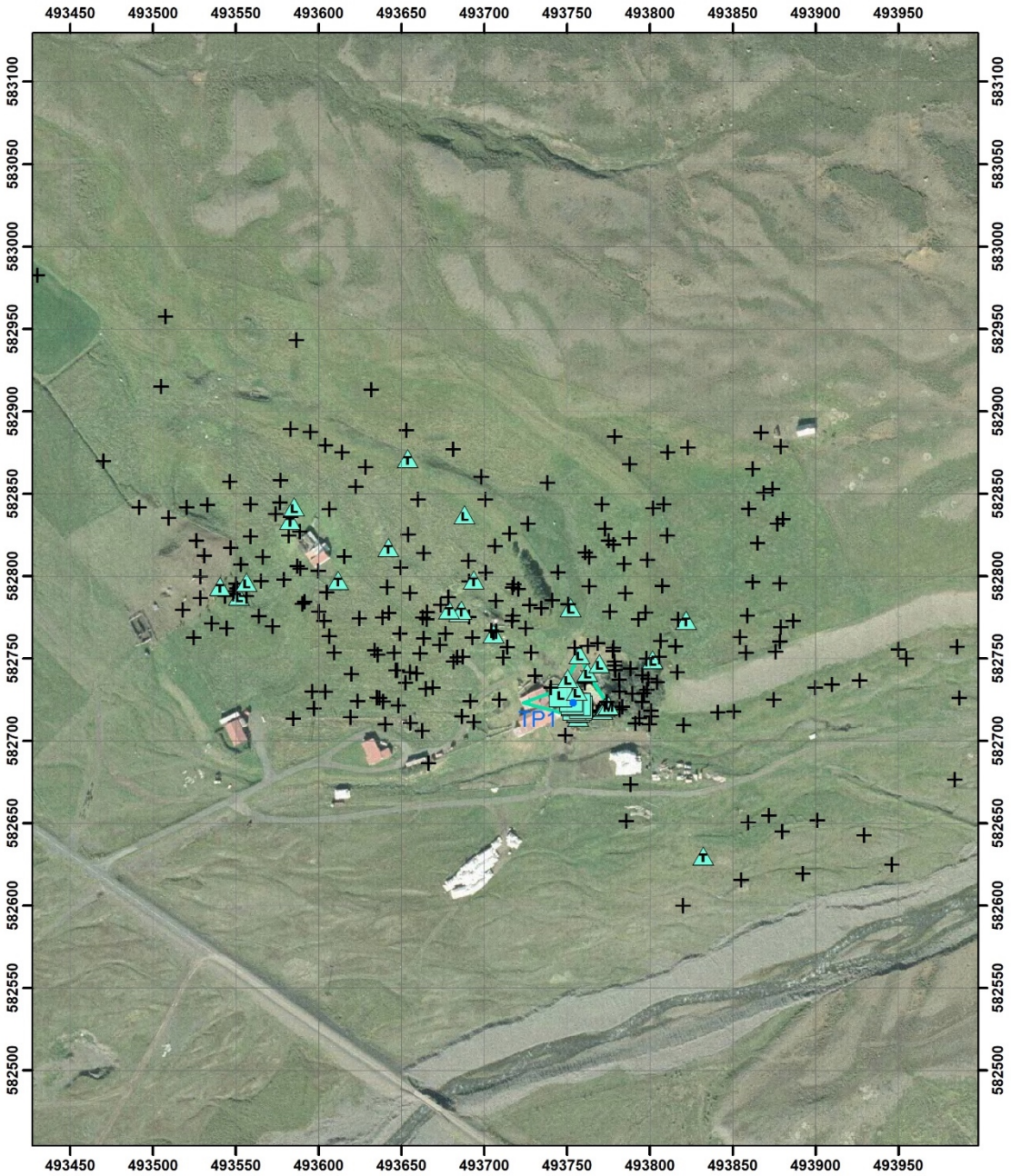

Figure 28. Map of Víðines pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue

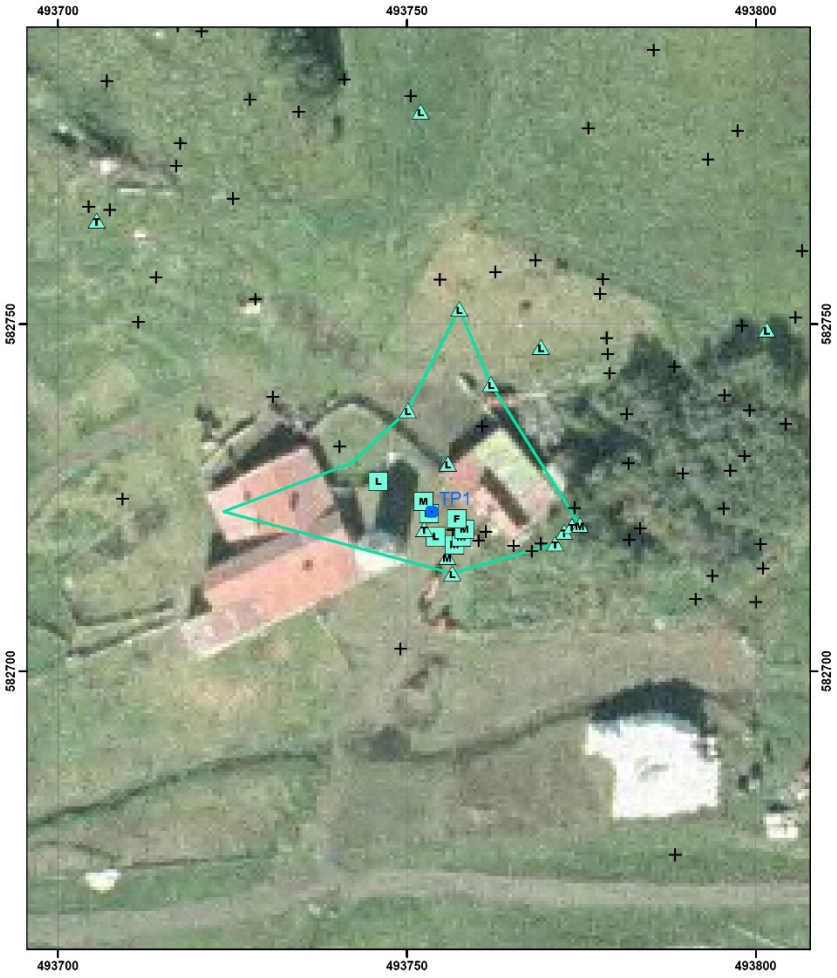

Figure 29. Closeup of the Víðines farm mound area showing pre-1104 coring results and interpolated pre-1104 farmstead size. The test pit location is in blue.

Figure 30. Coring in front of the Víðines framhús

Excavation

Test pit one at Víðines was placed based on the results of core #220588 which suggested a 30 cm thick midden below H1004 with Vj-1000 in the midden matrix. Because of a thick layer (5-9 cm) of driveway gravel, each core in front of the standing framhús had to be first excavated down to the ground soil surface with a spade. This made for arduous coring. While many of the cores in the area in front of the framhús confirmed substantial pre and post 1104 deposits (e.g., #220622 and #220581) only #220588 and #220589 had the Vj-1000 in the midden below H1104. Interestingly, core #220622 presented with a floor deposit under substantial midden, capping aeolian which overlaid H3/H4. That sequence was verified by TP1, just 3 m away. Conversely, what was probably a floor deposit at the bottom of the cultural sequence in core #20588, was mistakenly interpreted as the LNS. In all likelihood, the floor identified in TP1 is also seen in the 1 cm thick floor at 110 cm bgs in #220622, which might provide some idea of the orientation of the structure associated with the floor, but no other LNS or floor deposits were identified in the farmstead area.

Test pit 1

The entire deposit was capped by a recent farmyard gravel layer [101] with a thick disturbed layer [102] directly underneath. The first distinct preserved archaeological layer was a 10 cm thick turf layer [103]. Low density cultural layers layers [104] & [105] sandwiched a very distinct H-1300 layer, With the bottom of LCD on a distinct H-1104. Underneath the H-1104 tephra, the midden deposit became darker with more charcoal. There was a thin layer of midden [107] between the H-1104 & Vj-1000. A thicker midden layer [108], with the same characteristics continued below the Vj-1000 and rested on a distinct layer up upcast [109]. Only a small area was excavated through the upcast in the northwest corner. Under the upcast was another layer of turf [110], and midden [125] with some rocks, that rested on a distinct floor layer [126]. Below the [126] layer were H3 and H4 undisturbed.
Interpretation: The deposits below the vj-1000 layer are thicker and more distinct than any others investigated so far during the project. This thick distinct midden and floor layers suggests that the later midden was placed on a very early structure.

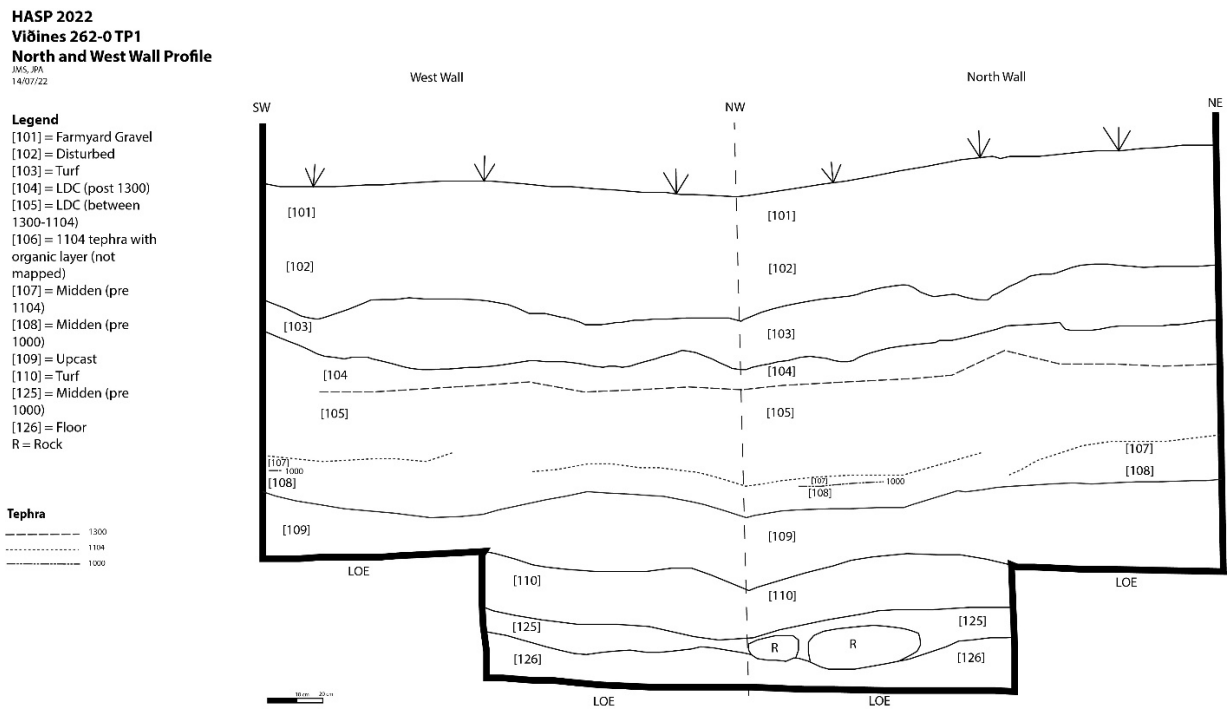

Figure 31. Profile of west and north walls of Víðines test pit 1.

Figure 32. photo of north wall (left) of TP1 at Víðines, with H3/H4 underlying cultural deposits. Tephra layers are marked with small white pegs—1300, 1104 & 1000 (just below 1104).

Víðines - Grófarstekkur

During the 2022 field season, a shallow test pit was excavated at abandoned site of Grófarstekkur on the farm Víðines along with an extensive coring program. Most of the Grófarstekkur occupation is pre-AD 1104, and the coring of the boundary wall suggests a

pre-AD 1104 construction date. There appears to be rather limited occupation for a short time post-1104. There appears to be no occupation post-1300.

History and previous work

Grófarstekkur is the name of a supposed farmstead site within the property of the Víðines farm. In Byggðasaga Skagafjarðar, Pálsson (2011) proposes that Grófarstekkur might be the same site as Hálsgróf, mentioned in a Hólar property register from 1388. The site includes a substantial field bound by a turf wall. The boundary wall encloses a field of about 1.8 hectares in size. Ruins can be found in two areas within the boundary wall: an ancient looking tripartite ruin of an outbuilding in the eastern part of the field, and in the southern part a more recent bipartite weaning pen of turf and stone perched on top of a mound of older structures (probably the dwelling). The mound measured 28 x 30 m but no structures could be identified from the surface. South of the potential farm mound are the remains of a low wall sectioning the southern part of the field.

Coring

During the 2022 field season, 88 cores were taken around Grófarstekkur. The coring suggests that the cultural deposits are primarily pre-H1104. Fifteen Grófarstekkur cores had good ("yes") evidence of cultural deposits before H1104 while another 21 cores showed ambiguous evidence ("maybe") of cultural activity below H1104 (Table 6). Only one core, #202616 had a full tephra sequence (except the H1766 layer) and this core only had evidence of cultural activity before H1104. Only four cores suggested post-1300 activity and they were all characterized as turf deposits.

The presence of late tephra layers (e.g., H1300 & H1766) is good at Grófarstekkur. Six cores presented with the LNS/LNT but no cores presented with the Vj-1000 tephra. Twenty-five cores had the H1104 and 30 with the H1300. Thirty-three cores had the H1766 tephra.

Several cores encountered the site-surrounding túngarður (boundary wall). All of them suggest that the wall was constructed well before the H-1104 fell. Core #220718 has 3 cm of aeolian deposit between the H1104 (17 cm bgs) and the top of the turf wall at 20 cm bgs. Core #20719 had an aeolian deposit that is about 6 cm thick between the top of the turf wall (which contains the LNT and H3/H4) and the H1104.

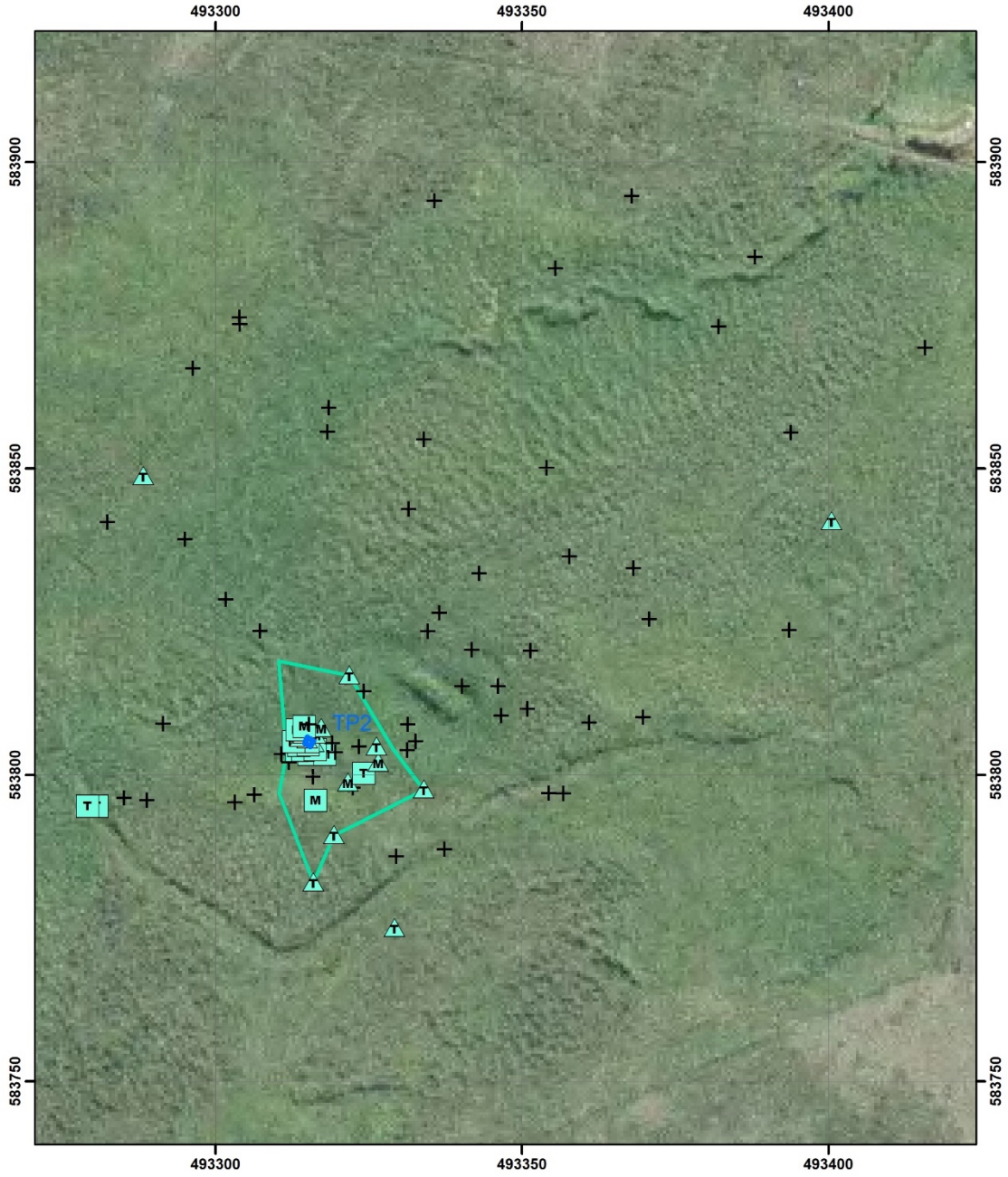

Figure 33. Map of Grófarstekkur pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue.

Excavations

A 1x1m test pit was placed 20 meters south of the supposed farm mound. The north (Figure 34) and south (Figure 35) sections of the test pit were recorded. The test pit was based on the results of cores 220654, 220697, 220691, and 220692. These cores encountered impenetrable ground (rock or gravel) between 30 and 40 cm bgs. In particular, core 220697 had aeolian deposits on either side of a thin (3 cm) but distinct midden that was 8 cm below a well-defined H1104 tephra layer.

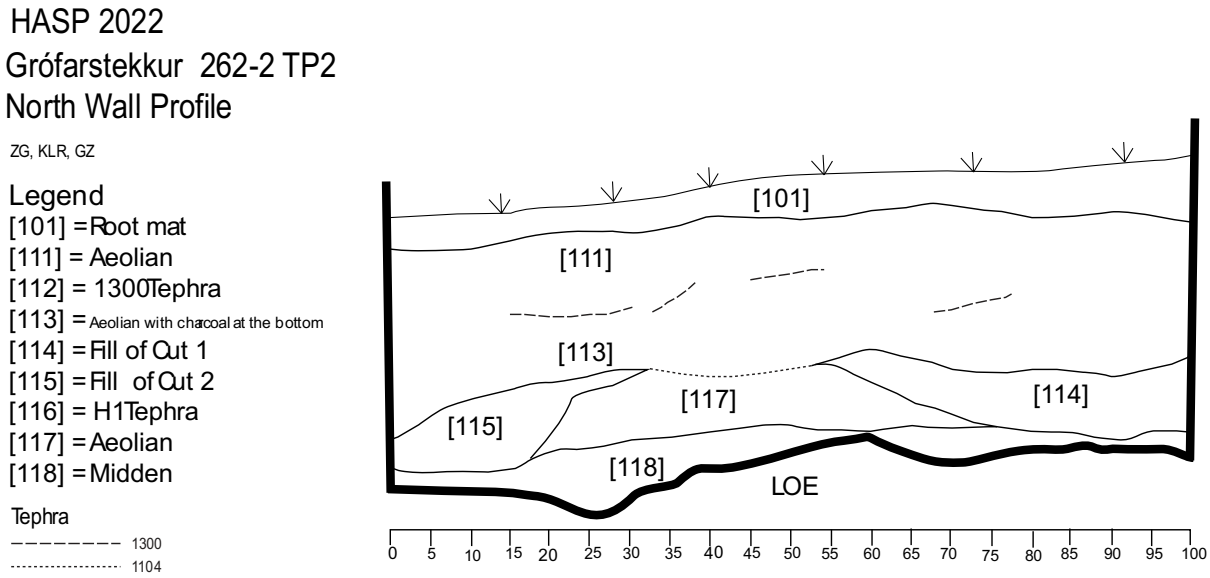

Figure 34. Grófarstekkur TP2 North wall profile.

Test pit 2 (at Víðines)

Under the grassroot [101] was an undisturbed aeolian [111] layer down to H1300 in situ. Below H1300 was another undisturbed aeolian layer [113]. At the bottom of the layer was a thin distribution of charcoal, corresponding to the two cuts [Cuts 114 and 115]. Directly under [113] was H1104 in situ extending over the whole profile (Figure 35). The two cuts appear to have been dug through the in situ 1104 layer Figure 37. Beneath the 1104 tephra is another aeolian layer [117] on top of a midden layer [118] that covered the natural gravel floor of the pit. 1104 may appear in [114] & 115

Interpretation: The 2022 research supported the results of earlier research, showing that there was a farm at the site Grófarstekkur was a farm, occupied from very early on, as there is up to a 10 cm thick aeolian deposit between the midden at the bottom of the pit and the H1104 tephra. The data points to the farm being abandoned before H1104 but there is evidence of some sort of burning activity soon after the H1104 tephra fall. A stekkur (weaning pen) was later placed on top the old farm buildings.

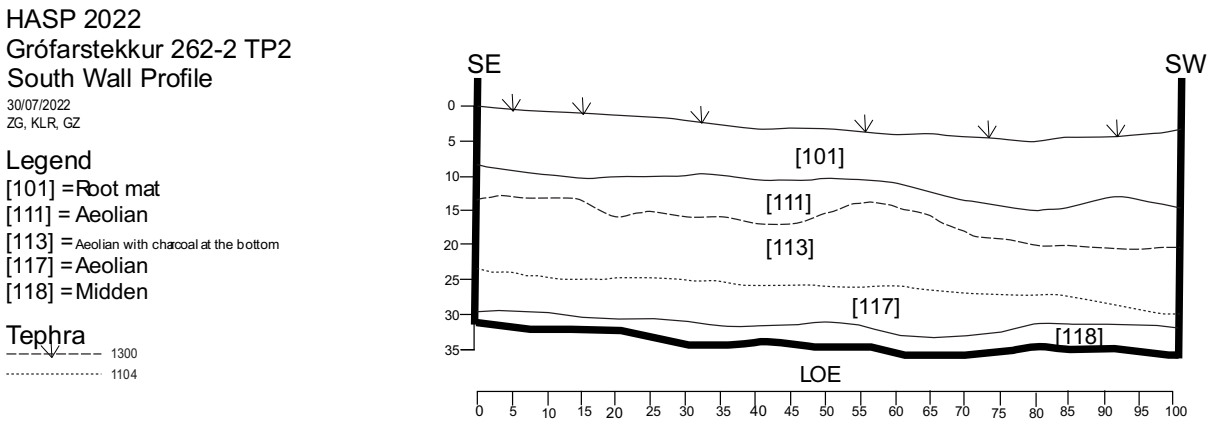

Figure 35. Grófarstekkur TP2 south wall profile.

Conclusion

This report covered the HASP 2022 work at Neðri Ás, Kálfsstaðir, Hlíð (Hrappsstaðir/Hrafnsstaðir), Hrafnholl, Hvammur, Reykir, and Víðines (including Grófarstekkur) in Hjaltadal. The eight farms investigated in 2022 seem to have been established well before the Hekla 1104 (H1104) tephra fell. Hvammur may be the exception as it's establishment date is still unclear. Conversely, the farm mounds at Neðri Ás, Kálfsstaðir, and Víðines have outstanding continuous sequences that indicate long-term stability. The Kálfsstaðir churchyard was investigated with Ground Penetrating Radar (GPR) and follow-up coring makes it very likely that there are burials within the churchyard, but their level of preservation has not been determined. Hrafnholl, Hvammur, and Reykir seem to have experienced substantial landslides. There is good evidences that farmsteads at Reykir and Hlíð seem to relocate slightly over the sequence of their settlement. At Reykir, the relocation can be directly attributed to landslides. The reasons for the relocation at Hlíð are less clear, but may be environmentally driven. Grófarstekkur seems to be the only 2022 investigated farm that is abandoned as a farmstead.

Appendix A - The protocol used for the HASP coring and test-trenching project.

To determine the location and area of farmstead deposits, the results of cores were divided into three simple categories: "yes," "no," and "maybe" for each of the three temporal periods based on the presence of cultural material above or below specific tephra layers (Steinberg *et al.* 2016). Small and infrequent anthropogenic inclusions in soils – such as ash, charcoal, and bone – are common near farmsteads and other activity areas. These are good indicators that an activity area or domestic site may be nearby, but we do not count infrequent inclusions as contributing to the areal extent of the farmstead. Higher concentrations of anthropogenic inclusions, midden deposits, turf, and floors are included in farm mound deposits. These deposits are listed in the "category" column in the coring (e.g., Appendix E – 2022 Coring Data, p. 70) list and the class column in the context list (Table 2).

The first step in determining a "yes," "no," or "maybe" was to check if there were any in situ primary tephra layers (1766, 1300, or H1) present in the core. If none of these tephra layers were present, then all time periods were listed as "maybe". This procedure was also followed if any pre-H1 tephra layers (ex. H3 and H4) were present below the deepest cultural deposit in the core. The deposit type listed as "maybe" for each time period depended on how many total farmstead deposits were present in the core and their relative stratigraphic location. If there were 3 different deposit classes, they were listed in stratigraphic order with the deepest deposit corresponding to the pre-1104 time period, the middle deposit listed for 1104-1300, and the latest deposit for post-1300. If there was only one deposit, it was listed as "maybe" in all three time periods. If there were two deposits, the deepest one was listed for pre-1104 and the latest was listed for post-1300. For deposit classes, floor and midden were prioritized for 1104-1300, and if there was no floor or midden, the deepest deposit was listed for this time period. If there were more than three deposits, the deepest was listed for pre-1104 and the latest for post-1300. The deposit for 1104-1300 was assigned based on descending priority: Floor, midden, cultural layer, LDC, turf.

If there were in situ primary tephra layers present, the method was slightly different. For the pre-1104 time period, a deposit was assigned as "yes" if it extended through an in situ H1 layer, started below one, or extended through any deeper tephra, such as the LNL, H3, or H4. If there were multiple cultural deposits that could be listed as "yes", priority was given to midden or floor. If none of the deposits were midden or floor, the deposit type was listed as "mixed". A "no" was assigned for this time period if there were no deposits deeper than an in situ H1 layer. A deposit was listed as "maybe" if H1 was missing but the deposit was

determined in association with another tephra, such as 1766, 1300. The absence of the H1 in a context of a cultural deposit is mostly because it was not preserved or the core did not penetrate deeply enough to encounter it (i.e., refusal within more recent deposits). In this case it was unclear whether the deposit would have extended below H1. A "maybe" was also given if H1 was missing and a deposit ended at the exact depth of a tephra layer below H1 but did not extend through it. If there were multiple deposits that could be listed as "maybe" the deepest one was selected for this time period.

For the 1104-1300 time period, a deposit was assigned as "yes" if it extended through the H1 layer or the 1300 layer or was located between these two in-situ layers without overlapping either one. If there were multiple cultural deposits that could be listed as "yes", priority was first given to the one that physically overlapped with the H1 or 1300, and then floor followed by midden. If no floor or midden were present, any combination of deposits was listed as "mixed". A "no" was assigned for this time period if there were no cultural deposits above the H1 tephra, or none extending through or existing between an in situ 1300 and H1. A deposit was listed as "maybe" if it existed above an in situ H1 with no 1300 present, or if there was no H1 present, but the deposit was determined in association with another tephra layer. A "maybe" was also given if there was no 1300 layer and a cultural deposit ended at the exact depth of an in situ H1 but did not extend through it. If there were multiple cultural deposits that could be listed as "maybe" the middle one was prioritized. However, if there were only two potential deposits, and therefore no middle, the earlier deposit was selected. Finally, if there was a greater even number of potential deposits (and thus no middle deposit), floor was prioritized, followed by midden, cultural layer, LDC, and turf.

For the post-1300 time period, a deposit was assigned as "yes" if it extended through the 1300 tephra layer, started and ended above it, or extended through a later tephra, such as 1766. If there were multiple deposits that could be listed as "yes" priority was given to midden and floor, and if none of the deposits were midden or floor the deposit type was listed as "mixed". A "no" was assigned for this time period if no farmstead deposit existed after the 1300 layer. A deposit was listed as "maybe" if there was no in situ 1300 layer, but the deposit was identified in association with another tephra. If multiple deposit types could be listed as "maybe", the latest one was selected.

For the purposes of the coring survey, farmstead or farm mound class deposit categories include:

- Turf deposits: any evidence for a turf structure, including collapsed or leveled turf, are considered evidence of farm buildings. The organic content and percentage of soil in turf deposits is variable. Sometimes tephra layers are present in turf, which represents a special case, as the tephra can provide a terminus post quem (TPQ) date for the deposit. As a rule, the turf must always postdate the tephra layer incorporated within it. This can lead to some specific situations. For example, a turf deposit containing a 1300 tephra layer is assigned a "yes" for the post-1300 time period if there are no other farmstead deposits above 1300 that would take priority. All other time periods are assigned according to the rules for in-situ tephra outlined above. If turf with H1 in it is the only farmstead deposit, and no in-situ tephra are present, a "no" is assigned for the pre-1104 time period, and the turf is assigned as "maybe" for both later time periods. If there is turf with H1 as the oldest deposit, a "no" is assigned for the pre-1104 time period, and the other time periods are assigned according to the rules for in-situ tephra outlined above. Finally, if there is turf with H1 in it as the only farmstead deposit, but there is also an in situ 1300 layer above the turf, the turf deposit is listed as "yes" for the 1104-1300 time period.
- Low-density cultural layers (LDC): defined by anthropogenic inclusions amounting to 10-50% of the soil matrix. These are assumed to result from indistinct and extensive depositional events that suggest regular activity typical of farmsteads or other farm production areas. Sometimes this deposit has a "mixed" character.
- Middens: defined by anthropogenic inclusions amounting to more than 50% of the soil matrix that suggest the regular deposition of household or production area waste. Middens are the result of distinct and intensive depositional events associated with purposeful disposal. In both LDC and Midden layers that are punctuated by tephra layers, for purposes of farm mound dating, the deposits are assumed to be continuous, occurring immediately before and after the date of the tephra deposition. For example, in a midden deposit with only H1 present, surrounded on either side by midden, both "Pre 1104, and "1104-1300" would be positive ("yes") while "Post-A.D. 1300" would be "maybe."
- Floor: characterized by dense, compacted, and/or greasy cultural layers indicative of floors, extramural activity areas, or areas of intense deposition of organic materials. Sometimes floors are distinct fine-grained black ash. These floor deposits are often thin but are very distinct.

A coring shapefile was generated with a 3 layered symbology (one layer for each time period) where each core displayed a specific color for each time period, a specific shape for "yes", "no" or "maybe" within each time period, and a specific letter referencing the type of farmstead deposit in that time period. For a farmstead to be defined, for a specific time period at least one core had to have some confirmed evidence of human burning or other unambiguous evidence of human occupation that would be distinct from an animal-only outbuilding. More specifically, a farmstead perimeter for a specific time period was defined starting in a location where some confirmed evidence ("yes") of midden was found, whether from a single core or an excavation profile. The perimeter was then extended out to neighboring cores with farmstead deposits and was plotted halfway between a "yes" and "no" core, or on a "maybe" core. The continuous area within the perimeter was calculated to produce the maximum possible area of a farmstead.

Most cores with farmstead deposits are clustered together allowing for the definition of a single contiguous farmstead area. However, isolated areas with multiple cores containing farmstead deposits that are some distance removed from the main farmstead area are often identified in the coring. Generally, cores with farmstead deposits that were less than 30 meters from the main farmstead area were included within the farmstead perimeter. However, because of the complexity of the site, there were exceptions to this rule. The boundary could be stopped within 30 meters of other cores if there was a justified reason, such as a line of interstitial cores with no farmstead deposits but good preservation (ex. intact 1104). The farmstead boundary should encompass areas of cores with confirmed midden or floor, so single isolated cores or groups of multiple cores within 30 meters of the main farmstead area without confirmed midden or floor were generally not included unless they were interstitial between two areas of cores with confirmed midden or floor.

Groups of multiple cores with farmstead deposits located further than 30 meters from the main farmstead area were considered separate islands if at least one core had a confirmed midden or floor deposit. Single isolated cores with farmstead deposits or isolated areas of turf or LCD, without nearby midden, floor, or distinct cultural deposits, were not defined as farmstead islands. Separate enclosing boundaries were generated for islands that had sterile interstitial areas of more than 30 m from the main farmstead area. The area of these isolated islands was then added to the area of the main farmstead. Isolated farmstead deposits beyond 100 meters from the main farmstead are counted as separate named farmstead areas.
The coring data was also used to generate a point shapefile showing the percentage of disturbed deposits in each core. This was accomplished by dividing the combined thickness

of any disturbed deposits within the core by the end depth of the core. Any large continuous areas of disturbance were identified and delineated by polygons in ArcMap, as these areas can impact the ability to accurately define the farmstead boundary.

Appendix B – 2022 Excavation data

Table 2. Context list

Place Name	Farm #	Place #	Ex	Context	CLASS	DESCRIPTION	STRAT ABOVE	STRAT BELOW	NW Open	NE Open	SE Open	SW Open	SW Close	SW Close	NE Close	NW Close
Neðri-Ás	251	0	P1	101	Root Mat	Root mat		172								
Neðri-Ás	251	0	P1	171	Disturbed	Disturbed	101	173								
Neðri-Ás	251	0	P1	172	Turf	Turf wall	171	173								
Neðri-Ás	251	0	P1	173	Turf	Turf collapse	173	175								
Neðri-Ás	251	0	P1	174	Turf	Turf collapse with stones	177	177								
Neðri-Ás	251	0	P1	175	Floor	Floor	173	Natural								
Neðri-Ás	251	0	P1	176	Floor	Floor/midden	177	Natural								
Neðri-Ás	251	0	P1	177	Turf	Turf collapse-better turf	171	174								
Neðri-Ás	251	0	P1	178	Aeolian Deposit	Aeolian	176	Natural								
Neðri-Ás	251	0	P1	179	Turf	Turf wall collpase	171	Natural								
Neðri-Ás	251	0	P1	180	Turf	Turf wall	101	Natural								
Neðri-Ás	251	0	P1	1104	Tephra	1104	171	173								
Neðri-Ás	251	0	TP1	101	Root Mat	Root mat		161	0	0	0	0	16	14	18	15
Neðri-Ás	251	0	TP1	161	Disturbed	Disturbed	101	162	15	18	14	16	19	20	27	26
Neðri-Ás	251	0	TP1	162	Aeolian Deposit	Aeolian	161	163	26	27	20	19	21	23	30	28
Neðri-Ás	251	0	TP1	163	Aeolian Deposit	Aeolian below 1300	162	1104 tephra	28	30	23	21	28	30	32	33
Neðri-Ás	251	0	TP1	164	Aeolian Deposit	Aeolian	1104 layer	166	34	32	31	28	37	40	43	45
Neðri-Ás	251	0	TP1	165	Post Hole	Fence post posthole										
Neðri-Ás	251	0	TP1	166	Midden	Midden	164	167	45	43	40	37	42	45	52	57
Neðri-Ás	251	0	TP1	167	Midden	Cooking pit midden	166	168	57	52	45	42	48	48	59	61
Neðri-Ás	251	0	TP1	168	Midden	Midden	167		61	59	48	48	58	55	62	72

Place Name	Farm #	Place #	Ex	Context	CLASS	DESCRIPTION	STRAT ABOVE	STRAT BELOW	NW Open	NE Open	SE Open	SW Open	SW Close	SW Close	NE Close	NW Close
Neðri-Ás	251	0	TP1	1104	Tephra	1104 tephra layer	163	164	33	32	30	28	28	31	32	34
Neðri-Ás	251	0	TP2	101	Root Mat	Root mat		201	0	0	0	0	11	16	12	12
Neðri-Ás	251	0	TP2	201	Disturbed	Disturbed	101	202	12	12	16	11	22	24	21	21
Neðri-Ás	251	0	TP2	202	Midden	Midden	201	203	21	21	24	22	41	43	42	38
Neðri-Ás	251	0	TP2	203	Midden	Midden on top of 1300	202	1300	38	42	43	41	61	64	66	55
Neðri-Ás	251	0	TP2	204	Midden	Midden below 1300	1300	205	56	68	65	62	69	74	75	63
Neðri-Ás	251	0	TP2	205	Midden	Midden	204	206	63	75	74	69	73	81	83	70
Neðri-Ás	251	0	TP2	206	Midden	Lighter midden	205	1104	70	83	81	73	82	86	91	75
Neðri-Ás	251	0	TP2	207	Midden	Midden below 1104	1104	208	76	93	87	83	90	93	99	83
Neðri-Ás	251	0	TP2	208	Aeolian Deposit	Aeolian	207	209	83	99	93	90	94	95	101	90
Neðri-Ás	251	0	TP2	209	Low Density Cultural Deposit	LDC	208	871	90	101	95	94	94	95	108	90
Neðri-Ás	251	0	TP2	871	Tephra	LNS	208	EOE	90	108	95	94	101	99	112	95
Neðri-Ás	251	0	TP2	1104	Tephra	H1 tephra	206	207	75	91	86	82	83	87	93	76
Neðri-Ás	251	0	TP2	1300	Tephra	1300 tephra	203	204	55	66	64	61	62	65	68	56
Kálfsstaðir	257	0	TP1	101	Root Mat	Root Mat		221	0	0	0	0	8	8	12	10
Kálfsstaðir	257	0	TP1	221	Disturbed	Disturbed	Root Mat	222	10	12	8	8	35	30	40	45
Kálfsstaðir	257	0	TP1	222	Midden	Midden	221	1300	40	45	30	35	55	51	54	52
Kálfsstaðir	257	0	TP1	223	Midden	Midden	1300	1104	54	56	53	59	96	91	93	95
Kálfsstaðir	257	0	TP1	224	Midden	Midden	1104	225	96	94	92	97	136	135	135	137
Kálfsstaðir	257	0	TP1	225	Bog	Bog	224	LOE	137	135	135	136	154	156	151	148
Kálfsstaðir	257	0	TP1	1104	Tephra	Tephra	223	224	95	93	91	96	97	92	94	96
Kálfsstaðir	257	0	TP1	1300	Tephra	Tephra	222	223	55	54	51	55				
Hrappstaðir	258	0	TP1	101	Root Mat	Root mat		221	0	0	0	0	20	19	17	17
Hrappstaðir	258	0	TP1	221	Disturbed	Disturbed		1104	17	17	19	20	33	28	21	27
Hrappstaðir	258	0	TP1	222	Low Density Cultural Deposit	LDC	221	223	32	22	30	34	39	33	23	36

Place Name	Farm #	Place #	Ex	Context	CLASS	DESCRIPTION	STRAT ABOVE	STRAT BELOW	NW Open	NE Open	SE Open	SW Open	SW Close	SW Close	NE Close	NW Close
Hrappstaðir	258	0	TP1	223	Midden	Midden	222	224	36	23	33	39	54	43	40	46
Hrappstaðir	258	0	TP1	224	Tephra	Landnam on H3	223		46	40	43	54				
Hrappstaðir	258	0	TP1	1104	Tephra	1104 tephra	221	222	27	21	28	33	34	30	22	32
Hrafnhóll	259	0	TP1	101	Root Mat	Root Mat	Root Mat	101	0	0	0	0	10	5	6	18
Hrafnhóll	259	0	TP1	131	Disturbed	Disturbed	101	1766	18	6	5	10	15	9	20	30
Hrafnhóll	259	0	TP1	132	Disturbed	Disturbed	1766	133	30	20	9	15	20	22	32	39
Hrafnhóll	259	0	TP1	133	Midden	Midden	132	134	39	32	22	20	29	27	38	51
Hrafnhóll	259	0	TP1	134	Midden	Midden	133	135	51	38	27	29	38	37	45	60
Hrafnhóll	259	0	TP1	135	Midden	Midden	134	1104	60	45	37	38	45	43	52	64
Hrafnhóll	259	0	TP1	136	Midden	Midden	1104	137	66	54	43	48	53	47	65	73
Hrafnhóll	259	0	TP1	137	Floor	Floor	136	138	73	65	47	53	53	47	65	73
Hrafnhóll	259	0	TP1	138	Scree	Scree	136	871	73	65	47	53	77	69	83	90
Hrafnhóll	259	0	TP1	140	Aeolian Deposit	Aeolian	871	LOE								
Hrafnhóll	259	0	TP1	871	Tephra	LNS	138	140	90	83	69	77	79	70	84	93
Hrafnhóll	259	0	TP1	1104	Tephra	1104	135	136	64	52	43	45	48	43	54	66
Hrafnhóll	259	0	TP1	1766	Tephra	1766	131	132								
Hvammur	260	0	TP1	101	Root Mat	Root mat		141	0	0	0	0	17	16	14	18
Hvammur	260	0	TP1	141	Disturbed	Disturbed	101	142	18	14	16	17	19	21	16	20
Hvammur	260	0	TP1	142	Midden	Midden	141	143	20	16	21	19	33	29	20	24
Hvammur	260	0	TP1	143	Midden	Midden below 1776	142	144	24	20	29	33	39	40	37	33
Hvammur	260	0	TP1	144	Midden	Midden	143	145	33	37	40	39	41	43	39	36
Hvammur	260	0	TP1	145	Midden	Midden above 1300	144	1300	36	39	43	41	50	49	41	43
Hvammur	260	0	TP1	146	Midden	Midden	1300	147	44	42	50	51	63	60	52	54
Hvammur	260	0	TP1	147	Tephra	1300 teprha -- changed from unidentifeid teprha	146	148	54	52	60	63	65	61	56	59
Hvammur	260	0	TP1	148	Midden	Midden	147	149	59	56	61	65	77	71	67	68
Hvammur	260	0	TP1	149	Scree	Scree	148		68	67	71	77	103	96	93	101

Place Name	Farm #	Place #	Ex	Context	CLASS	DESCRIPTION	STRAT ABOVE	STRAT BELOW	NW Open	NE Open	SE Open	SW Open	SW Close	SW Close	NE Close	NW Close
Hvammur	260	0	TP1	1300	Tephra	1776 - was origionall y called 1300	145	146	43	41	49	50	51	50	42	44
Reykir	261	0	TP1	101	Root Mat	Root mat		151								
Reykir	261	0	TP1	151	Disturbed	Disturbed	Root mat	152					36	40	35	42
Reykir	261	0	TP1	152	Midden	Midden	151	153	42	35	40	36	80	76	76	83
Reykir	261	0	TP1	153	Pit	Pit fill	152	Scree			76			94		
Reykir	261	0	TP1	154	Scree	Scree	152	1300	83	76	94	80	92	94	96	94
Reykir	261	0	TP1	155	Midden	Midden	1300	1104	95	86	94	92				
Reykir	261	0	TP1	156	Midden	Midden	1104	157	101	91	94	97				102
Reykir	261	0	TP1	157	Midden	Midden	156	Scree	102	92	94	99	100	94	93	103
Reykir	261	0	TP1	1104	Tephra	1104	155	156	100	91	94	97	97	94	91	101
Reykir	261	0	TP1	1300	Tephra	1300	154	155	94	86	94	92				
Viðines	262	0	TP1	101	Gravel	Gravel in farmyard		102								
Viðines	262	0	TP1	102	Disturbed	Disturbed	101	103					25	30	30	26
Viðines	262	0	TP1	103	Turf	Turf	102	104					32	30	43	35
Viðines	262	0	TP1	104	Low Density Cultural Deposit	LDC on top of 1300	103	105					39	41	45	40
Viðines	262	0	TP1	105	Low Density Cultural Deposit	LDC under 1300	104	106								
Viðines	262	0	TP1	106	Tephra	Tephra with organic layer	105	107	55	55	52	51				
Viðines	262	0	TP1	107	Midden	Midden under 1104	106	108	60	60	57	54				
Viðines	262	0	TP1	108	Midden	Midden	1000	871	57	64	62	59				
Viðines	262	0	TP1	109	Upcast	Upcast	108	110	63	68	62	62	70	79	80	74
Viðines	262	0	TP1	110	Turf	Turf wall	109	125	74	77	74	70				
Viðines	262	0	TP1	125	Midden	Midden deposit in turf wall [110]	110	126								
Viðines	262	0	TP1	126	Floor	Floor	125	LOE								

Place Name	Farm #	Place #	Ex	Context	CLASS	DESCRIPTION	STRAT ABOVE	STRAT BELOW	NW Open	NE Open	SE Open	SW Open	SW Close	SW Close	NE Close	NW Close
Viðines	262	0	TP1	127	Subsoil	Subsoil										
Viðines	262	0	TP1	1000	Tephra	Tephra	107	108	62	61	59	56				
Grófarstekkur	262	2	TP2	101	Root Mat	Root mat		111	0	0	0	0	7	8	12	7
Grófarstekkur	262	2	TP2	111	Aeolian Deposit	Aeolian	101	1300	7	12	8	7	10	12	13	10
Grófarstekkur	262	2	TP2	112	Tephra	1300 tephra layer	111	113	10	13	12	10	17	17	18	17
Grófarstekkur	262	2	TP2	113	Aeolian Deposit	Aeolian with some charcoal at bottom	112	114	17	18	17	17	20	24	24	27
Grófarstekkur	262	2	TP2	114	Pit	Midden cut 1	113	118	27	24	24	20		29	33	31
Grófarstekkur	262	2	TP2	115	Pit	Midden cut 2	113	118	27							32
Grófarstekkur	262	2	TP2	116	Tephra	1104 tephra	114	115	27	24	24	20	23	24	24	27
Grófarstekkur	262	2	TP2	117	Aeolian Deposit	.	116	118	27	27	24	23	27	26	31	29
Grófarstekkur	262	2	TP2	118	Midden	Midden	117		32	33	26	27	32	29	37	36

Table 3. Preliminary Sample list

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Neðri-Ás	251	0	P1	175	1	Flotation	Floor	Floor	870-1104	7
Neðri-Ás	251	0	P1	176	2	Flotation	Floor with peat ash and charcoal	Floor	870-1104	1.5
Neðri-Ás	251	0	P1	176	3	Flotation	Floor with peat ash and charcoal	Floor	870-1104	7
Neðri-Ás	251	0	P1	176	4	Flotation	Charcoal in floor	Floor	870-1104	1
Neðri-Ás	251	0	P1	176	5	Flotation	Floor from west section without ash or charcoal	Floor	870-1104	5.5
Neðri-Ás	251	0	TP1	163	1	Flotation	Top of cxt 163 just below 1300 lenses	Aeolian Deposit	1104-1766	7
Neðri-Ás	251	0	TP1	164	3	Flotation	Top of cxt 164	Aeolian Deposit	870-1104	7
Neðri-Ás	251	0	TP1	164	4	Bone, Animal	Cxt 164	Aeolian Deposit	870-1104	
Neðri-Ás	251	0	TP1	166	5	Flotation	Top of cxt 166	Midden	870-1104	7
Neðri-Ás	251	0	TP1	166	6	Bone, Animal	Bone from cxt 166	Midden	870-1104	

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Neðri-Ás	251	0	TP1	166	7	Flotation	5cm into cxt 166 (bottom of cxt 166)	Midden	870-1104	6
Neðri-Ás	251	0	TP1	166	8	Bone, Animal	Bone from bottom of cxt 166	Midden	870-1104	
Neðri-Ás	251	0	TP1	167	9	Flotation	Top of cxt 167	Midden	870-1104	7
Neðri-Ás	251	0	TP1	167	10	Bone, Animal	Screen from cxt 167	Midden	870-1104	
Neðri-Ás	251	0	TP1	167	11	Charcoal	Screen from cxt 167	Midden	870-1104	
Neðri-Ás	251	0	TP1	168	12	Flotation	Top of cxt 168	Midden	870-1104	7
Neðri-Ás	251	0	TP1	168	13	Flotation	Sample of tan colored dung ash from cxt 168	Midden	870-1104	1
Neðri-Ás	251	0	TP1	168	14	Bone, Animal	Bone from cxt 168	Midden	870-1104	
Neðri-Ás	251	0	TP1	1104	2	Flotation	1104 tephra layer	Tephra	1104-1766	6
Neðri-Ás	251	0	TP2	201				Disturbed	1766-Present	
Neðri-Ás	251	0	TP2	202				Midden	1104-1766	
Neðri-Ás	251	0	TP2	204	3	Flotation	Top of midden	Midden	1104-1766	7
Neðri-Ás	251	0	TP2	204	4	Bone, Animal		Midden	1104-1766	
Neðri-Ás	251	0	TP2	204	5	Flotation	Middle of midden	Midden	1104-1766	7
Neðri-Ás	251	0	TP2	205	6	Flotation	Midden	Midden	1104-1766	7
Neðri-Ás	251	0	TP2	205	7	Bone, Animal	Bone, metal	Midden	1104-1766	
Neðri-Ás	251	0	TP2	206	8	Flotation	Top of midden	Midden	1104-1766	7
Neðri-Ás	251	0	TP2	206	9	Bone, Animal	In midden	Midden	1104-1766	
Neðri-Ás	251	0	TP2	206	10	Flotation	Bottom of midden	Midden	1104-1766	7
Neðri-Ás	251	0	TP2	207	12	Bone, Animal		Midden	870-1104	
Neðri-Ás	251	0	TP2	207	13	Flotation		Midden	870-1104	7

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Neðri-Ás	251	0	TP2	207	14	Flotation		Midden	870-1104	7
Neðri-Ás	251	0	TP2	208	15	Flotation		Aeolian Deposit	870-1104	7
Neðri-Ás	251	0	TP2	209	16	Flotation		Low Density Cultural Deposit	870-1104	3.5
Neðri-Ás	251	0	TP2	871	17	Flotation		Tephra	870-1104	7
Neðri-Ás	251	0	TP2	1104	11	Flotation	H1 tephra	Tephra	1104-1766	7
Neðri-Ás	251	0	TP2	1104	18	Flotation	Combo of context 206 and H1	Tephra	1104-1766	
Kálfsstaðir	257	0	TP1	222	1	Flotation	Bottom of 222	Midden	1104-1766	7
Kálfsstaðir	257	0	TP1	223	4	Flotation	Top of 223	Midden	1104-1766	7
Kálfsstaðir	257	0	TP1	223	5	Bone, Animal	Animal bone from throughout 223	Midden	1104-1766	
Kálfsstaðir	257	0	TP1	223	6	Flotation	Middle 223; 10 cm below 1300;	Midden	1104-1766	7
Kálfsstaðir	257	0	TP1	223	7	Flotation	223; 18cm below 1300	Midden	1104-1766	7
Kálfsstaðir	257	0	TP1	223	8	Flotation	223; 30 cm below 1300	Midden	1104-1766	7
Kálfsstaðir	257	0	TP1	223	9	Flotation	223 bottom	Midden	1104-1766	7
Kálfsstaðir	257	0	TP1	224	11	Flotation	Midden	Midden	870-1104	7
Kálfsstaðir	257	0	TP1	224	12	Flotation	Midden	Midden	870-1104	7
Kálfsstaðir	257	0	TP1	224	13	Bone, Animal	Animal bone frags collected from screen	Midden	870-1104	
Kálfsstaðir	257	0	TP1	224	14	Flotation	Midden	Midden	870-1104	7
Kálfsstaðir	257	0	TP1	224	15	Flotation	Midden	Midden	870-1104	7
Kálfsstaðir	257	0	TP1	224	16	Flotation	Midden	Midden	870-1104	7
Kálfsstaðir	257	0	TP1	224	17	Flotation	Midden	Midden	870-1104	7
Kálfsstaðir	257	0	TP1	1104	10	Flotation	Tephra	Tephra	1104-1766	7
Kálfsstaðir	257	0	TP1	1300	2	Flotation	1300 layer	Tephra	1104-1766	2
Kálfsstaðir	257	0	TP1	1300	3	Bone, Animal	Tooth found ion the 1300 layer	Tephra	1104-1766	
Hrappstaðir	258	0	TP1	222	2	Flotation	Top of cxt 222	Low Density Cultural Deposit	870-1104	7

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Hrappstaðir	258	0	TP1	223	3	Flotation	Top of 223	Midden	870-1104	7
Hrappstaðir	258	0	TP1	223	4	Bone, Animal	Cxt 223	Midden	870-1104	
Hrappstaðir	258	0	TP1	224	5	Flotation	Cxt 224 LNS	Tephra	870-1104	2
Hrappstaðir	258	0	TP1	1104	1	Flotation	Scraped off H1 tephra	Tephra	1104-1766	7
Hrappstaðir	258	0	TP2	231	2	Bone, Animal	Bone from cxt 231	Midden	1104-1766	
Hrappstaðir	258	0	TP2	231	3	Flotation	Top of cxt 231	Midden	1104-1766	7
Hrappstaðir	258	0	TP2	231	4	Flotation	Bottom of cxt 231	Midden	1104-1766	2.5
Hrappstaðir	258	0	TP2	232	5	Flotation	Cxt 232	Upcast		3
Hrappstaðir	258	0	TP2	1300	1	Flotation	1300 tephra	Tephra	1104-1766	7
Hrafnhóll	259	0	TP1	134	1	Flotation	Top context 134	Midden	1104-1766	7
Hrafnhóll	259	0	TP1	134	2	Bone, Animal	Bone from within context 134	Midden	1104-1766	
Hrafnhóll	259	0	TP1	135	3	Flotation	Top of 135	Midden	1104-1766	7
Hrafnhóll	259	0	TP1	135	4	Flotation	Bottom of 135	Midden	1104-1766	7
Hrafnhóll	259	0	TP1	135	5	Bone, Animal	Bones retrieved from screening	Midden	1104-1766	
Hrafnhóll	259	0	TP1	136	7	Flotation	Top of 136	Midden	870-1104	7
Hrafnhóll	259	0	TP1	136	8	Flotation	Middle of 136	Midden	870-1104	7
Hrafnhóll	259	0	TP1	136	9	Flotation	Bottom of 136	Midden	870-1104	7
Hrafnhóll	259	0	TP1	137	10	Flotation	Entirety of context 137	Floor	870-1104	2.5
Hrafnhóll	259	0	TP1	138	11	Flotation	Middle of 138	Scree	870-1104	6
Hrafnhóll	259	0	TP1	138	12	Flotation	Bottom of 138	Scree	870-1104	3
Hrafnhóll	259	0	TP1	871	13	Flotation	Top of 871	Tephra		7
Hrafnhóll	259	0	TP1	1104	6	Flotation	1104 Tephra layer	Tephra	1104-1766	7
Hvammur	260	0	TP1	144	1	Flotation	Cxt 144	Midden	1766-Present	3.5

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Hvammur	260	0	TP1	145	2	Flotation	Top of cxt 145	Midden	1766-Present	6.5
Hvammur	260	0	TP1	146	5	Flotation	Top of cxt 146	Midden	1104-1766	7
Hvammur	260	0	TP1	146	6	Bone, Animal	Cxt 146	Midden	1104-1766	
Hvammur	260	0	TP1	146	7	Flotation	5cm into cxt 146	Midden	1104-1766	7
Hvammur	260	0	TP1	146	8	Flotation	10cm into cxt 146	Midden	1104-1766	6.5
Hvammur	260	0	TP1	147	9	Tephra	Unidentified tephra from cxt 147	Tephra	1104-1766	
Hvammur	260	0	TP1	147	10	Flotation	Cxt 147 unidentified tephra	Tephra	1104-1766	7
Hvammur	260	0	TP1	148	11	Flotation	Top of cxt 148	Midden	870-1104	7
Hvammur	260	0	TP1	148	12	Bone, Animal	Cxt 148	Midden	870-1104	
Hvammur	260	0	TP1	149	13	Flotation	Top of cxt 149	Scree	870-1104	4
Hvammur	260	0	TP1	1300	3	Flotation	1300 tephra layer	Tephra	1766-Present	7
Hvammur	260	0	TP1	1300	4	Bone, Animal	Bone from 1300 layer	Tephra	1766-Present	
Reykir	261	0	TP1	153	1	Flotation	Entirety of 153	Pit	1104-1766	3.5
Reykir	261	0	TP1	154	2	Flotation	Bottom of 154	Scree	1104-1766	6.5
Reykir	261	0	TP1	155	3	Flotation	Top of 155	Midden	1104-1766	7.25
Reykir	261	0	TP1	155	4	Bone, Animal	Bone from screening in 155	Midden	1104-1766	
Reykir	261	0	TP1	155	5	Flotation	Bottom of 155	Midden	1104-1766	7
Reykir	261	0	TP1	156	6	Flotation	Top of 156	Midden	870-1104	7
Reykir	261	0	TP1	157	7	Flotation	Top of 157	Midden	870-1104	5.5
Viðines	262	0	TP1	105	1	Flotation	Just below 1300	Low Density Cultural Deposit	1104-1766	7
Viðines	262	0	TP1	105	3	Flotation	From west side just on top of 1104	Low Density Cultural Deposit	1104-1766	6.5

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Viðines	262	0	TP1	105	4	Flotation	From east side, just below 1300	Low Density Cultural Deposit	1104-1766	7
Viðines	262	0	TP1	105	26	Flotation	Top of context (just below 1300)	Low Density Cultural Deposit	1104-1766	1.5
Viðines	262	0	TP1	106	5	Flotation	In H1, potentially in turf	Tephra	870-1104	7.25
Viðines	262	0	TP1	106	6	Bone, Animal		Tephra	870-1104	
Viðines	262	0	TP1	107	7	Flotation	Top of cotext	Midden	870-1104	7
Viðines	262	0	TP1	107	8	Bone, Animal		Midden	870-1104	
Viðines	262	0	TP1	108	11	Bone, Animal		Midden	870-1104	
Viðines	262	0	TP1	108	12	Flotation	From south end, rich in peat ash. Right on top of LNS.	Midden	870-1104	4
Viðines	262	0	TP1	108	13	Flotation	From north end, on top of landnam	Midden	870-1104	5
Viðines	262	0	TP1	109	14	Flotation	Mid upcast	Upcast	870-1104	7.25
Viðines	262	0	TP1	109	15	Bone, Animal		Upcast	870-1104	
Viðines	262	0	TP1	109	16	Flotation	Bottom of cxt	Upcast	870-1104	7
Viðines	262	0	TP1	109	17	Charcoal	Bottom of cxt	Upcast	870-1104	
Viðines	262	0	TP1	110	20	Slag		Turf	870-1104	
Viðines	262	0	TP1	126	23	Flotation	Northeast charcoal rich floor	Floor	870-1104	4
Viðines	262	0	TP1	1000	9	Flotation	Tephra-1000	Tephra	870-1104	1.5
Grófarstekkur	262	2	TP2	112	1	Flotation	1300 tephra	Tephra	1104-1766	3.5
Grófarstekkur	262	2	TP2	113	2	Flotation	Middle of cxt 113	Aeolian Deposit	1104-1766	2
Grófarstekkur	262	2	TP2	113	3	Flotation	Lower/middle of cxt 113 where charcoal started	Aeolian Deposit	1104-1766	4
Grófarstekkur	262	2	TP2	113	4	Bone, Animal	Lower/middle of cxt 113 where charcoal started	Aeolian Deposit	1104-1766	
Grófarstekkur	262	2	TP2	114	5	Flotation	From midden cut 1 and 2	Pit	1104-1766	3

PlaceName	Farm_Num	Place_Num	Excavation	Context	Sample	Type	DESCRIPTION	Deposit_Class	Date_Range	Volume
Grófarstekkur	262	2	TP2	114	6	Bone, Animal	Bone from midden cuts	Pit	1104-1766	
Grófarstekkur	262	2	TP2	116	7	Flotation	1104 tephra	Tephra	1104-1766	3.5
Grófarstekkur	262	2	TP2	118	8	Flotation	From top and bottom of midden cxt 118	Midden	870-1104	7
Grófarstekkur	262	2	TP2	118	9	Bone, Animal	From cxt118	Midden	870-1104	

Table 4. Find list (National Museum number 2022-45).

National_Register_Number	PlaceName	Farm_Num	Place_Num	Excavation	Context	Find_Num	RETRIEVAL	MATERIAL TYPE	MATERIAL SUBTYPE	OBJECT TYPE	DESCRIPTION	ÞJMS Artifact Number
2022-45-463	Neðri-Ás	251	0	TP2	205	1	Screen	Metal	Iron	Unknown		463
2022-45-464	Neðri-Ás	251	0	TP2	206	2	Screen	Iron	Iron	Rivet		464
2022-45-465	Neðri-Ás	251	0	TP2	209	3	Screen	Iron	Iron		Slag	465
2022-45-455	Kálfsstaðir	257	0	TP1	223	2	Screen	Iron	Iron	Unknown	Iron things	455
2022-45-456	Kálfsstaðir	257	0	TP1	221	1	Hand	Clay		Pipe	1 pipestem	456
2022-45-461	Kálfsstaðir	257	0	TP1	223	4	Screen	Metal		Unknown	Likely soft metal object	461
2022-45-466	Kálfsstaðir	257	0	TP1	224	3	Screen	Iron	Iron		Misc iron objects	466
2022-45-460	Hrappstaðir	258	0	TP1	223	1	Hand	Stone		Whetstone		460
2022-45-467	Hrappstaðir	258	0	TP2	231	2	Screen	Metal		Hook	Iron hook	467
2022-45-458	Hvammur	260	0	TP1	147	2	Screen			Unknown	Possible half of a bead	458
2022-45-459	Hvammur	260	0	TP1	148	3	Screen	Stone		Unknown	Smooth stone	459
2022-45-470	Hvammur	260	0	TP1	146	1	Hand	Metal	Bronze		Bronze object	470
2022-45-462	Reykir	261	0	TP1	151	1	Hand	Metal		Nail	2 complete nail, 1 nail body	462
2022-45-473	Reykir	261	0	TP1	155	3	Screen	Metal		Nail	2 very rusty metal nails	473
2022-45-468	Viðines	262	0	TP1	108	1	Screen	Iron	Iron	Rivet	Rivet, and nail head	468
2022-45-469	Viðines	262	0	TP1	108	3	Screen			Unknown	Lava piece	469

Appendix C – 2022 Excavation Harris matrices

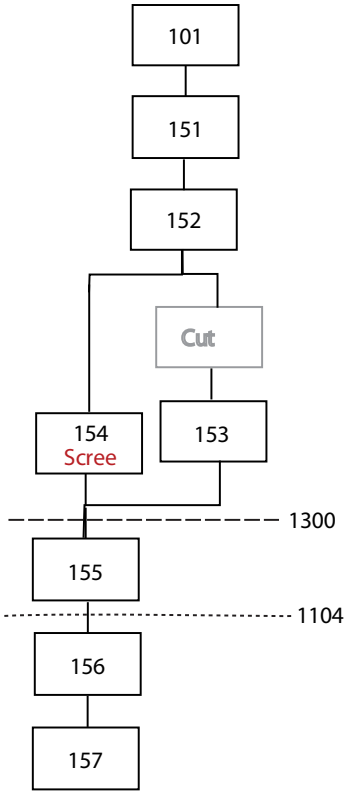

Figure 36.Harris Matrix of Reykir Test Pit 1

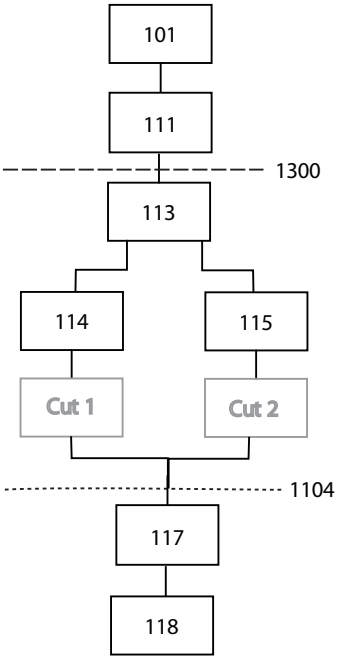

Figure 37.Harris Matrix of Grófarstekkur Test Pit 2

Appendix D –Geophysics

Ground Penetrating Radar (GPR)

In 2022, a GPR survey was conducted over a 50 x 45 m grid with 0.5 m transect spacing and a 25x27 m grid with 20 cm transect spacing. The smaller grid was located directly over the cemetery of the churchyard. The use of GPR to detect unmarked burials and clandestine graves has been reported widely in the archaeological, forensic sciences, and geophysical literature and has been successfully applied previously at the nearby Stóra Seyla farm (Damiata, et al. 2013).

As to whether a burial is detectable by GPR depends on various factors. In particular, a measureable contrast in the geophysical (electromagnetic) property of relative permittivity must exist between the combined elements of a burial and the surrounding naturally compacted soil. The elements of a burial that determine its relative permittivity include: (1) soil moisture content, (2) ground disturbance caused by digging and filling the grave shaft which homogenizes the backfill soil and introduces small air voids into it, (2) skeletal remains, (3) grave goods of sufficient size, if present, and (4) container such as a shroud, vault, coffin or casket, if any. In some instances, a measurable contrast may not exist even though a burial is present. For these cases, the contrast between burial elements and the surrounding undisturbed soil was either insufficient initially or had diminished with time because of, for example, the disintegration of skeletal remains by natural decomposition or through interaction with the local environment.

The GPR survey was performed using a Malå X3M system that was equipped with a 450 MHz antenna (Figure 13). Data were collected at a vertical scan interval of approximately 0.02 m along parallel contiguous transects that were separated by 0.2 m. The data collection was guided by stretching a fiberglass measuring tape between the endpoints of 1-m spaced transects. Distance along the line was recorded by a wheel. The survey was conducted in a uni-directional manner (i.e., from south to north). In total, 71 radar profiles were collected and 1,065 linear meters were traversed for the survey.

Data Processing

The data were processed using GPR-Slice software (see www.gpr-survey.com; Goodman et al. 1995; Goodman et al. 2007; Goodman et al. 2008). The raw vertical scan data were gained, resampled and filtered (background removal and boxcar) to produce processed 2-D radargrams. On these radargrams, the presence of strong reflectors is indicated by a black-and-white banding pattern. Note that the raw data were collected in terms of the two-way

travel time of reflected energy. To convert to a depth scale, a radar wave velocity of 0.057 m/ns was used. The processed radargrams were next combined to produce a pseudo three-dimensional data set.

Appendix E – 2022 Coring Data

The coring data is permanently archived and publicly available from http://www.fiskecenter.umb.edu/HASP/HASP_2022_core_data.zip or https://arcticdata.io/catalog/portals/hasp where it can be downloaded. Blank cells or cells with N/A indicate that the researcher did not fill in the data or that there was an instrument failure and only partial data was retained. The comma-separated value (CSV) files use UTF-8 encoding. There are three tables: coring locations, core layers, and core tephra. The tables should be joined by the Core_ID field.

General Coring results

Broad trends from general coring results away frp, farm mounds shallow (top part of Table 5). suggest that the tephra layers generally fall in sequential order, although the LNL and the Vj~1000 have so few examples from any given place that the deposit depth. That being said, the H-1766 is mostly in the root mat, and infrequently appears, but when it is identified, it is at about 5 cm bgs. In general, at 10 cm bgs the H-1300 tephra is identified and at 17 cm bgs is the H-1104. The H-1104 is the second most commonly identified tephra layer (about 17% of cores). The H3/H4 tephras are most commonly identified (about 20% of cores) and they are deepest at about 20 cm bgs. If these cores are any guide to general depositional trends, then the last 254 years between 2020 and 1766 had a soil deposition rate of about 2 cm per 100 years (5/254x100). However, because much of that depth is not actual soil but root mat and other organic material, this is probably a substantial overestimate. Between 1300 and 1766 (476 years) there would have been about 1.05 cm of soil per 100 years (5/476x100). Between 1104 and 1300 (196 years) would have been about 3.6 cm of soil per 100 years (7/196x100). Finally assuming that erosion started in earnest in AD 877 and the H3/H4 tephra layer is a proxy for that LNT depth, then the soil deposition rate from 877-1104 was about 1.08 cm per 100 years (3/227x100). This is probably a maximum number as there is almost certainly some prehistoric erosion in Iceland This would imply that for the farms investigated in Hjaltadalur, the maximum soil deposition rate is between 1104 and 1300. While this general trend is consistent with other areas that have been cored (maximum soil deposition took place between 1104-1300, the LNL-1104 rate is much slower in Hjaltadalur than in Hegranes.

In general, there are very few deposits that are clearly between 1104-1300 (Table 6).

Table 5. Tephra identification counts, depths, and percentages in non-farm mound contexts, in farm mound contexts and the differences between farm mound and non-farm mound contexts. Average depths for all sites are weighted by counts are weighted by count. Depths are in cm. Note that Víðines is combined with Grófarstekkur.

Non-farm mound cores

			H3/H4			LNL			1000			1104			1300			1776		
Place Name	**Count**	**Mean depth**	**Count**	**Mean depth**	**%**	**Count**	**Mean depth**	**%**	**Count**	**Mean depth**	**%**	**Count**	**Mean depth**	**%**	**Count**	**Mean depth**	**%**	**Count**	**Mean depth**	**%**
Hof	849	36.37	198	42.7	23%	35	36.5	4%	12	36.3	1%	124	28.1	15%	52	21.7	6%	27	13.2	3%
Hólar	1042	38.29	368	40.9	35%	26	33.4	2%	1	39.0	0%	165	29.7	16%	14	29.8	1%	4	28.5	0%
Hrafnhóll	149	22.72	4	36.3	3%	5	37.0	3%	0		0%	9	31.7	6%	6	22.3	4%	2	25.5	1%
Hrappstaðir	129	41.12	37	41.9	29%	12	45.3	9%	0		0%	12	42.6	9%	1	30.0	1%	4	21.5	3%
Hvammur	78	19.66	0		0%	0		0%	0		0%	1	45.0	1%	4	22.8	5%	6	11.2	8%
Kálfsstaðir	57	57.96	18	58.8	32%	7	42.3	12%	0		0%	9	32.4	16%	1	30.0	2%	0		0%
Neðri-Ás	265	38.65	63	40.8	24%	11	49.4	4%	1	54.0	0%	39	30.3	15%	15	31.0	6%	2	5.5	1%
Reykir	165	22.06	9	48.6	5%	6	35.8	4%	1	32.0	1%	8	26.4	5%	15	25.9	9%	25	9.3	15%
Víðines	277	38.08	60	38.4	22%	13	39.2	5%	1	40.0	0%	39	29.0	14%	29	25.4	10%	19	12.4	7%
Average / total		*34.99*	*757*	*41.7*		*115*	*38.6*		*16*	*37.6*		*406*	*29.7*		*137*	*25.0*		*89*	*13.0*	
Farm Mound Cores																				
Hof	145	74.00	48	67.1	33%	13	45.6	9%	7	48.9	5%	46	40.9	32%	21	32.2	14%	5	11.0	3%
Hólar	328	83.30	126	63.0	38%	36	71.2	11%	9	78.4	3%	88	55.8	27%	28	44.1	9%	3	21.0	1%
Hrafnhóll	44	49.96	2	68.5	5%	8	59.4	18%	0		0%	14	44.0	32%	3	33.7	7%	0		0%
Hrappstaðir	99	69.10	53	57.7	54%	25	57.3	25%	4	57.5	4%	31	49.3	31%	15	32.0	15%	4	27.0	4%
Hvammur	63	64.94	1	60.0	2%	1	74.0	2%	0		0%	5	62.8	8%	16	72.2	25%	8	29.9	13%
Kálfsstaðir	85	96.08	15	80.2	18%	6	79.2	7%	1	133.0	1%	43	64.9	51%	30	51.4	35%	2	22.0	2%
Neðri-Ás	198	61.74	71	54.3	36%	21	63.9	11%	18	42.3	9%	64	42.3	32%	22	40.0	11%			0%
Reykir	67	51.91	2	75.0	3%	0		0%	1	106.0	1%	4	87.0	6%	12	58.2	18%	7	23.3	10%
Víðines	101	56.24	27	54.0	27%	5	42.2	5%	5	58.0	5%	33	37.2	33%	20	25.1	20%	13	13.2	13%
Average		*67.47*	*345*	*61.1*		*115*	*62.3*		*45*	*57.1*		*328*	*49.8*		*167*	*43.5*		*42*	*20.1*	

Difference between farm mound and non-farm mound cores

			H3/H4			LNL			1000			1104			1300			1776		
	Total Cores	**Mean depth difference**	**Total cores**	**Mean Difference in Depth**	**% Difference in count**	**Total cores**	**Mean Difference in Depth**	**% Difference in count**	**Total cores**	**Mean Difference in Depth**	**% Difference in count**	**Total cores**	**Mean Difference in Depth**	**% Difference in count**	**Total cores**	**Mean Difference in Depth**	**% Difference in count**	**Total cores**	**Mean Difference in Depth**	**% Difference in count**
Hof	994	37.63	246	24.5	10%	48	9.1	5%	19.00	12.5	3%	170	12.7	17%	73	10.5	8%	32	(2.2)	0%
Hólar	1370	45.01	494	22.2	3%	62	37.7	8%	10.00	39.4	3%	253	26.1	11%	42	14.3	7%	7	(7.5)	1%
Hrafnhóll	193	27.24	6	32.3	2%	13	22.4	15%	0.00		0%	23	12.3	26%	9	11.3	3%	2		-1%
Hrappstaðir	228	27.98	90	15.7	25%	37	11.9	16%	4.00		4%	43	6.7	22%	16	2.0	14%	8	5.5	1%
Hvammur	141	45.28	1	60.0	2%	1		2%	0.00		0%	6	17.8	7%	20	49.4	20%	14	18.7	5%
Kálfsstaðir	142	38.13	33	21.4	-14%	13	36.9	-5%	1.00		1%	52	32.4	35%	31	21.4	34%	2		2%
Neðri-Ás	463	23.09	134	13.4	12%	32	14.5	6%	19.00	(11.7)	9%	103	12.0	18%	37	9.0	5%	2		-1%
Reykir	232	29.86	11	26.4	-2%	6		-4%	2.00	74.0	1%	12	60.6	1%	27	32.2	9%	32	14.0	-5%
Víðines	378	18.16	87	15.6	5%	18	3.0	0%	6.00	18.0	5%	72	8.2	19%	49	(0.4)	9%	32	0.7	6%
Average Difference		*32.49*		*19.42*			*23.68*			*19.53*			*20.10*			*18.56*			*7.11*	

Table 6. Coring deposit counts for cultural deposit classes for the three time periods by place. Note that Víðines is combined with Grófarstekkur.

	Pre-1104			1104-1300			Post-1300		
Place	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes
Hof	137	812	31	183	796	1	168	784	28
Hólar	357	834	68	482	767	10	466	763	30
Hrafnhóll	28	153	12	40	150	3	39	147	7
Hrappstaðir	65	143	20	83	141	4	73	143	12
Hvammur	49	90	2	51	88	2	35	79	27
Kálfsstaðir	38	67	37	60	58	24	56	58	28
Neðri-Ás	116	296	51	162	291	10	156	277	30
Reykir	59	171	2	60	170	2	55	160	17
Viðines	66	289	23	97	279	2	87	274	17

Table 7. Coring deposit classes for pre-1104 yes or maybe cores with mean depth of deposit class by place. Note that Víðines is combined with Grófarstekkur.

	LDC		Midden		Turf		Floor	
Place	n	Mean depth	n	Mean depth	n	Mean depth	n	Mean depth
Hof	30	0.47	30	0.67	38	0.52		
Hólar	94	0.66	90	0.78	44	0.62	5	0.708
Hrafnhóll	10	0.45	11	0.39	14	0.34		
Hrappstaðir	15	0.39	50	0.56	23	0.42		
Hvammur	14	0.46	26	0.84	21	0.48		
Kálfsstaðir	7	0.40	47	0.89	15	0.77		
Neðri-Ás	40	0.43	67	0.59	59	0.52		
Reykir	13	0.28	30	0.64	16	0.26		
Viðines	14	0.42	28	0.45	28	0.48	1	1.11

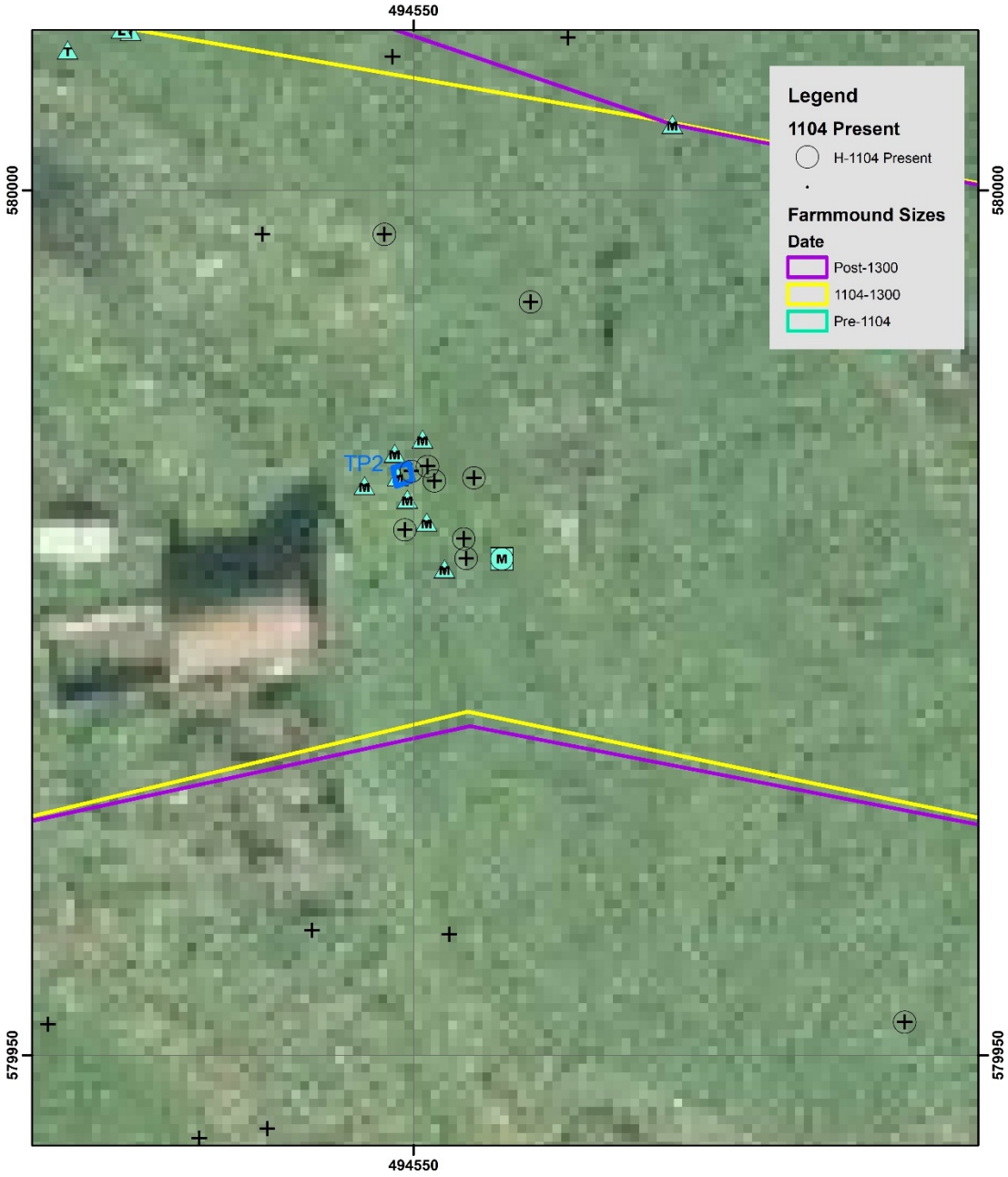

Figure 38. Map of Hlíð pre-1104 coring deposits with the presence of H-1104 tephra

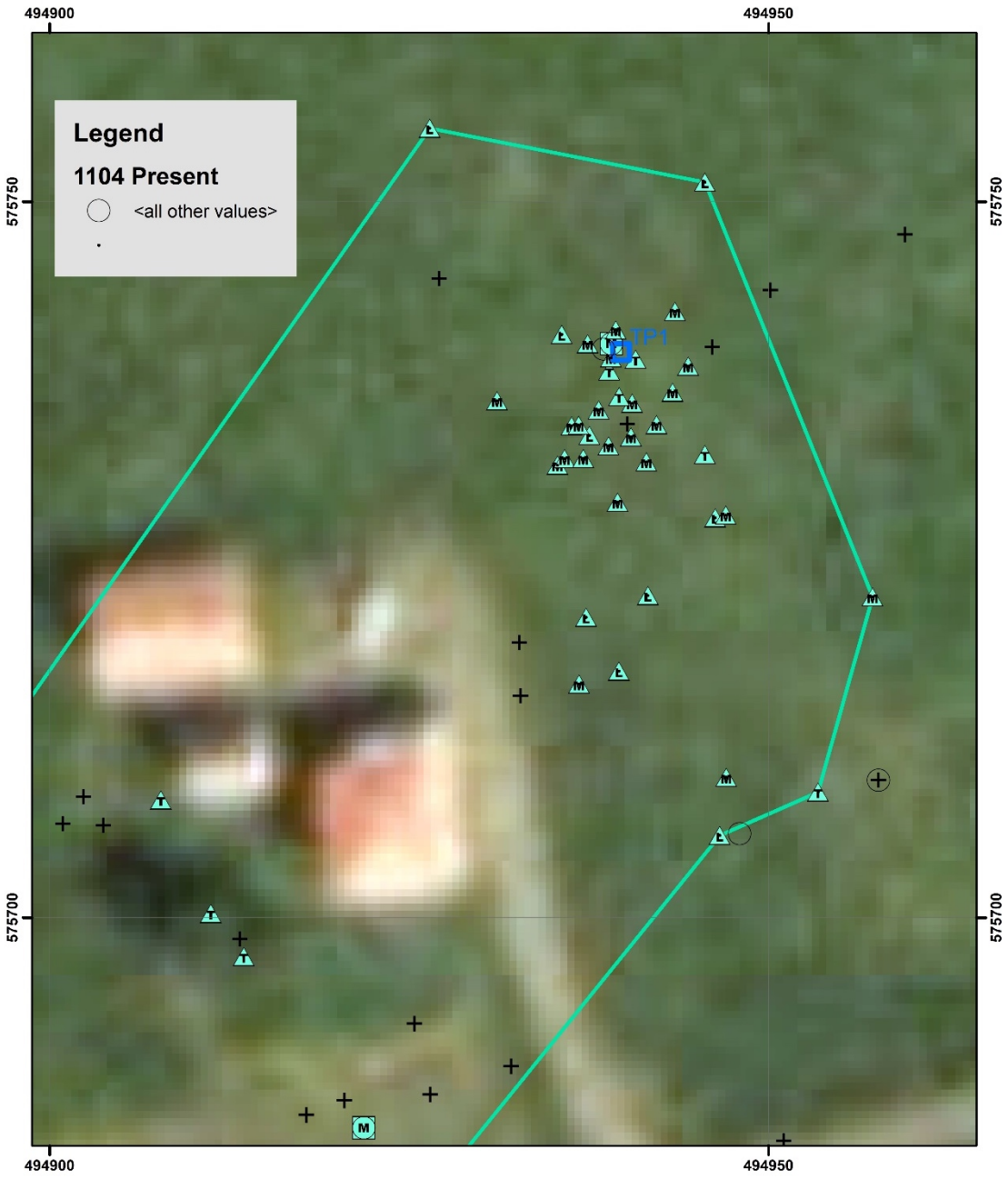

Figure 39. Map of Hvammur pre-1104 coring deposits with the presence of H-1104 tephra

Data set 1 Coring locations.

The location of each core taken as part of archaeological work. Coordinates are in ISN 93 - Lambert 1993.

Fields

Core_ID: Unique identification code for each core. Usually consisting of a farm number (and place), the year recorded, and a sequential number

Place: Name of place on a farm. if the place and farm are the same, it usually indicates that cores were taken on and around the main visible farm mound.

Jarðabók Johnsens_ID: A unique number of a modern farmstead in Skagafjörður derived from a land registry from 1847.

Place_ID: A sequential number for a sub-location on a farmstead. Corresponds to Place

Farm: A sequential number for a sub-location on a farmstead. Corresponds to Place

ISN93_East: Coordinate in ISNET93. ISNET93 (or ISN93) is the reference coordinates of GPS measurements for Iceland

ISN93_North: Coordinate in ISNET93. ISNET93 (or ISN93) is the reference coordinates of GPS measurements for Iceland

Date: Date core recorded

Full_core: If the full depth of the JMC backsaver core (1.2 m) was reached

End_depth: Depth of core below ground surface

Arch_Initials: Initials of the archaeologist who placed the core

Comments: Any notes about core

Core: Sequential core number

Data set 2: Core layers

Each layer (natural and cultural) from the core taken as part of archaeological work. Layers from a single core form a sequence.

Fields

Core_ID: Unique identification code for each core. Usually consisting of a farm number (and place), the year recorded, and a sequential number

Category: Description of layer

Top_depth: Depth of top of the layer below ground surface

Bottom_depth: Depth of bottom of the layer below ground surface

Inorganic_inclusions: Gravel, tephra, or other inorganic inclusions in layer

Organic_inclusions: Organic inclusions (e.g., bone) in layer

Tephra_in_turf: List of tephra, if the identified layer is identified in building turf (Only necessary if identified layer category is turf.)

Description: Any notes on layer

Core: Sequential core number

Data set 3: core tephra

Each tephra layer from the core taken as part of archaeological work. Tephra layers from a single core form a sequence.

Fields

Core_ID: Unique identification code for each core. Usually consisting of a farm number (and place), the year recorded, and a sequential number

Tephra: Tephra layer - sometimes date (e.g. AD 1300) or tephra layer (e.g., H1)

Depth: Depth below ground surface

Thickness: Thickness of the tephra layer

Description: Notes on tephra

Scheme for display of coring information

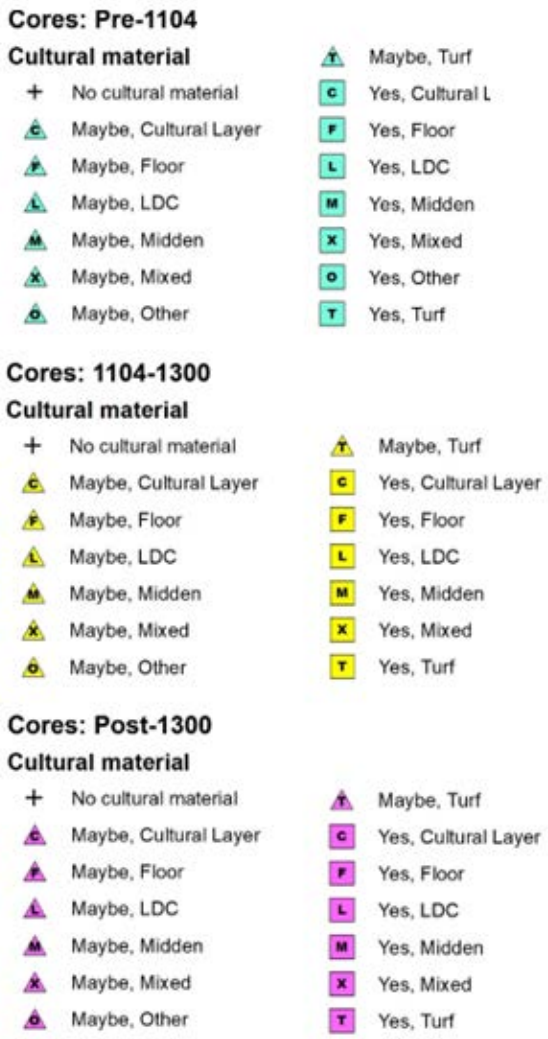

Figure 40. Key for interpreting coring results.

1104-1300 and post-1300 maps

Pre-1104 coring results are presented in the sections of their respective sites above. Coring results from 1104-1300 and Post-1300 are presented here. Interpolated farmstead sizes are also presented with their corresponding cores. Test pit locations are in blue.

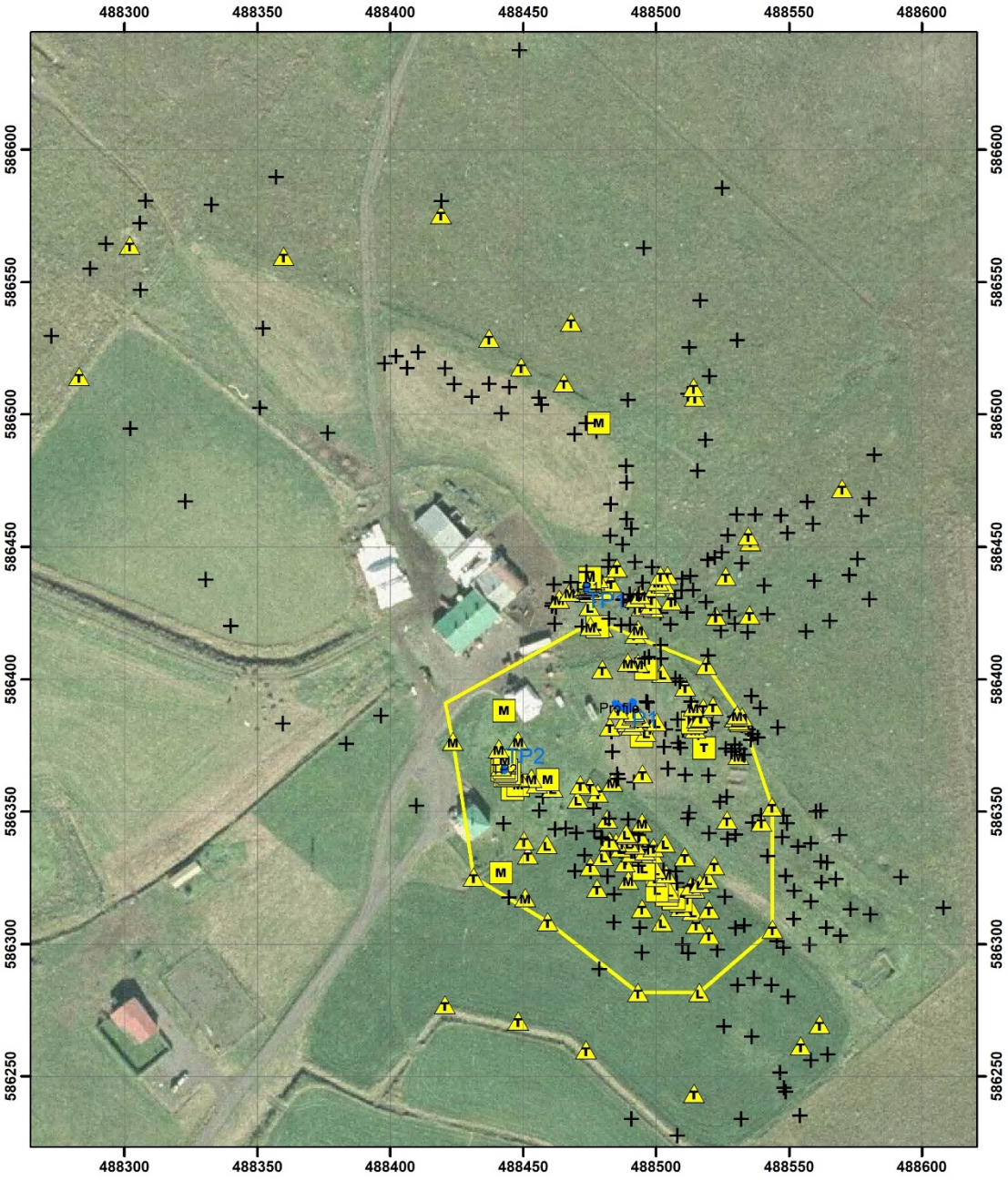

Figure 41. Map of Neðri-Ás 1104-1300 coring results.

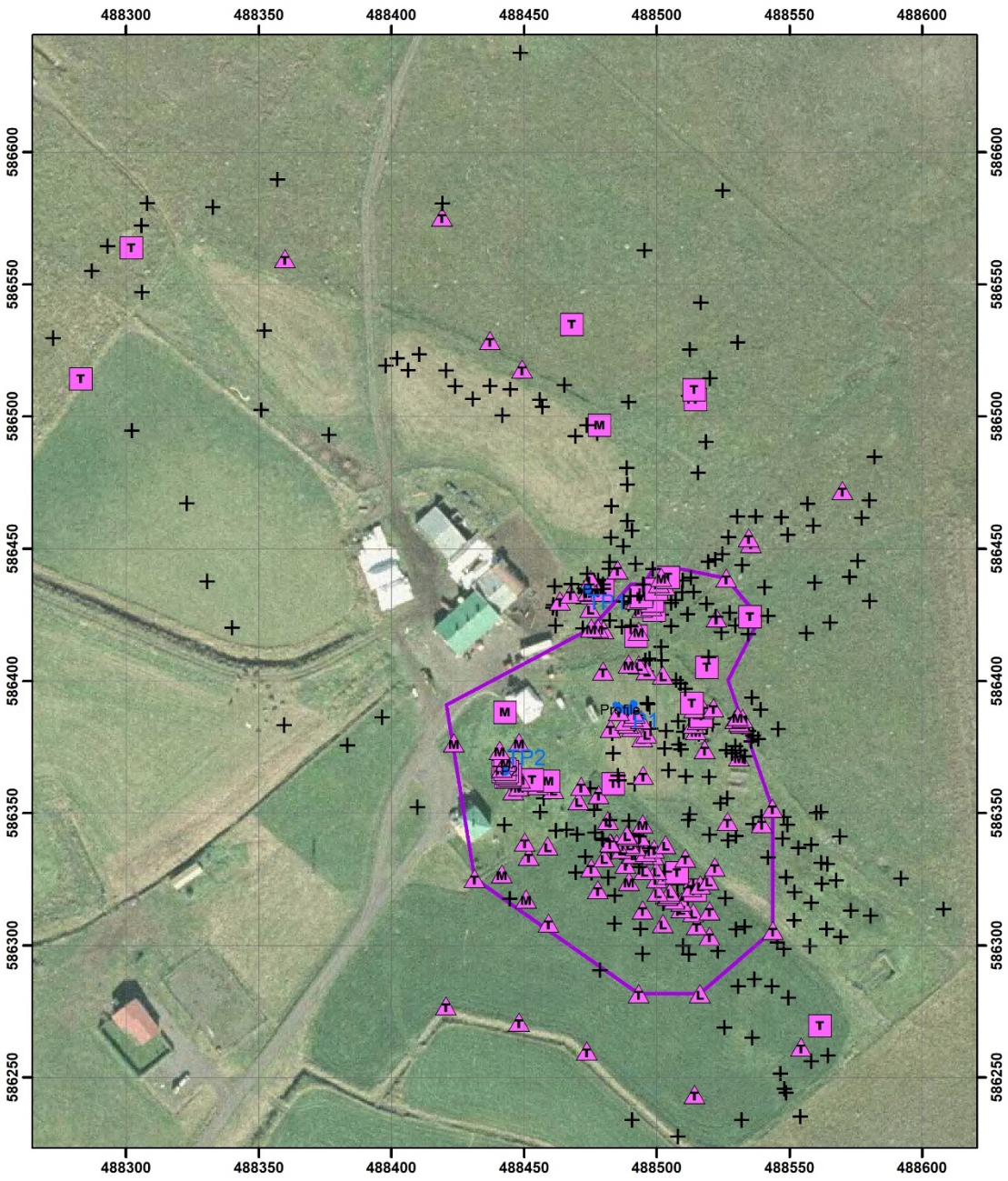

Figure 42. Map of Neðri-Ás post-1300 coring results.

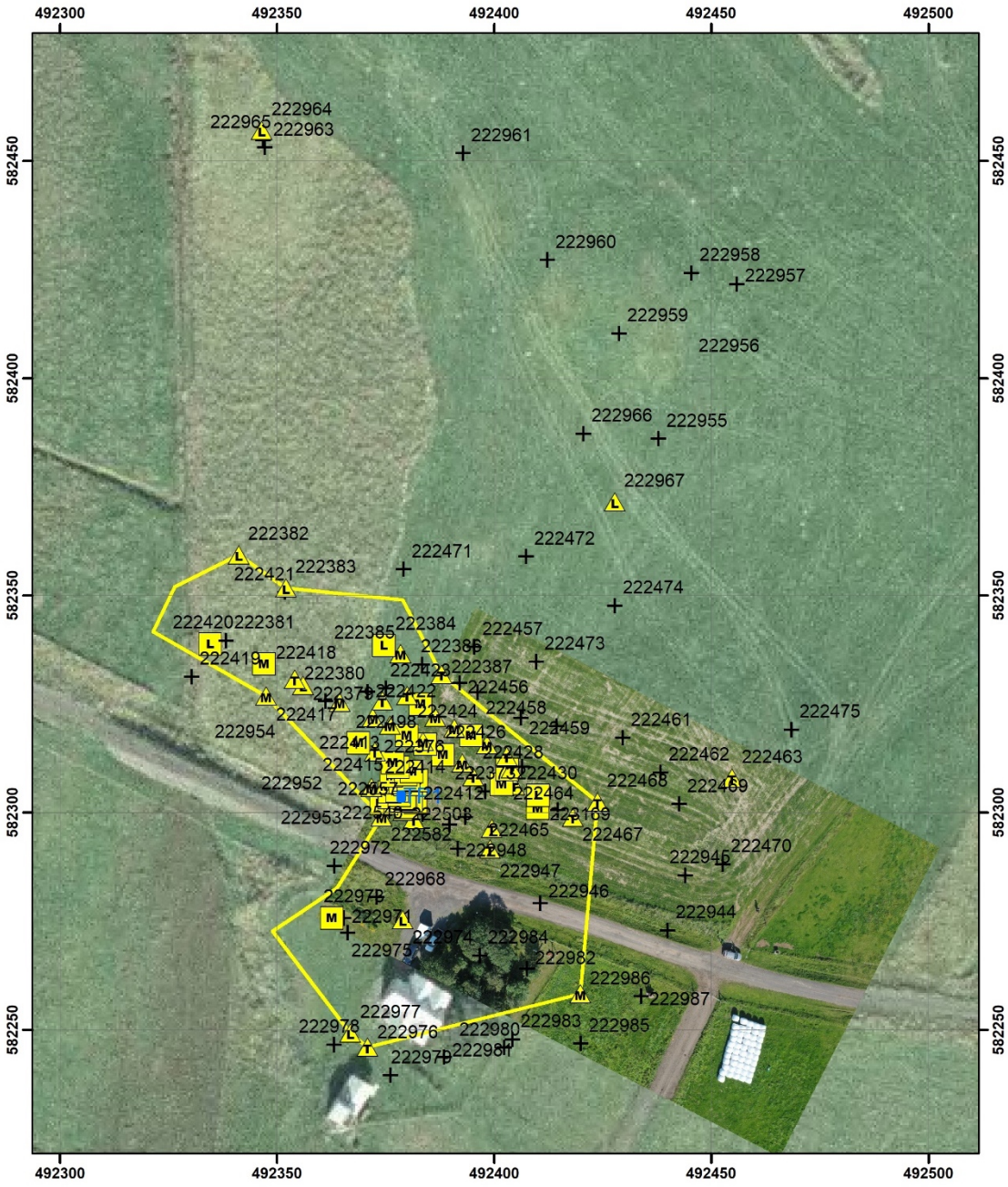

Figure 43. Map of Kálfsstaðir 1104-1300 coring results.

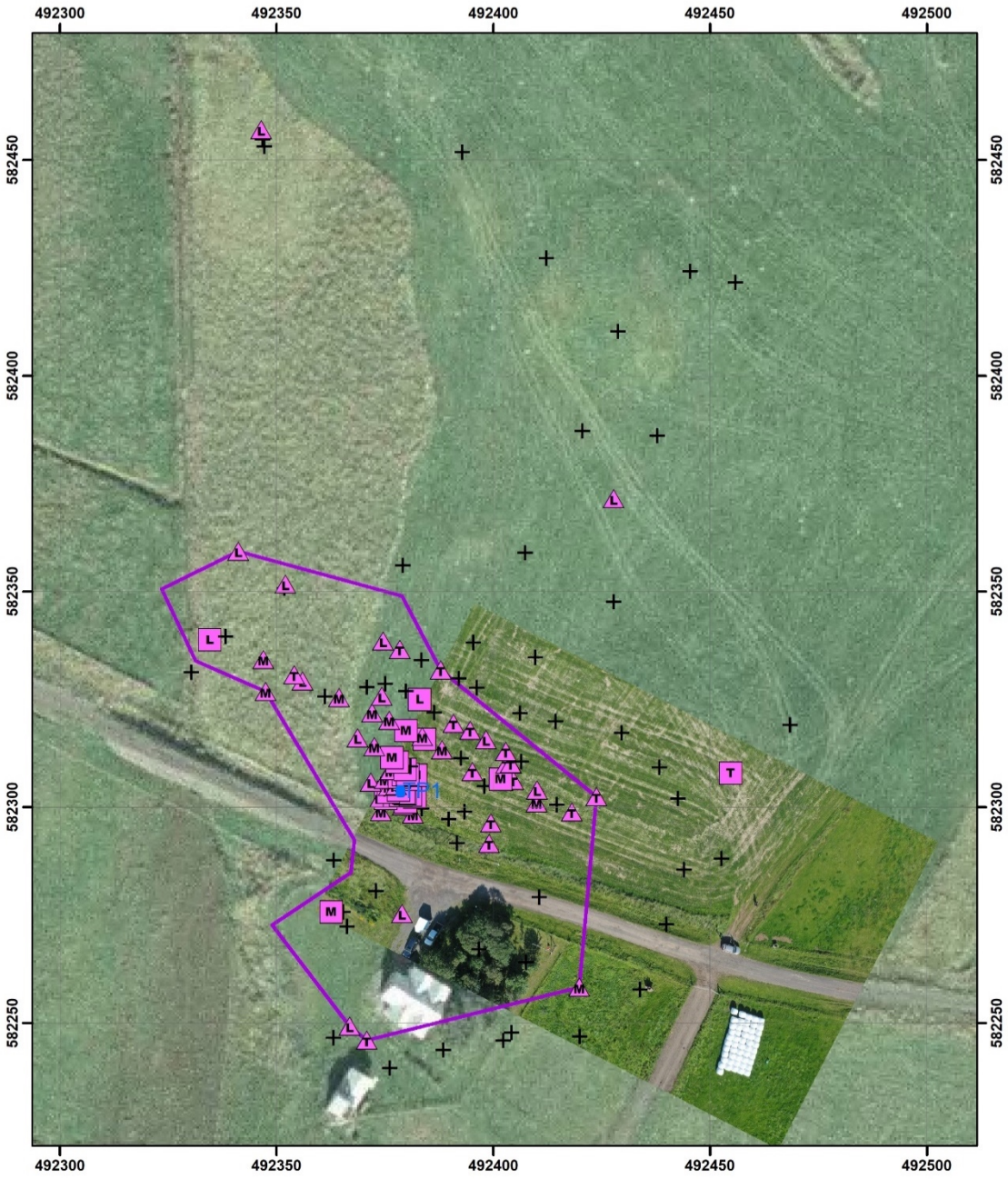

Figure 44. Map of Kálfsstaðir post-1300 coring results.

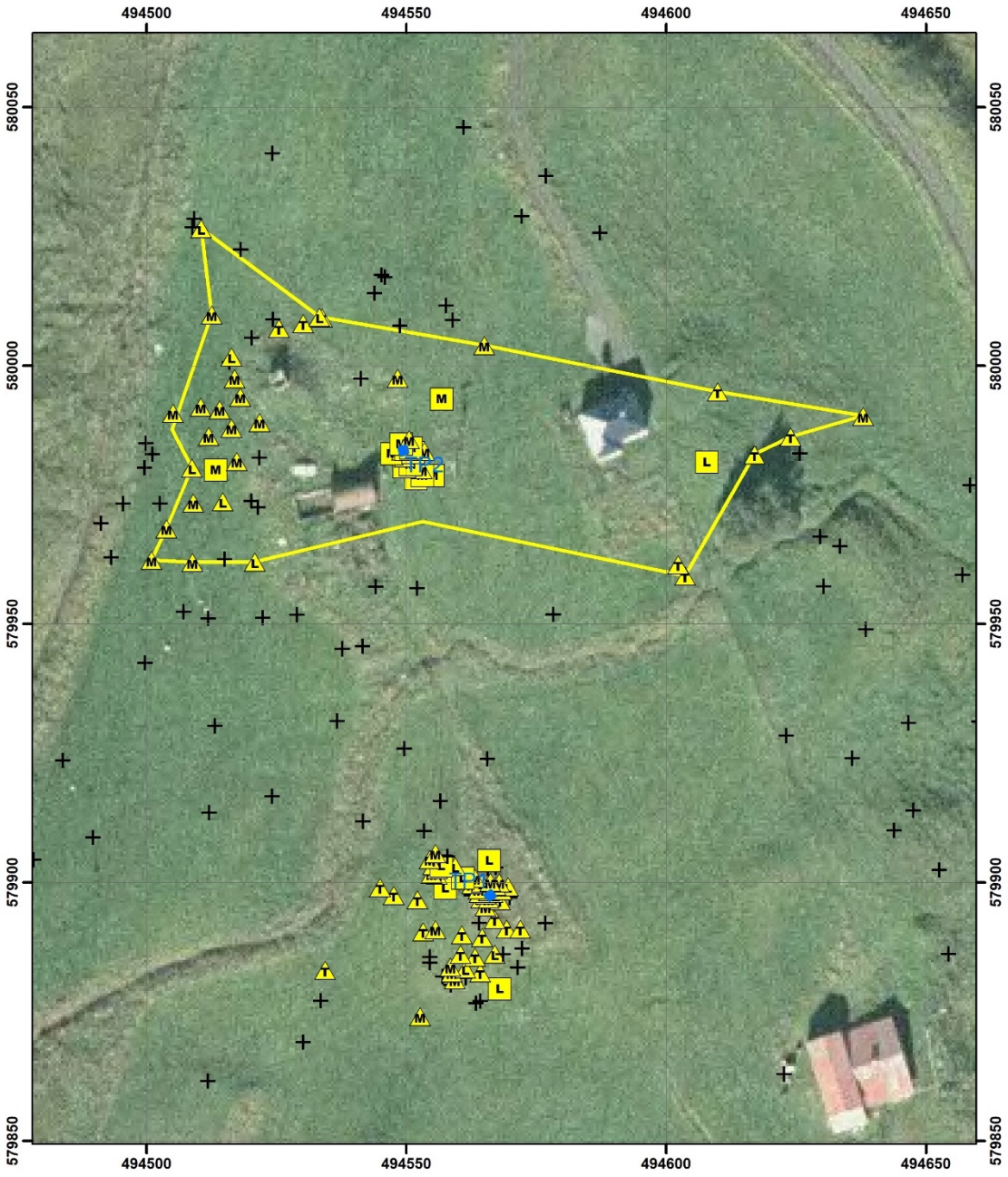

Figure 45. Map of Hlíð 1104-1300 coring results.

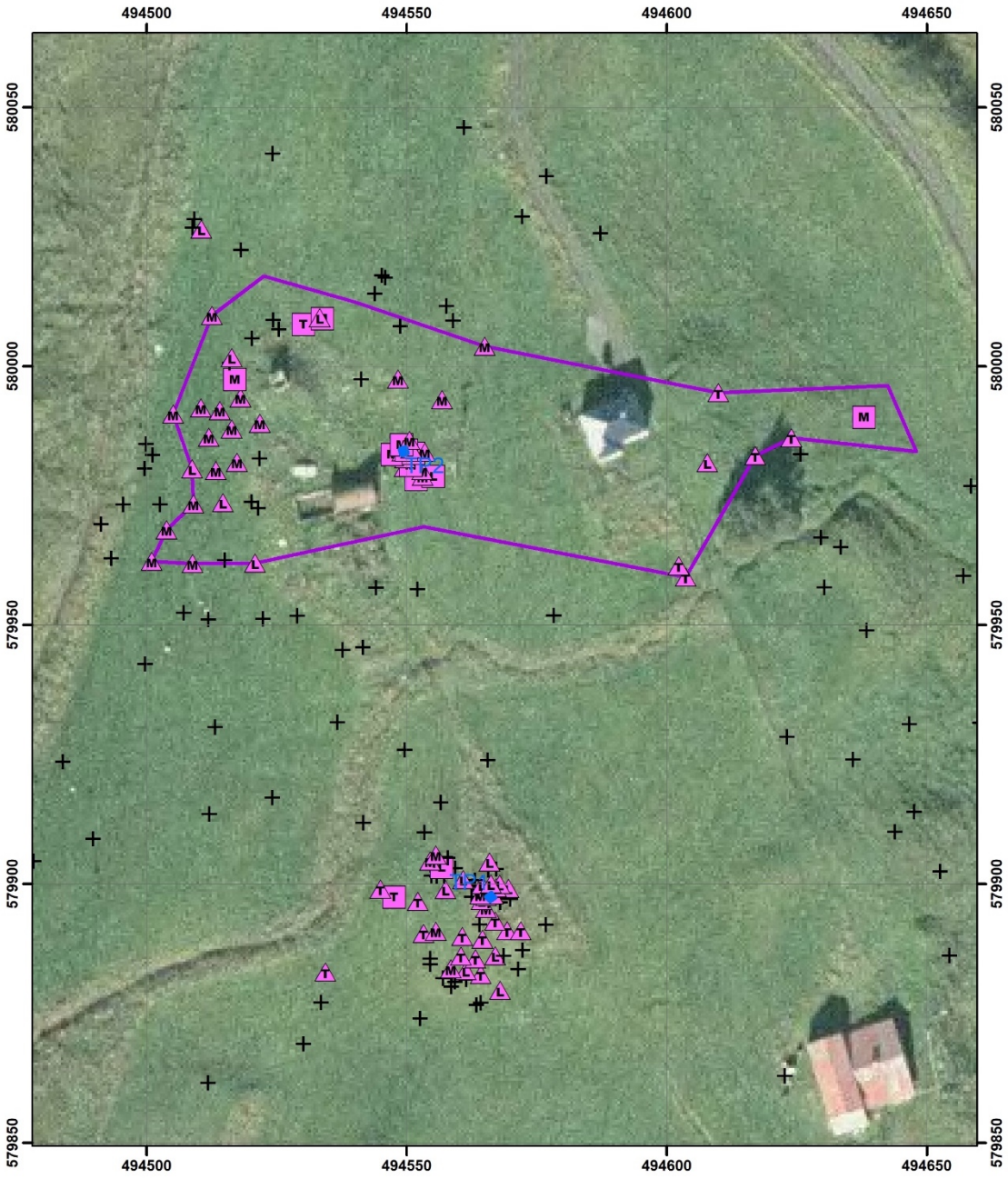

Figure 46. Map of Hlíð post-1300 coring results.

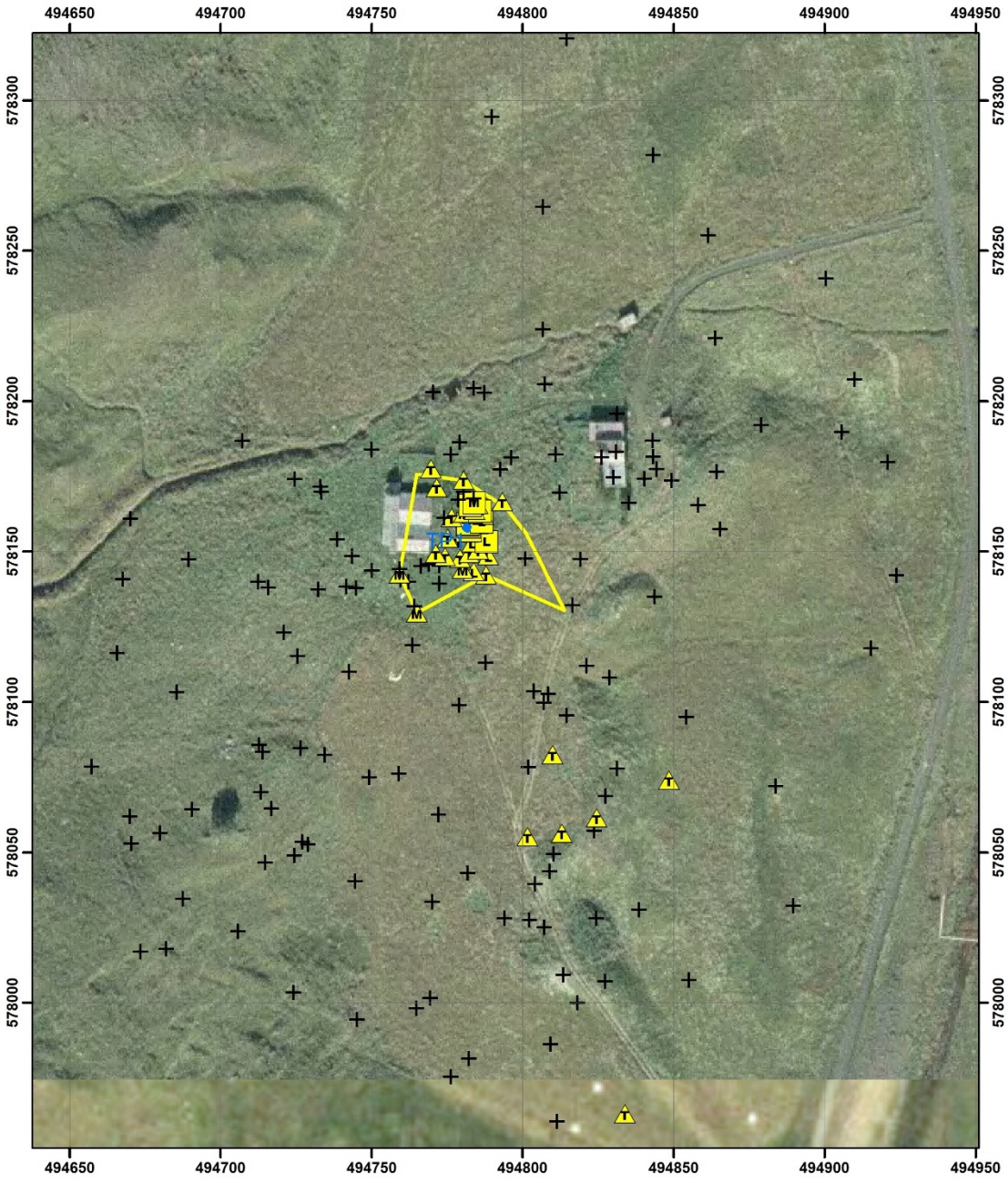

Figure 47. Map of Hrafnhóll 1104-1300 coring results.

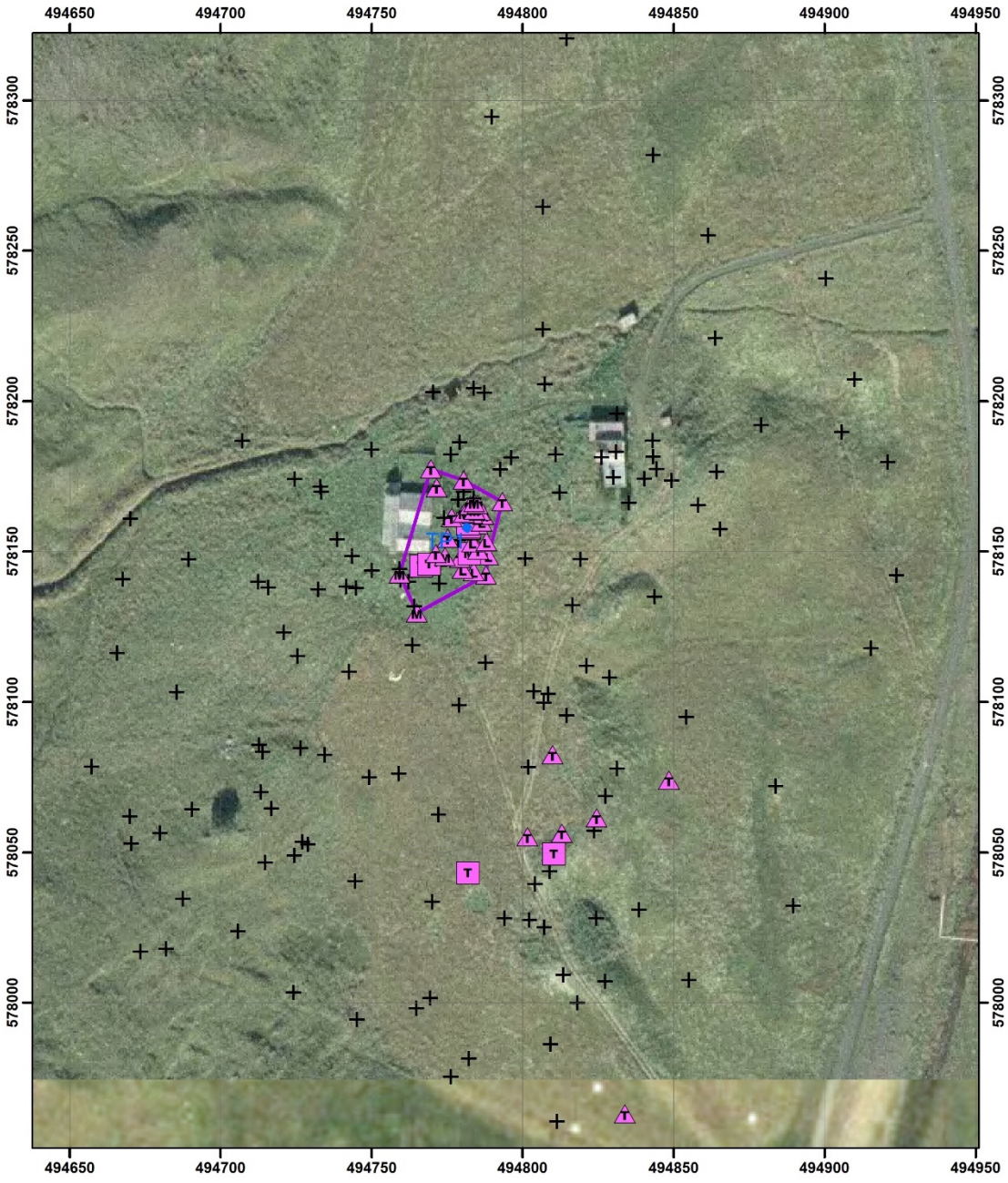

Figure 48. Map of Hrafnhóll post-1300 coring results.

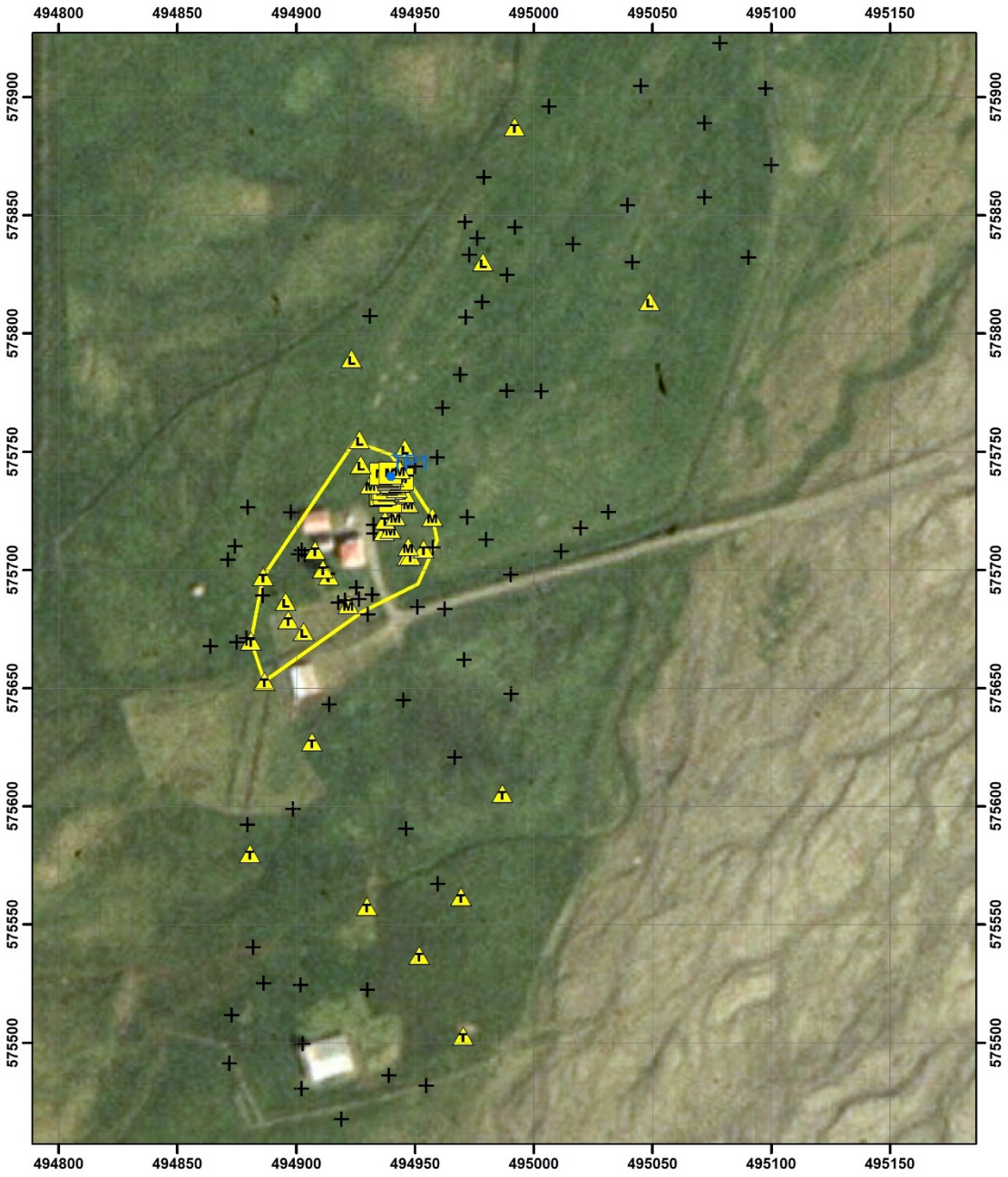

Figure 49. Map of Hvammur 1104-1300 coring results.

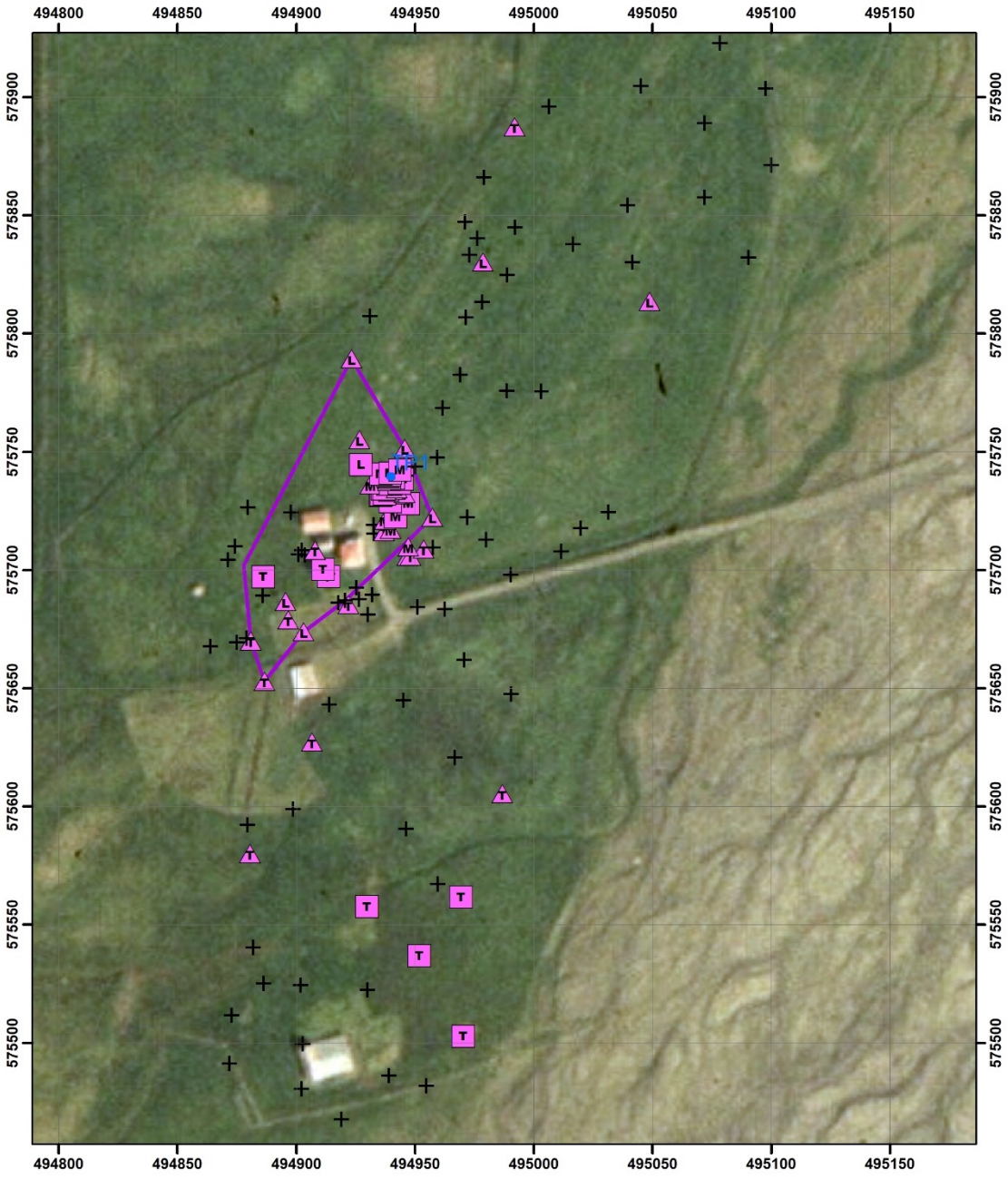

Figure 50. Map of Hvammur post-1300 coring results.

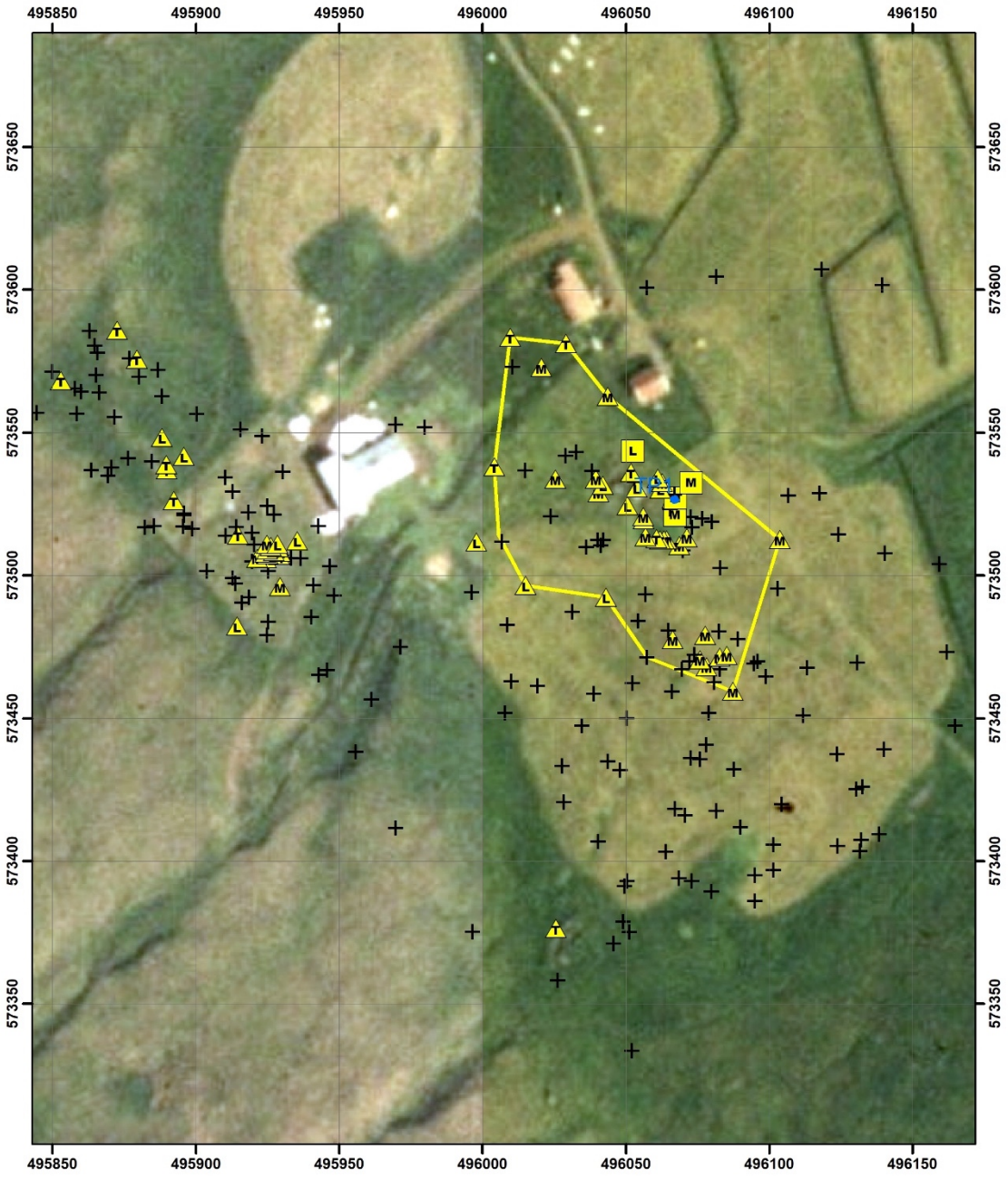

Figure 51. Map of Reykir 1104-1300 coring results.

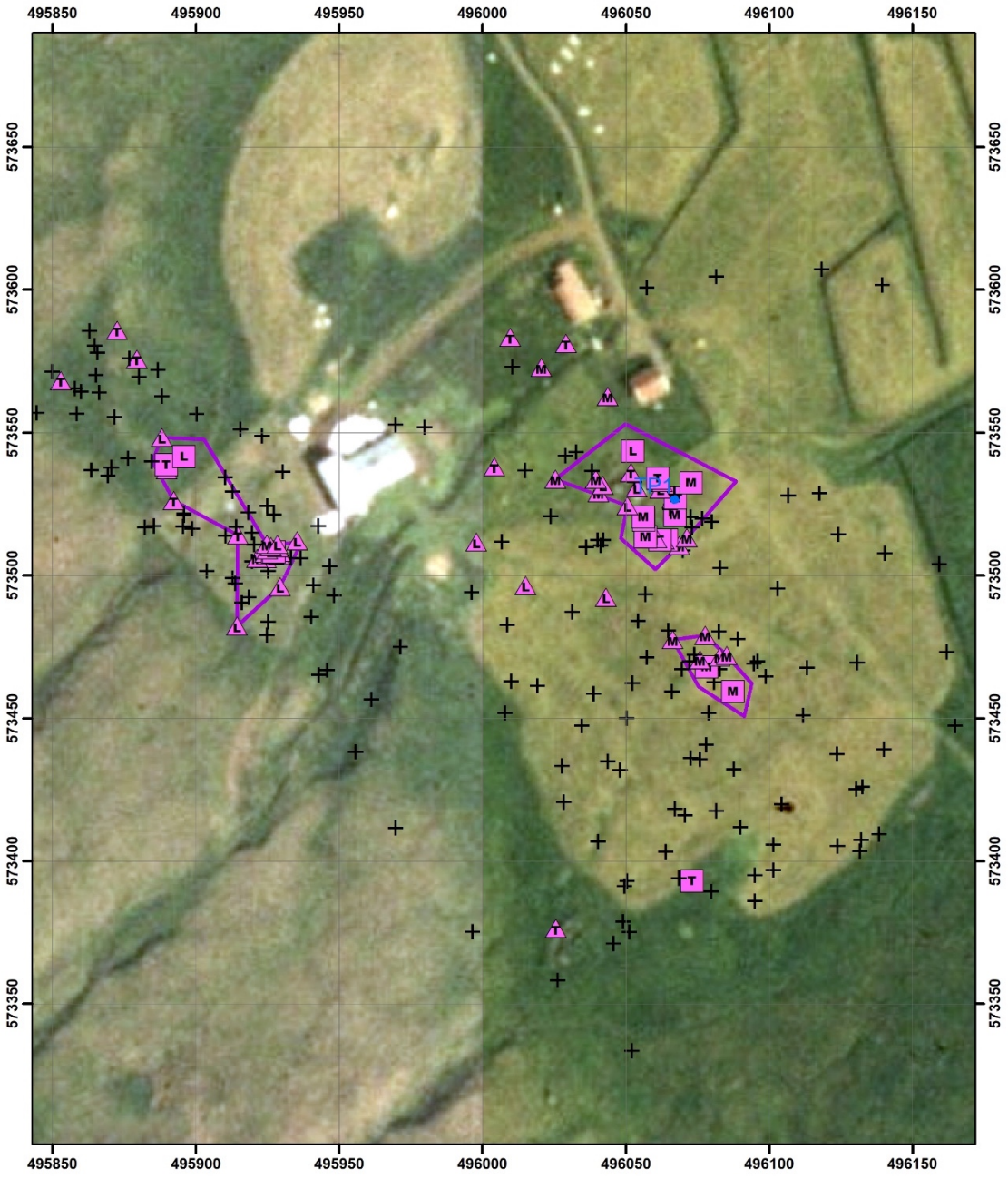

Figure 52. Map of Reykir post-1300 coring results.

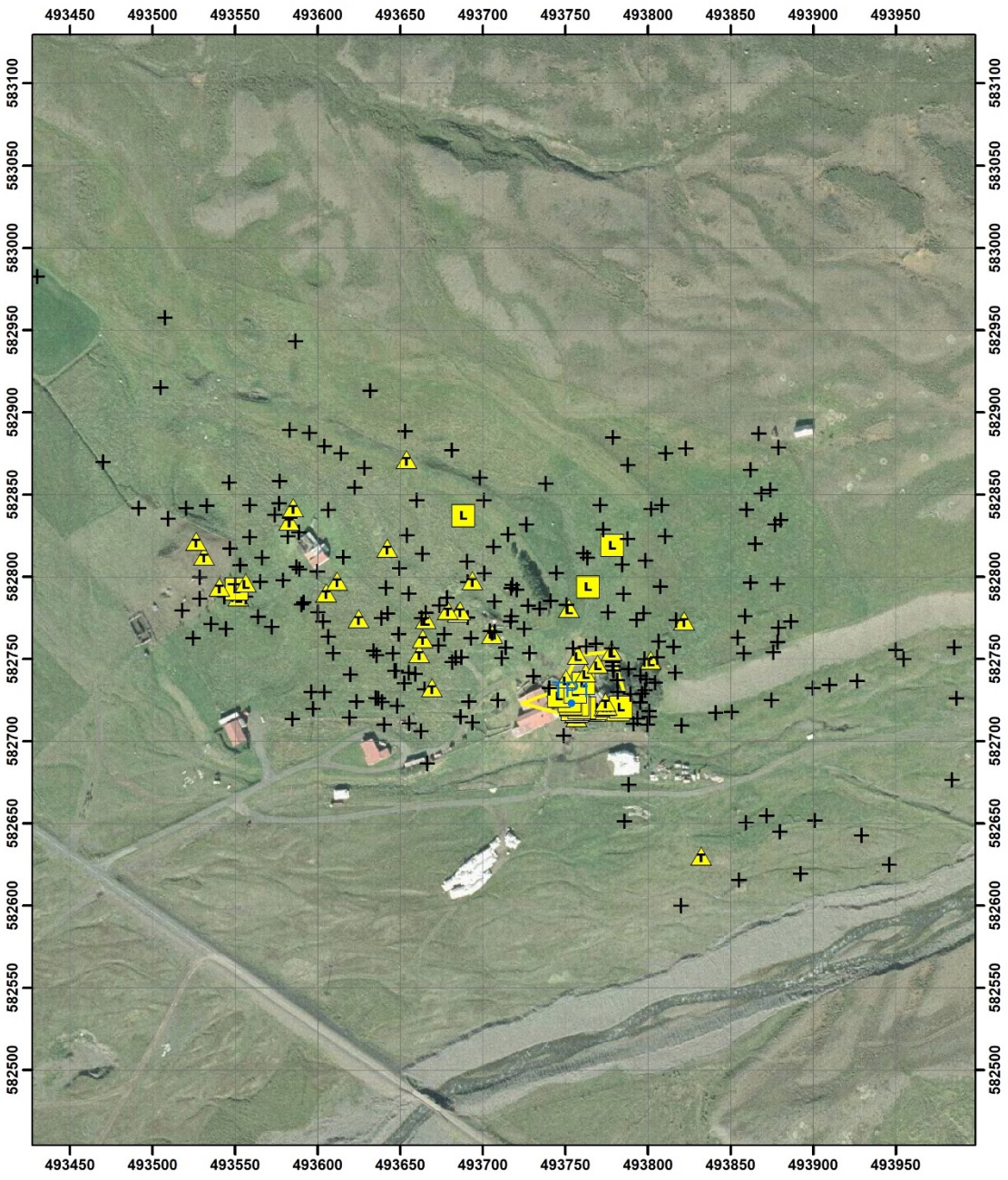

Figure 53. Map of Víðines 1104-1300 coring results.

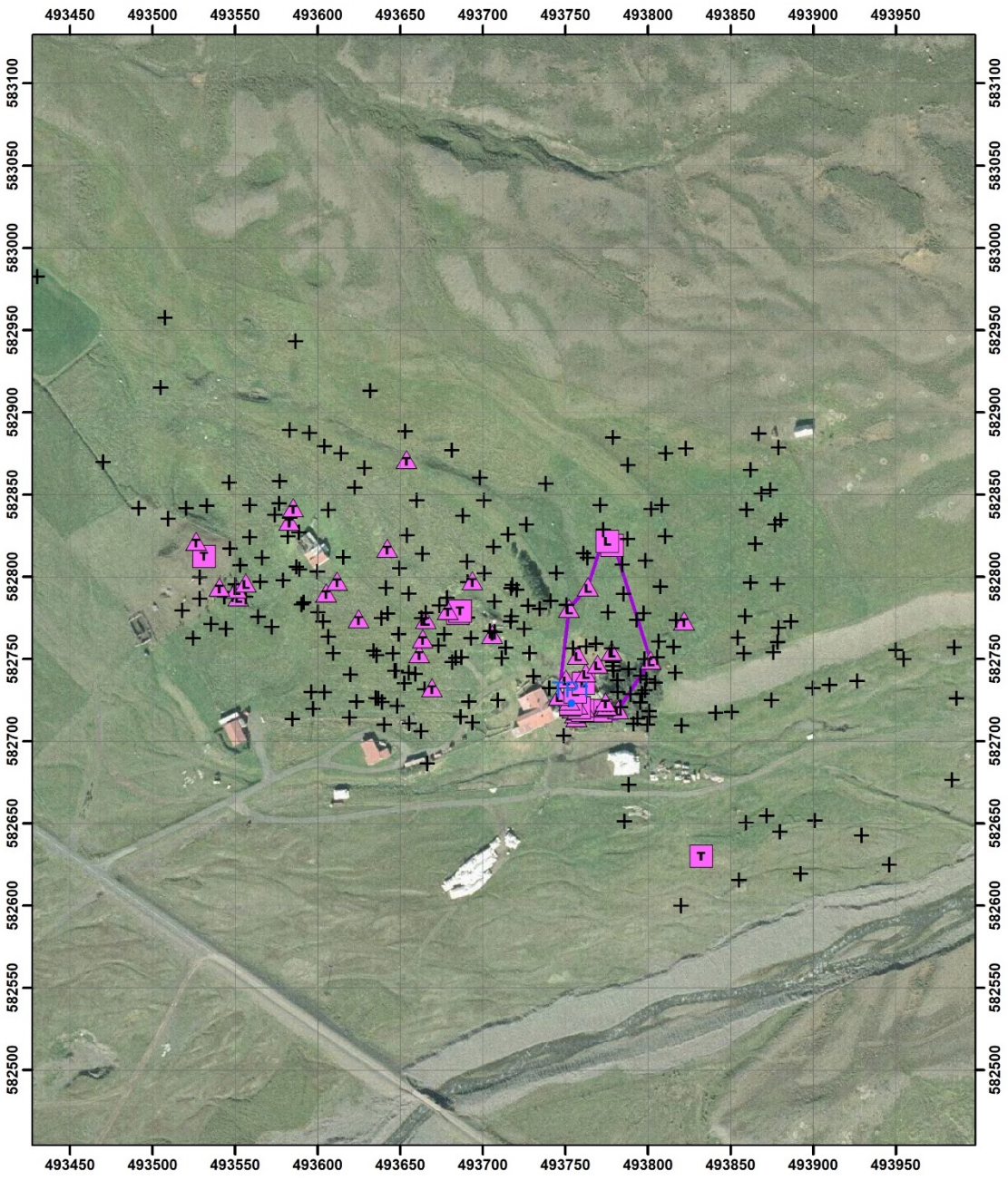

Figure 54. Map of Víðines post-1300 coring results.

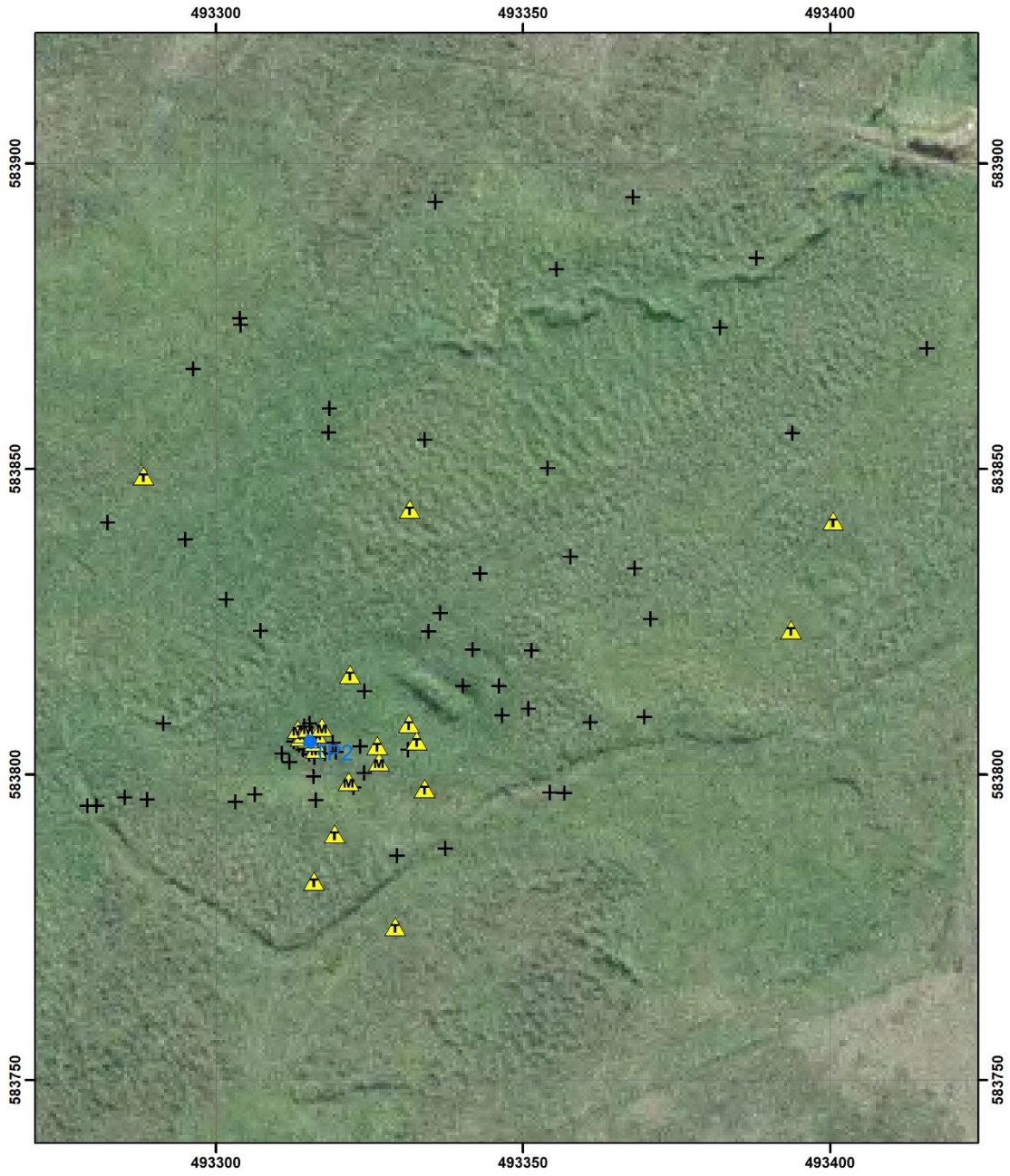

Figure 55. Map of Grófarstekkur 1104-1300 coring results.

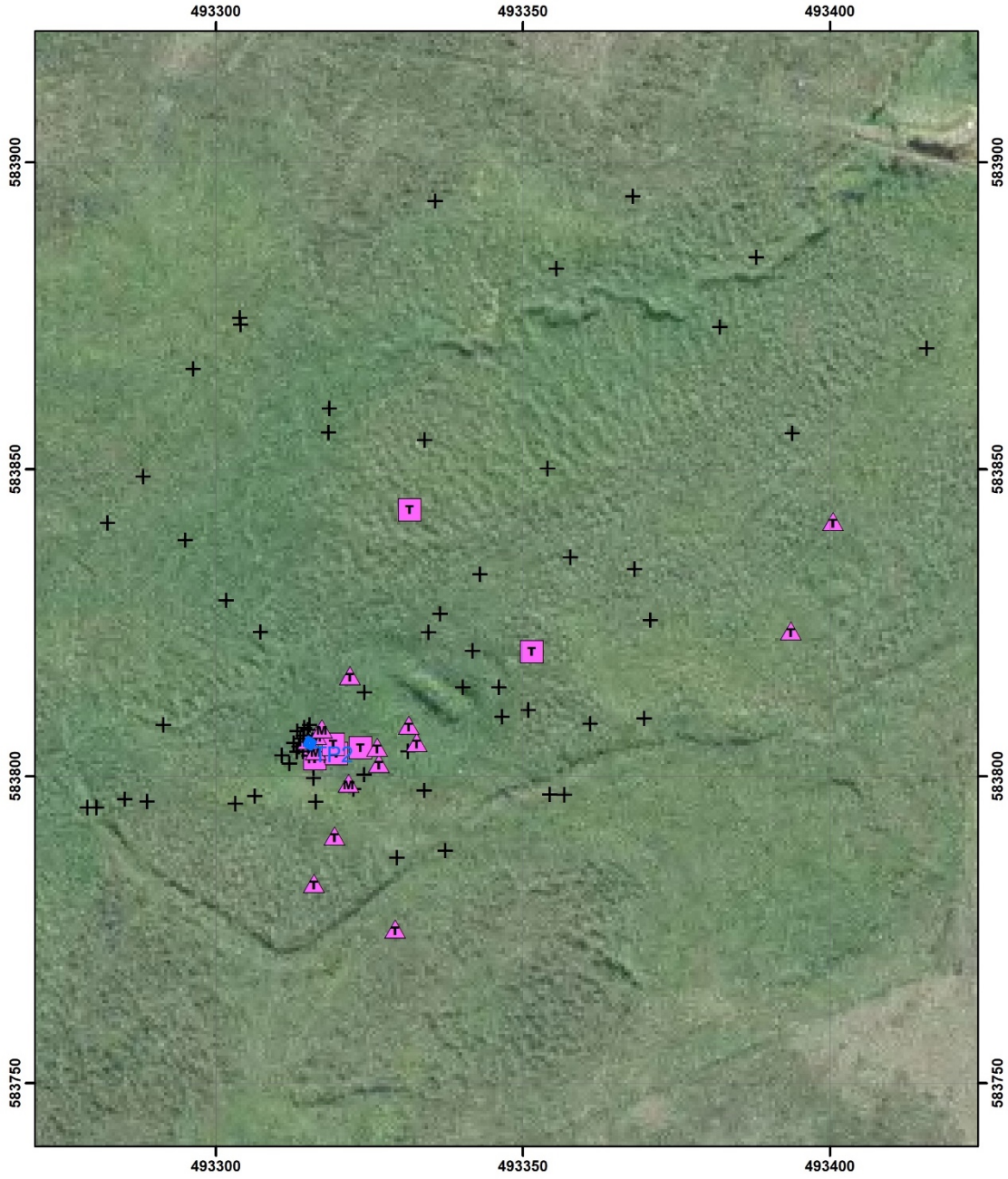

Figure 56. Map of Grófarstekkur post-1300 coring results.

Appendix F – Radiocarbon (AMS) Results

Fourteen AMS dates were submitted to the National Ocean Sciences Accelerator Mass Spectrometry Facility (NOSAMS) at the Woods Hole Oceanographic Institution (WHOI). Radiocarbon samples are all on seeds from flotation collections. Two of the seed samples were not charred (indicated by Plant/Wood in Table 8). Seeds were identified at UMass Boston and processed at NOSAMS. For a description of the methods used to process samples see https://www2.whoi.edu/site/nosams/resources/methods/ (National Ocean Sciences AMS Facility 2023) Four of the AMS dates (marked in read in Table 8) are outside the range of reasonable date ranges for Viking Age Iceland. These 4 dates are not employed in the analysis or models that follows. Repeat samples (UMB-2023-186 to 189)s from those same contexts yielded reasonable date ranges.

In the text, uncalibrated dates (radiocarbon years) are given with their 1σ age error (±) and labeled BP. Calibrated dates are labeled "cal AD" and their 2σ range(s) given. Calibrated dates use IntCal20 (Reimer, et al. 2020) and Marine20 for the marine component of the human bones (Heaton, et al. 2020). Modeled dates are presented in italics and preceded by AD in the text and labeled as modeled in the tables. In general, the median of the highest posterior density (hpd) range is used to describe boundaries and the 95.4% hpd range listed in the accompanying tables. Often different runs of the included Chronological Query Language codes will produce slightly different dates. Because the OxCal (Version 4.4.4) modeling software (Bronk Ramsey 2009) uses sampling from a probability distributions (MCMC) the models have been run multiple times to ensure that the presented tables are representative.

Table 8. Radiocarbon date results

HASP Identification	Type	Process	Sample identification number	F Modern	Fm Err	Age (BP)	Age Error (±)	$\delta^{13}C$	$\Delta^{14}C$	Material submitted
UMB-2022-176, 250P0TP4[111]#1	Charcoal	(OC) Organic Carbon	OS-171373	0.8325	0.0016	1470	15	-25.22	-174.59	14 charred cyperaceae seeds
UMB-2022-177, 250P0TP4[113]#7	Charcoal	(OC) Organic Carbon	OS-171364	0.4995	0.0016	5580	25	-25.83	-504.8	18 charred cyperaceae seeds
UMB-2022-178, 250P0TP5[126]#1	Charcoal	(OC) Organic Carbon	OS-171374	0.8743	0.0017	1080	15	-27.58	-133.2	9 charred stellaria seeds
UMB-2022-179, 250P0TP5[126]#3	Charcoal	(OC) Organic Carbon	OS-171375	0.8721	0.0019	1100	15	-27.15	-135.35	169 charred caryophyllaceae seeds
UMB-2022-180, 260P0TP1[148]#11	Plant/Wood	(OC) Organic Carbon	OS-171376	0.9063	0.0018	790	15	-29.06	-101.6	80 uncharred portulacaceae seeds
UMB-2022-181, 251TP1P0[168]#12	Charcoal	(OC) Organic Carbon	OS-171377	0.8697	0.0017	1120	15	-25.03	-137.8	1 charred hordeum seed
UMB-2022-182, 249P0TP15[141]#7	Charcoal	(OC) Organic Carbon	OS-171378	0.6384	0.0015	3610	20	-25.61	-367.01	115 charred cyperaceae seeds
UMB-2022-183, 249P0TP15[149]#27	Plant/Wood	(OC) Organic Carbon	OS-171365	0.9014	0.0021	835	20	-29.06	-106.32	22 uncharred caryophyllaceae seeds
UMB-2022-184, 250P0TP6[137]#7	Charcoal	(OC) Organic Carbon	OS-171366	0.9590	0.0020	335	15		-49.24	7 charred cyperaceae seeds
UMB-2022-185, 249P0TP14[133]#4	Charcoal	(OC) Organic Carbon	OS-171379	0.6333	0.0015	3670	20	-25.17	-372.13	57 charred cyperaceae seeds
UMB-2023-186, 250P0TP4[111]#1b	Charcoal	(OC) Organic Carbon	OS-173021	0.8976	0.0018	870	15	-27.81		7 various charred seeds
UMB-2023-187, 250P0TP4[113]#7b	Charcoal	(OC) Organic Carbon	OS-173022	0.8853	0.0016	980	15	-28.52		20 charred caryophyllaceae

HASP Identification	Type	Process	Sample identification number	F Modern	Fm Err	Age (BP)	Age Error (±)	$\delta^{13}C$	$\Delta^{14}C$	Material submitted
UMB-2023-188, 249P0TP14[133]#4b	Charcoal	(OC) Organic Carbon	OS-173023	0.8861	0.0016	970	15	-27.4		26 charred caryophyllaceae
UMB-2023-189, 249P0TP15[141]#7b	Charcoal	(OC) Organic Carbon	OS-172910	0.8720	0.0019	1100	15	-24.53		14 various charred seeds

Samples in red are anomalously old.

Table 9. Calibrated radiocarbon dates from 2021-2022 season with median date and 2σ (95.45%) range.

Place	Test Pit	Context	Sample	Material	Age (BP)	Age Error (±)	Unmodelled Cal AD		
							from	to	median
Hólar	14	133	4b	26 charred caryophyllaceae	970	20	1024	1155	1100
Hólar	15	141	77	14 various charred seeds	1100	15	893	994	955
Hólar	15	149	27	22 uncharred caryophyllaceae seeds	835	20	1174	1264	1221
Hof	4	111	1b	7 Various charred seeds	870	15	1162	1219	1191
Hof	4	113	7b	20 charred caryophyllaceae seeds	980	15	1022	1152	1089
Hof	5	126	1	9 stellaria	1080	15	896	1020	979
Hof	5	126	3	169 caryophyllaceae	1100	15	893	994	955
Hof	6	137	7	7 charred cyperaceae	335	15	1490	1636	1570
Neðri-Ás	1	168	12	1 Hordeum	1120	15	890	987	940
Hvammur	1	148	11	80 Uncharred portulacaceae	790	15	1225	1271	1248

Hof Radiocarbon dates

Three test pits were dated with 5 AMS samples over 4 contexts at Hof. The non-overlapping range of each test pit deposit model and their specific limited sequences imply that each test pit is representative of a separate occupation area. Test Pit 5 (Lower Hof) is the earliest (and largest) phase of Hof. Test Pit 4, adjacent to Hof 1 and the burials (Ólafsson 1984), is the middle occupation. Test Pit 6, with only 1 radiocarbon date, suggests a very small but distinct later occupation. For test pit descriptions, locations of site sizes for Hof see Zoëga, et al. (2022). This suggests that the farm mound areas in Zoëga, et al. (2022:25-30) need to be reevaluated and the pre-1104 areas divided into two distinct parts.

TP4 (Hof Farm Mound)

Two radiocarbon dates on either side of a very distinct H-1104 tephra layer produced a sequential model (Code 1) with a good agreement (Table 10) and a relatively narrow occupation range (Figure 57). If the samples and test pit are at all representative of the farm mound as a whole, the models' median boundaries hint at an Hof farm mound active midden date range between *AD 1018 and 1238*. This boundary range overlaps much of the range modeled using the AMS dates taken from two burials from the adjacent cemetery (see page 101).

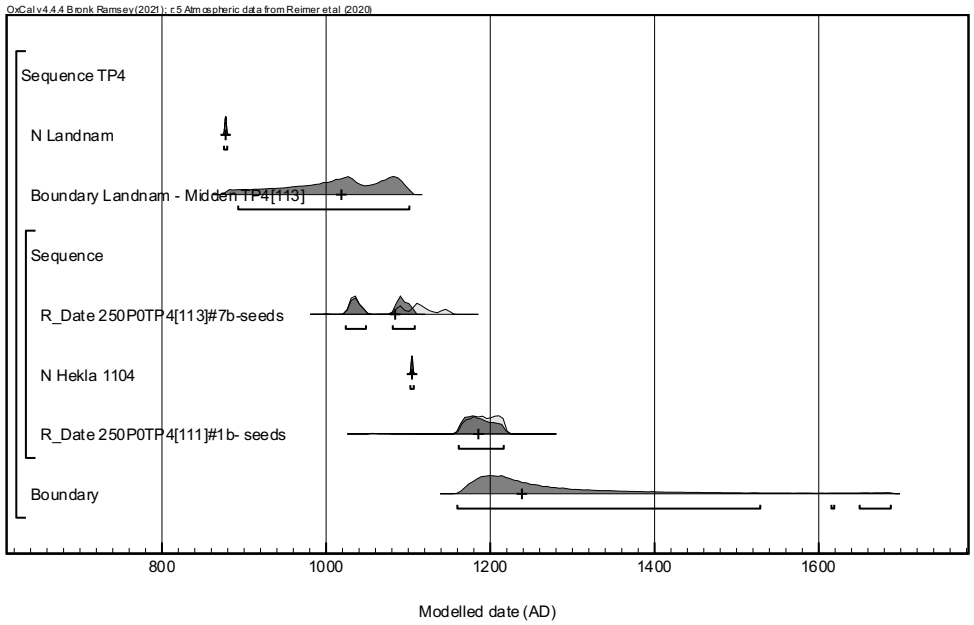

Figure 57. The multiplot of the modeled radiocarbon dates from TP 4 (Hof farm mound). Median dates are marked with "+" and the 2σ hpd range is underlined. The light gray curves indicate the unmodeled radiocarbon distribution and the dark gray curve indicates the modeled date distribution (which are used for the median and ranges).

Table 10. Modeled Radiocarbon dates from Hof Test Pit 4.

Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Indices Amodel 96.3 Aoverall 96		
	from	to	%	median	from	to	%	median	Acomb	A	C
Axis											
Sequence TP4											
N Landnam	875	879	95.44997	877	875	879	95.44997	877		99.7	96.3
Interval					18	224	95.44997	141			97.1
Boundary Landnam - Midden TP4[113]					892	1101	95.44997	**1018**			95.6
Sequence											
R_Date 250P0TP4[113]#7b-seeds	1022	1152	95.44997	1089	1024	1108	95.44997	1084		94.5	98.9
N Hekla 1104	1102	1106	95.44997	1104	1102	1106	95.44997	1104		100	97.8
R_Date 250P0TP4[111]#1b- seeds	1162	1219	95.44997	1191	1161	1216	95.44997	1185		97.8	98.7
Boundary					1159	1687	95.44997	**1238**			95

Code 1. Chronological Query Language (Oxcal) Code for tephra and AMS from TP4

```
Axis(650, 1150);
 Sequence("TP4")
 {
  Date("Landnam", N(AD(877),1));
  Interval ();
  Boundary ("Landnam - Midden TP4[113]");
  Sequence ()
  {
   R_Date("250P0TP4[113]#7b-seeds ", 980, 15);
   Date("Hekla 1104", N(AD(1104),1));
   R_Date("250P0TP4[111]#1b- seeds", 870, 15);
  };
  Boundary ();
 };
```

TP5 (Lower Hof)

The two dates from the uppermost low density cultural layer context [126] at Hof, Test Pit 5 (Zoëga, et al. 2022) when modeled (Figure 61), suggest a median boundary date range of *AD 925-1005*. The charred Caryophyllaceae seeds from two different samples from the same context [126] yielded almost exactly the same date (1080 and 1100±15 Radiocarbon years BP). Modeled as a phase, these two dates suggest a narrow range that is unlikely to extend much before AD 900 ()Table 11. Given the prominence of the farm in the *Landnámabók* (Íslenzk fornrit I 1986) as the home of an influential and wealthy chief (Pálsson and Edwards 1972), and the post-AD 900 dates of TP5, it is possible that Lower Hof may not be the exact site of the first farmstead. However, this uppermost low density cultural layer context [126] caps 20-30 cm of alternating midden and low density cultural layer, which rest of 20 cm of turf and an aeolian soil deposit with a discontinuous but well preserved 5 cm think H3/H4 deposit (Zoëga, et al. 2022:20). Originally, a short thin H-1104 teprha layer was identified below the bottom low density cultural deposit and above the turf. These two radiocarbon dates imply that the previously identified H-1104 was not in situ and that the whole cultural deposit is earlier. Thus, the *AD 925-1005*

median boundary date range characterizes the final phase of the cultural deposits and the lower cultural deposits are almost certainly earlier. The modeled interval between the Landnám and the top of midden runs from *0-108 years* (Figure 59) with a median of *48 years* after the LNT date (although the tephra itself was not observed in TP5 (but H3/H4 tephra was observed). Thus, the temporal interval between the top of the midden and the 877 ±1 LNL is two or three generations, which is not inconsistent with the 20 cm or so of cultural deposit (midden and turf) below the dated and modeled phase. Farmstead relocation and movement uphill is common in Skagafjörður at about the time of the modeled end of the midden deposition (Bolender, et al. 2011; Steinberg, et al. 2017; Zoëga 2015).

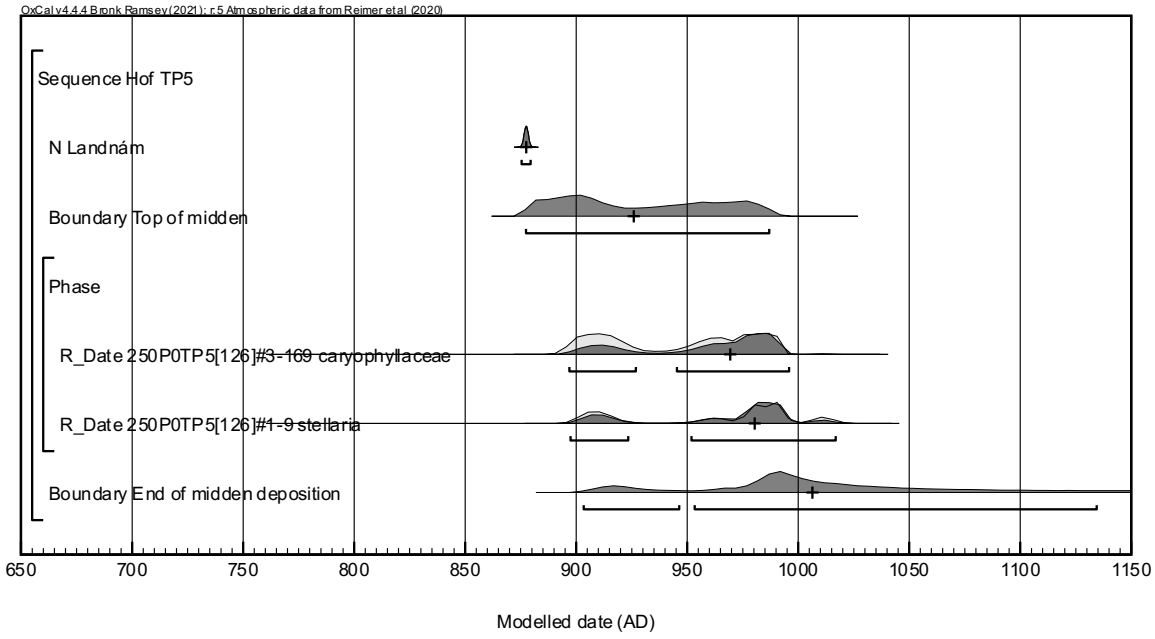

Figure 58. The multiplot of the modeled radiocarbon dates from TP 5 (Lower Hof).

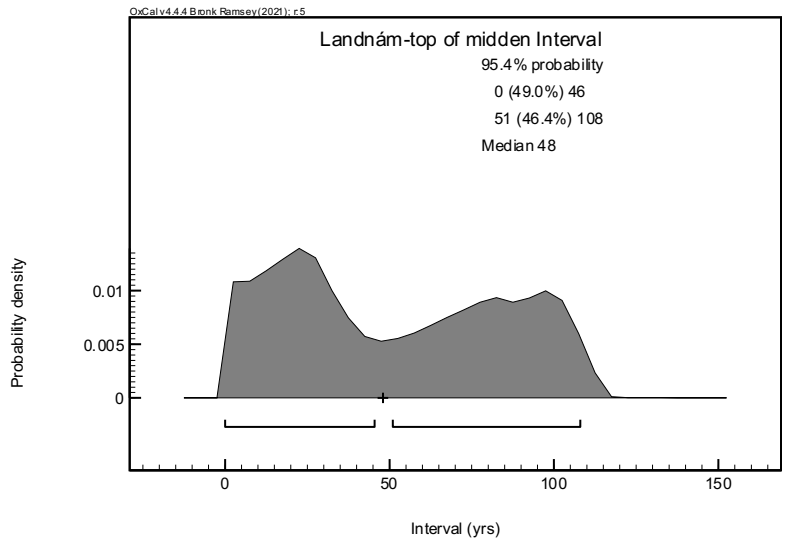

Figure 59. Probability density of the modeled Interval between the Landnám and the midden start from TP 5 (Lower Hof).

Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Indices A_{model} 105.1 $A_{overall}$ 104	
	from	to	%	median	from	to	%	median	A	C
Sequence Hof TP5										
N Landnám	875	879	95.45	877	875	879	95.45	877	99.9	96.6
Interval Landnám-top of midden					0	108	95.45	48		98.8
Boundary Top of midden					877	986	95.45	925		98.9
Phase										
R_Date 250P0TP5[126]#3-169 caryophyllaceae	893	994	95.45	955	896	995	95.45	969	104.3	99
R_Date 250P0TP5[126]#1-9 stellaria	896	1020	95.45	979	897	1016	95.45	979	102.7	99.2
Boundary End of midden deposition					903	1219	95.45	1005		97.4

Table 11. Modeled Radiocarbon dates from Hof Test Pit 5

Code 2. Chronological Query Language (Oxcal) Code for tephra and AMS from Hof TP5

```
Sequence("Hof TP5")
 {
  Axis(650, 1150);
  Date("Landnám", N(AD(877),1));
  Interval ("Landnám-top of midden");
  Boundary ("Top of midden");
  Phase()
  {
   R_Date("250P0TP5[126]#3-169 caryophyllaceae ", 1100, 15);
   R_Date("250P0TP5[126]#1-9 stellaria", 1080, 15);
  };
  Boundary ("End of midden deposition");
 };
```

TP6 (North Hof)

One date from Test pit 6 from the lower part of the 35 cm thick midden that was between the H-1104 and the H1766. No 1300 teprha was observed. The modeled radiocarbon date (Code 3) is not changed by the constraining tephras (Table 12). Thus, the boundaries for the date extend from the respective tephra across the 2σ date range of the sample (Figure 60). Thus the broad occupation range, using the boundary medians, runs from *AD 1421-1646*.

Interestingly, the 1550 Sigurðar Register (Íslenzkt fornbréfasafn 1906-1913:859) indicates that Hof is a rented sub-farm within the boundary of the Hólar estate. This small post-1300 area, 100 m north of Hof 1 is consistent with that entry and the area indicated in (Zoëga, et al. 2022:26) should be changed from 1104-1300 to Post-1300.

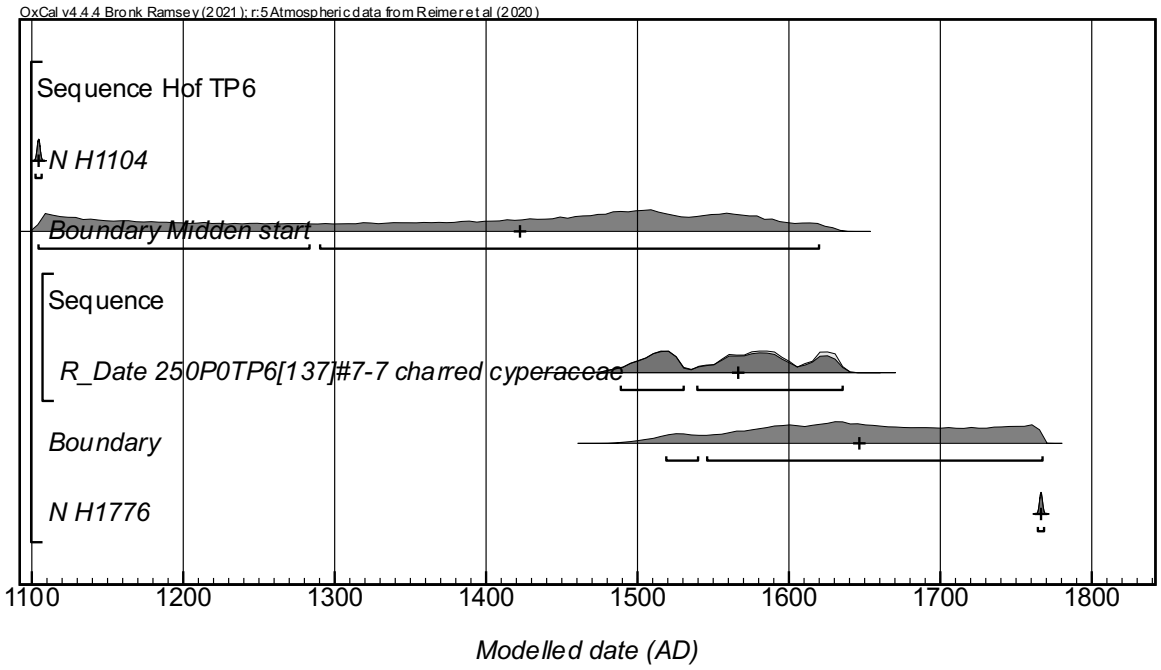

Figure 60. The multiplot of the modeled radiocarbon dates from TP 6 (North Hof).

Table 12. Modeled Radiocarbon dates from Hof Test Pit 6

Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Indices A_{model} 99.4 $A_{overall}$ 99.3	
	from	to	%	median	from	to	%	media	A	C
Sequence Hof TP6										
Axis										
N H1104	1102	1106	95.45	1104	1102	1106	95.4	1104	100.3	97.7
Interval pre-midden interval					0	514	95.4	318		97
Boundary 1104- Midden start					1103	1616	95.4	1421		96.6
Sequence										
R_Date 250P0TP6[137]#7-7 charred cyperaceae	1490	1636	95.45	1570	1489	1635	95.4	1566	98.4	99.2
Boundary					1521	1767	95.4	1646		98.7
N H1776	1764	1768	95.45	1766	1764	1768	95.4	1766	100	95.5

Code 3. Chronological Query Language (Oxcal) Code for tephra and AMS from Hof TP6

```
Sequence("Hof TP6")
 {
  Axis(650, 1150);
  Date("H1104", N(AD(1104),1));
  Interval ("pre-midden interval");
  Boundary ("Midden start");
  Sequence()
  {
   R_Date("250P0TP6[137]#7-7 charred cyperaceae", 335, 15);
  };
  Boundary ();
  Date("H1776", N(AD(1766),1));
 };
```

Hof Cemetery

Several dates from the bodies at the Hof cemetery (Ólafsson 1984) have been run, In Sveinbjörnsdóttir, et al. (2010) two dates that were attributed to Audbrekka in Hörgárdalur are actually from Hof. This switch did not affect the results of the paper, as they are both the same distance from the shore (10 km).

The two dates are:

- AAR-5916 — a badly preserved, peeled, right femur from an approximately 20 year old Female—returned 949±28 radiocarbon years BP, with a $\delta^{13}C$ (‰) VPDB of -18.15 [about 34% marine based on Sveinbjörnsdóttir, et al. (2010) calculations]
- AAR-5917 — a badly preserved, peeled, right femur from a Female—returned 861±36 Radiocarbon years PB, with a $\delta^{13}C$ (‰) VPDB of -19.35 [about 19% marine based on Sveinbjörnsdóttir, et al. (2010) calculations]

Using newer IntCal20 and Marine20 calibration curves and modeling these dates as a single phase of the Hof church results in a use interval of about 200 years (Table 13) from a median start boundary of *AD 1110 (880-1239)* to a median end boundary of *1289* (as early *AD 1154*). While this span (Figure 61) is slightly later than other cemeteries examined in the region (Sveinbjörnsdóttir, et al. 2010; Zoëga and Murphy 2016) there is overlap in the dates. Furthermore, there is also overlap with the these modeled dates and those of Hof TP4 (page 96) that run *AD 1018 and 1238.* The modeled median cemetery dates and the modeled median Hof Farm mound dates overlap *AD 1110-1238*.

Table 13. Modeled radiocarbon dates from Hof Cemetery

									Indices		
									Amodel 103.8		
Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Aoverall 100.3		
	from	to	%	median	from	to	%	median	Acomb	A	C
Sequence											
N Landnam	875	879	95.44997	877	875	879	95.44997	877		99.8	98.6
Boundary					880	1239	95.44997	1110			96.4
Phase Hof Church											
Curve IntCal20											
Curve Marine20											
Delta_R LocalMarine	-537	-97	95.44997	-317	-535.5	-110.5	95.44997	-325		99.9	95.6
Mix_Curves Mixed16	33.5	34.5	95.44997	34	33.5	34.5	95.44997	34		100	100
R_Date AAR-5916	1046	1260	95.44997	1167	1055	1266	95.44997	1186		105.1	99.2
Mix_Curves Mixed17	18.5	19.5	95.44997	19	18.5	19.5	95.44997	19		100	100
R_Date AAR-5917	1155	1282	95.44997	1226	1065	1280	95.44997	1219		96.1	99.5
Interval					0	904	95.44997	200			96.4
Span					0	141	95.44997	31			99.5
Boundary					1154	1949	95.44997	1289			95.8

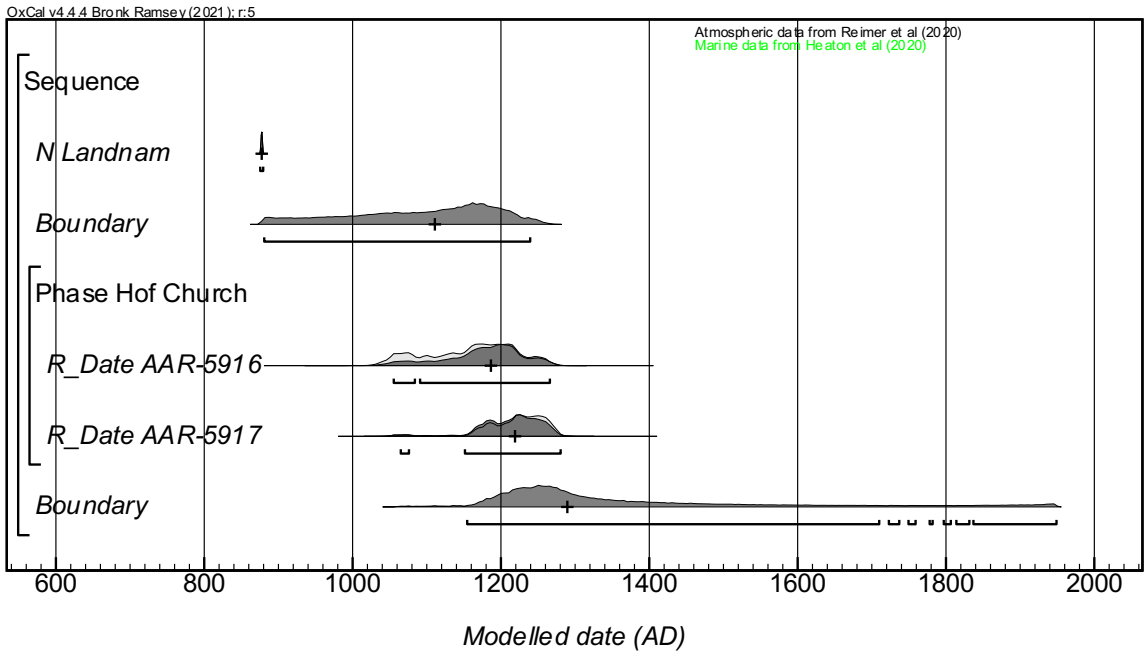

Figure 61. The multiplot of the modeled radiocarbon dates from the Hof cemetery.

Code 4. Chronological Query Language (Oxcal) Code for tephra and AMS from Hof Burials

```
// Delta_R values updated for Marine20
 Sequence ()
 {
  Date("Landnam", N(AD(877),1));
Boundary ();
  Phase ("Hof Church")
  {
   Curve("IntCal20","intcal20.14c");
   Curve("Marine20","marine20.14c");
   Delta_R("LocalMarine",-317,110);
   Mix_Curve("Mixed16","IntCal20","LocalMarine",34,0);
   R_Date("AAR-5916", 949, 28);
   Mix_Curve("Mixed17","IntCal20","LocalMarine",19,0);
   R_Date("AAR-5917", 861, 36);
   Interval ();
   Span();
  };
  Boundary ();
 };
```

Hólar Radiocarbon dates

Three deposits from two different test pits were dated with three AMS dates (Table 8). There are two additional dates from Hólar that were well outside the anticipated rage of occupation dates for Iceland. Details on the location and stratigraphy of these deposits can be found in Zoëga and Steinberg (2022:20).

TP 14 (east of Hólar road)

The date for the midden [133] at the bottom of the excavated part of test pit 14 suggests a range of Cal AD 1024-1155 (median AD 1100). While TP 15 hints at an earlier date, TP14 [133] is the

earliest reliable date that is from an in situ Hólar deposit yet identified. Since no tephra or other AMS dates were identified in or obtained from TP14, a model for the TP14 has not been created. The radiocarbon curve and 2-sigma dates are presented in Figure 62. Surrounding cores (Zoëga and Steinberg 2022) suggest that the [133] midden at the bottom of TP 14 is probably above H-1104 and there are cultural deposits underneath the dated strata.

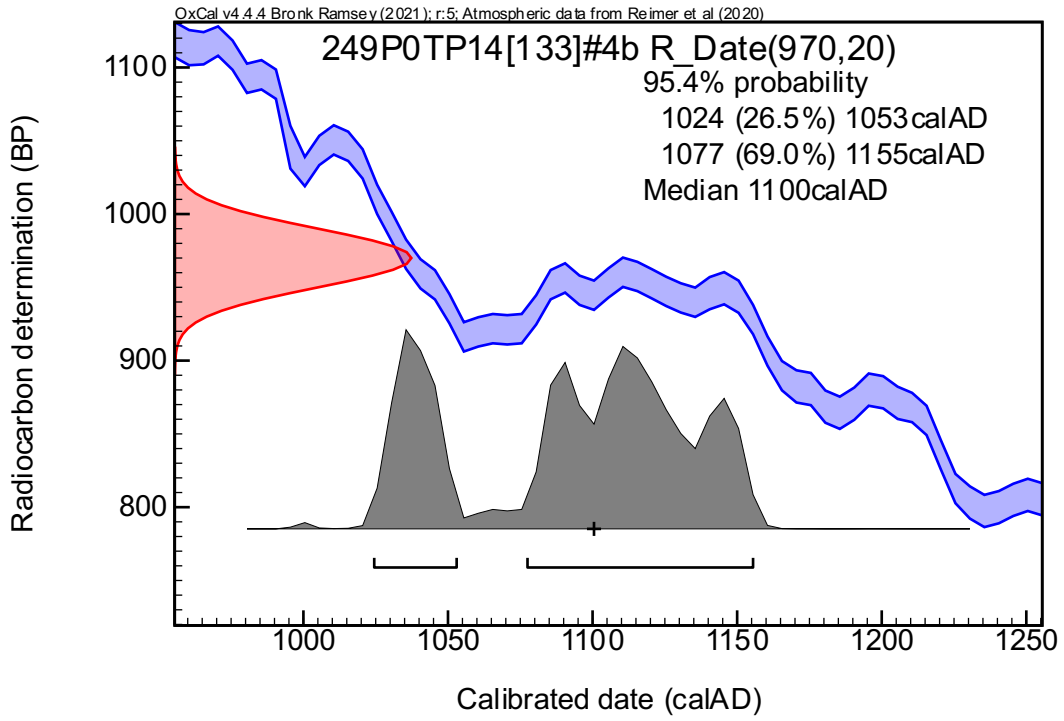

Figure 62. Radiocarbon calibration curve for Hólar TP 15 [133]

TP 15 (south of cathedral)

Given the current understanding of the Test Pit 15 stratigraphy, the two reasonable radiocarbon dates and the one tephra layer from TP 15 does not yield a solution as molded in Code 5. The sequence in the test pit (Zoëga and Steinberg 2022:20), the examination of the tephra layer (Sigurgeirsson 2023) , and the surrounding cores suggests that the 1300 tephra layer is correctly identified in the sequence between the two AMS samples. Furthermore, even without the tephra, the two AMS dates suggest reverse stratigraphy hinting that the [141] midden might be a redeposition of older material. Seeds from the much deeper sample # 27 from the lower [149] midden yield a range of Cal AD 1169-1265 with a median of Cal AD 1221. Seeds from the higher sample #77 from the [141] capping midden deposit yield a date of Cal AD 893-99 with a median of Cal AD 955. If the [141] midden is a redeposition, as suggested by the reverse stratigraphy idea, the AMS result from the upper [141] midden still suggests a pre-AD 1000

occupation at Hólar, but the [141] deposit is probably not in situ. There are other examples of reverse stratigraphy at Hólar (Steinberg and Daniels 2001; Traustadóttir 2009).

When the top, potentially redeposited sample from the [141] midden is removed, from the model (Code 6), the model yields has a high likelihood of being true (98.1)—with 60 being the threshold of acceptable as defined by Bronk Ramsey (1995:428). This suggests that the lower [147] deposit is Pre-1300 (median model date is *AD 1230*) The boundaries are used in Code 6 to model the sequence (Figure 63 and Table 14) and unlike other boundaries presented here (which do suggest ranges of occupation) these boundaries are not indicative of occupation ranges.

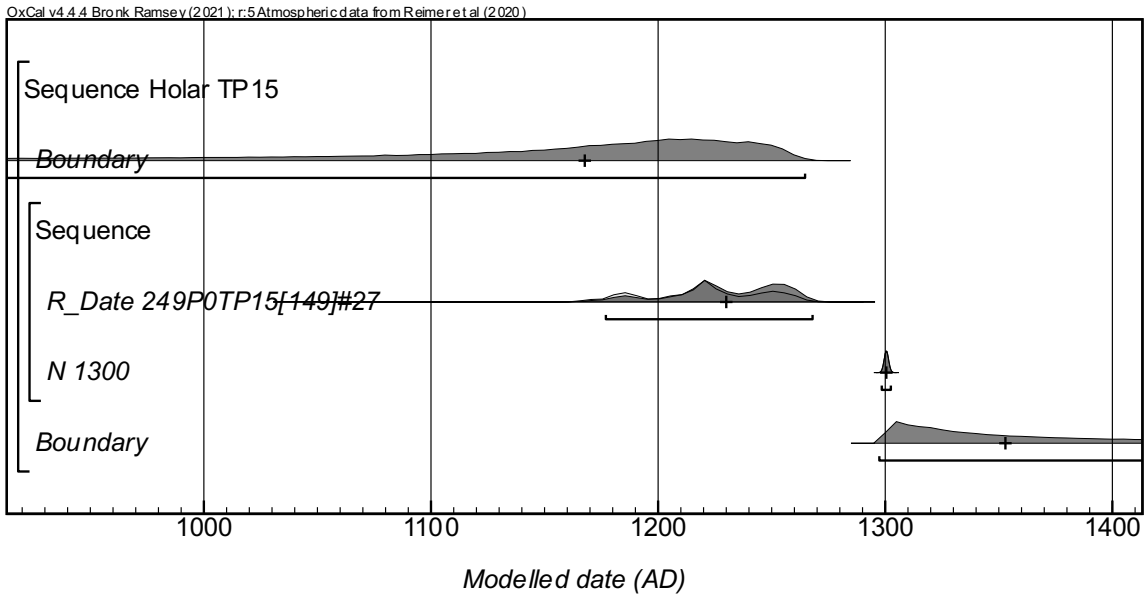

Figure 63. The multiplot of the modeled radiocarbon dates from TP 15 (Hólar in front of the cathedral), using Code 6.

Table 14. Modeled Radiocarbon dates from Hólar Test Pit 15 using Code 6.

Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Indices Amodel 98.1 Aoverall 98.2	
	from	to	%	median	from	to	%	median	A	C
Sequence Holar TP15										
Axis										
Boundary					752	1264	95.45	1167		95.3
Sequence										
R_Date 249P0TP15[149]#27	1174	1264	95.45	1221	1177	1268	95.45	1230	97.1	99.2
N 1300	1298	1302	95.45	1300	1298	1302	95.45	1300	100.3	99.1
Boundary					1297	1582	95.45	1352		98.6

Code 5. Chronological Query Language (Oxcal) Code for tephra and AMS from Hólar TP15 with all samples and tephra layers

```
Sequence("Holar TP15")
```

```
 {
  Axis(650, 1150);
  Boundary ();
  Sequence()
  {
   R_Date("249P0TP15[149]#27", 835, 20);
   Date("1300", N(AD(1300),1));
   R_Date("249P0TP15[141]#77", 1100, 15);
  };
  Boundary ();
 };
```

Code 6. Chronological Query Language (Oxcal) Code for tephra and AMS from Hólar TP15 with only the 1300 teprha and the #77 Sample results from the lower [147] midden.

```
Sequence("Holar TP15")
 {
  Axis(650, 1150);
  Boundary ();
  Sequence()
  {
   R_Date("249P0TP15[149]#27", 835, 20);
   Date("1300", N(AD(1300),1));
  };
  Boundary ();
 };
```

Neðri-Ás Radiocarbon dates

One radiocarbon sample was submitted form Test Pit 1 from a midden context. The barley grain yielded a pre-AD 1000 date (Figure 64), that was only marginally changed by the H-1104 and LNT constraints (Table 15) in the model (Code 7). The median interval of *33 years* from the Landnám to the start of the midden suggests that the complex midden deposit in TP1 might be a second-generation activity area.

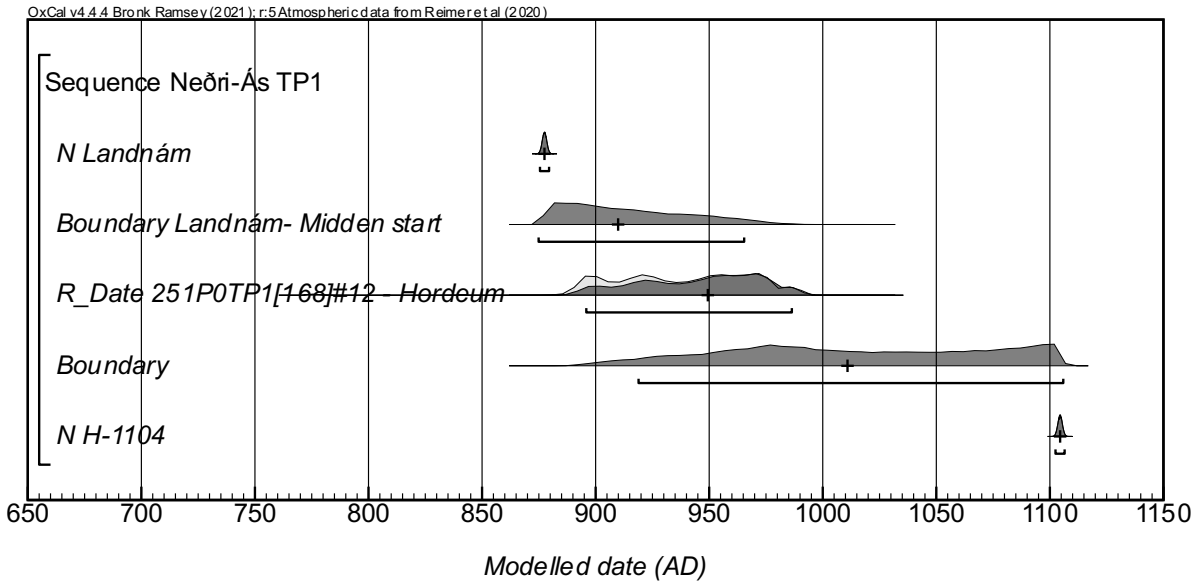

Figure 64. The multiplot of the modeled radiocarbon dates from Neðri-Ás Test Pit 1

Table 15. Modeled Radiocarbon dates from Neðri-Ás Test Pit 1.

Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Indices Amodel 100.5 Aoverall 100.6		
	from	to	%	median	from	to	%	median	Acomb	A	C
SequenceNeðri-Ás TP1											
Axis											
N Landnám	875	879	95.45	877	875	879	95.45	877		99.7	97.4
Interval pre-midden interval					0	89	95.45	33			99.6
Boundary Landnám- Midden start					874	965	95.45	909			99.7
Sequence											
R_Date 251P0TP1[168]#12 - Hordeum	890	987	95.45	940	895	986	95.45	949		100.9	99.5
Boundary					919	1105	95.45	1010			99.2
N H-1104	1102	1106	95.45	1104	1102	1106	95.45	1104		100.4	95.8

Code 7. Chronological Query Language (Oxcal) Code for tephra and AMS from Neðri-Ás Test Pit 1.

```
Sequence("Neðri-Ás TP1")
 {
  Axis(650, 1150);
  Date("Landnám", N(AD(877),1));
  Interval ("pre-midden interval");
  Boundary ("Landnám- Midden start");
  Sequence()
  {
   R_Date("251P0TP1[168]#12 - Hordeum", 1120, 15);
  };
  Boundary ();
  Date("H-1104", N(AD(1104),1));
 };
```

Hvammur Radiocarbon dates

One radiocarbon sample was submitted from Hvammur Test Pit 1 from the [148] midden context. The location of the H-1104 was unclear during excavation and in profile. The results of this date suggest that this midden may have started after 1104.

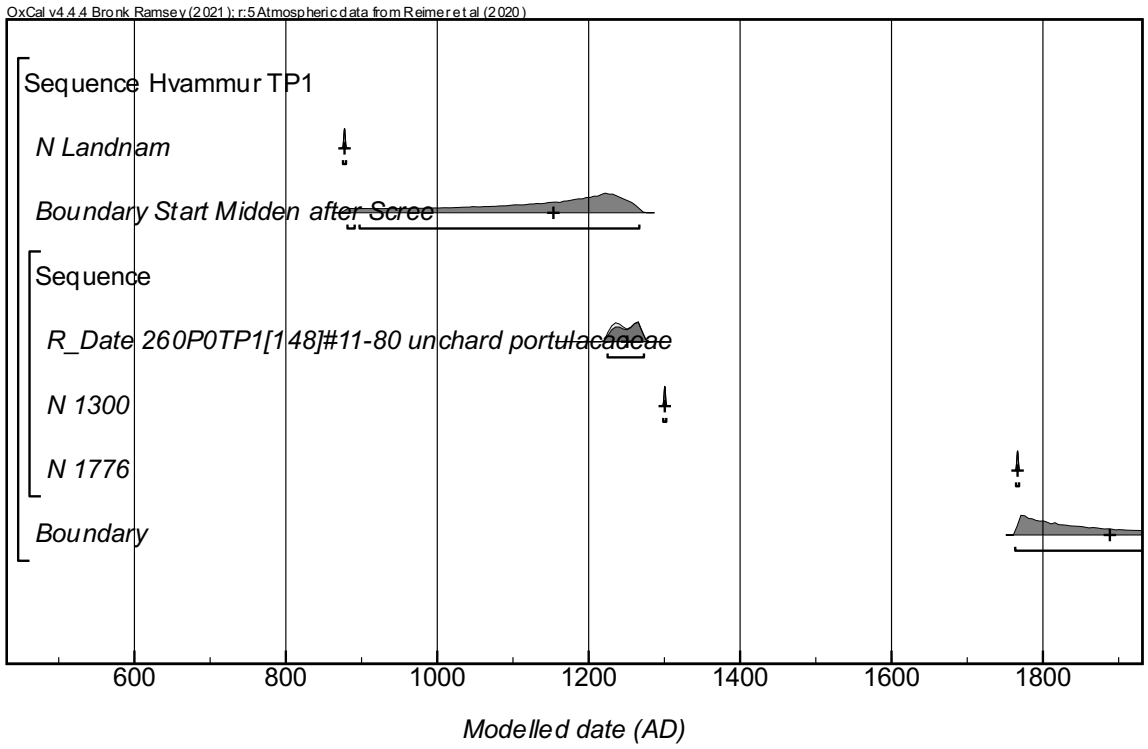

Figure 65. The multiplot of the modeled radiocarbon dates from Hvammur Test Pit 1

Table 16. Modeled Radiocarbon dates from Hvammur Test Pit 1.

Name	Unmodelled (BC/AD)				Modelled (BC/AD)				Indices Amodel 99.3 Aoverall 99.4		
	from	to	%	median	from	to	%	median	Acomb	A	C
Sequence Hvammur TP1											
Axis											
N Landnam	875	879	95.45	877	875	879	95.45	877		100	98.5
Boundary Start Midden after Scree					881	1265	95.45	1151			98.1
Sequence											
R_Date 260P0TP1[126]#11-80 Portulaca	1225	1271	95.45	1248	1225	1273	95.45	1251		99	99.5
N 1300	1298	1302	95.45	1300	1298	1302	95.45	1300		99.9	99.2
N 1776	1764	1768	95.45	1766	1764	1768	95.45	1766		99.9	99.3
Boundary					1763	2673	95.45	1890			96.5

Code 8. Chronological Query Language (Oxcal) Code for tephra and AMS from Hvammur Test Pit 1.

```
Sequence("Hvammur TP1")
 {
  Axis(650, 1150);
  Date("Landnam", N(AD(877),1));
  Boundary ("Start Midden after Scree");
  Sequence()
  {
   R_Date("260P0TP1[148]#11-80 unchard portulacaceae", 790, 15);
   Date("1300", N(AD(1300),1));
   Date("1776", N(AD(1766),1));
  };
  Boundary ();
 };
```

Appendix G – Archaeological research in Hjaltadalur, Skagafjörður, 2021 and 2022: Dating by aid of tephrochronology Magnús Á. Sigurgeirsson

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Introduction

The report summarizes the results from a research undertaken in Hjaltadalur, Skagafjördur N-Iceland, in 6-7th of August 2021 and 1st of August 2022. In these two trips profiles in several test pits and trenches at various farmsites in Hjaltadalur were examined in order to identify tephra layers. The sites visited were, Hólar, Hof, Neðri-Ás, Grafarstekkur, Víðines, Reykir, Hvammur and Hrafnhóll (Figures 1-4). The tephra layers were identified in the field as possible and sampled for further analysis. Profiles were measured in three pits at Hof (see Figure 5).

Tephra layers have been used for dating purposes in archaeological digs í Skagafjördur for several decades (Ólafsson 1985, Sveinbjarnardóttir 1992, Sigurgeirsson 1998, 2000, 2001, 2009). The most important tephra layers in North Iceland have been produced by Mt. Hekla. Thorarinsson (1968) gives an good overview of tephra layers produced by Hekla in historical times. The tephra layers that have been most useful are the following:

1. The Settlement tephra suite (LNS). In the central part of N-Iceland the LNS has 3-4 basaltic tephra layers sitting in a distinct dark coloured (organic) soil. All the layers are thin, < 0.5 cm. The Settlement tephra layer (LNL) formed in 877 CE is one of the layer, < 0.3 cm thick in the northern part of Skagafjörður.
2. The **V-Sv** tephra (ca. 940 CE). This tephra is easily found in NE-Iceland, e.g. in the Mývatn area and southern part of Eyjafjörður. It has been found in Svarfaðardalur valley and Hrísey island some 30 km NE of Hólar and may possibly be preserved in Hjaltadalur.
3. **Vj~1000** (also referred to as "s.g.~1000"). This tephra most probably originates in Grímsvötn central volcano, covered by Vatnajökull glacier. This tephra is thin but rather widely found in the Skagafjörður area esp. in its western part. It is commonly greenish in colour and less than 0.3 cm thick.
4. **H-1104 (H_1)**. May be found all over Skagafjörður but, < 0.5 cm thick.
5. **H-1300**. One of the best marker tephra layer in the Skagafjörður region, grayish < 1 cm thick.
6. **V-1477 ("a"-layer)**. Very thin and hard to find in Skagafjörður.
7. **H-1766**. Found all over Skagafjörður, dark gray <1 cm thick.

Figure 1. Test pits and trenches at Hof in Hjaltadalur, 2021. Number refer to gps-locations.

Figure 2. Test pits and trenches at Hólar in Hjaltadalur, 2021.

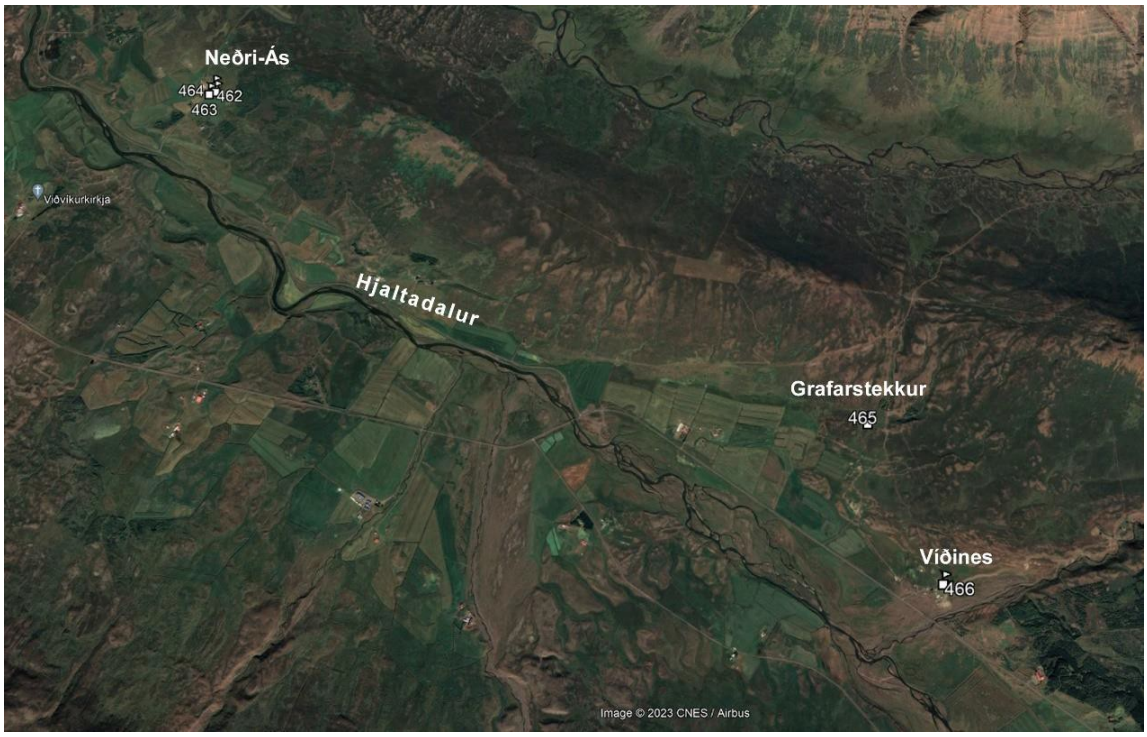

Figure 3. Test pits and trenches in Hjaltadalur, northern part, August 2022.

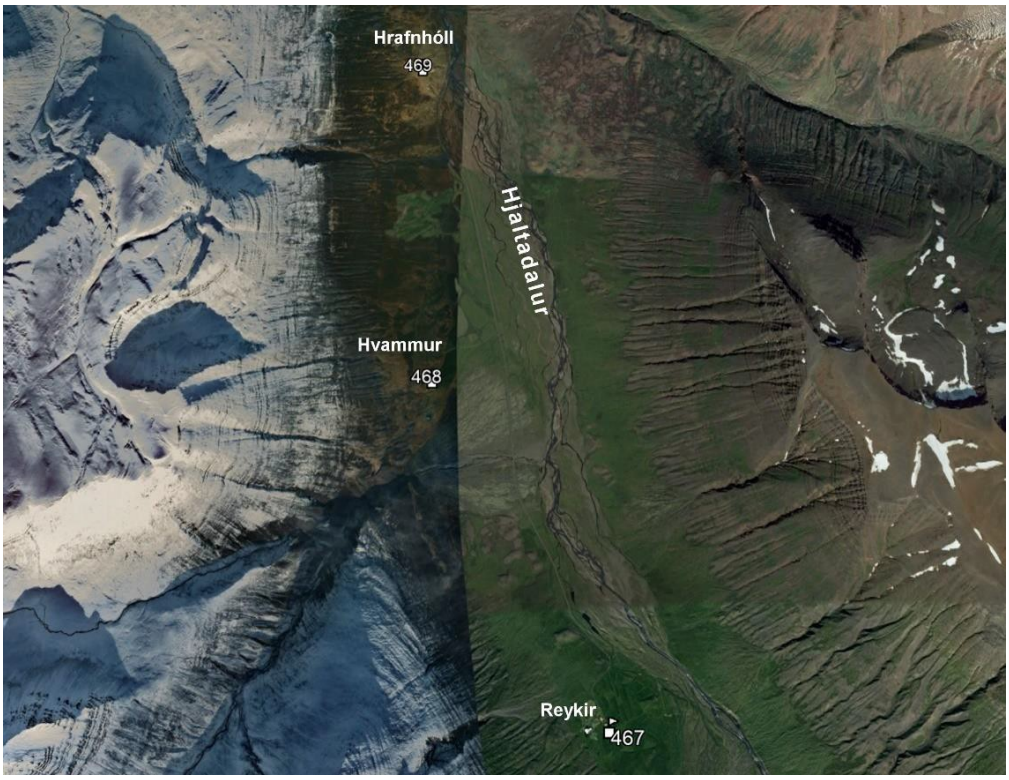

Figure 4. Test pits and trenches in Hjaltadalur, southern part, August 2022.

Conclusions

Hof in Hjaltadalur

Trench 6 (gps p. 239, core# 211941), NW of the farmhouse.

Soil section was measured (Figure 5). The tephra layers identified were H-1766, H-1104 and Vj~1000. Most probably V-Sv also was present (the LNL may be excluded). At deeper levels the prehistoric layers Hekla-3 and 4 were identified. A dark coloured and dense peat was seen underneath V-Sv and further down. Hekla-1300 was not found for sure.

Test pit, 1x1 m in size (gps p. 240, core 211624), north of the farmhouses.

Black tephra layer was seen at 28 cm depth, and below that there is a layer of peat ash with stones. Below the stones there is at light coloured soil with H-1104 in situ, most probably. Below this layer there was a disturbed soil with the LNL and Hekla-3. A sample was collected from assumed H-1766 (later confirmed by microscope examination).

Trench 4 1x1 m in size, in the farm mound 20 m north of the farmhouse (p. 241, core# 211572).

A soil section was measured (Figure 5). Turf and mixed turf (collapsed wall) was seen at 20-54 cm depth. Hekla-1104 was present in the turf. Below that there is a soil, 16 cm thick, mixed with peat ash and patches of turf. Below this layer Hekla-1104 was seen in situ. Then, below H-1104 there was a cultural layer with charcoal and bones down to Hekla-3 at the bottom of the pit.

Test pit 1x1 m, in a hayfield west of the farmhouse (gps p.242).

No tephra was seen in situ in this pit. Next above the Hekla-3 tephra there is 20 cm thick layer of turf, then 4 cm thick layer of midden and above that there is a 20 cm thick layer of mixed soil. At the top the soil is mostly composed of roots.

A trench NE of the farmhouses (gps. p.249).

The uppermost 45 cm of the soil is heavily disturbed (Figure 5). The tephra layer H-1766 was seen at 47 cm depth. A gray-green tephra layer was seen at ca. 70 cm depth, most certainly H-1300. Hekla-1104 was seen discontinuous 9.5 cm below H-1300. Below that there is an 20 cm thick disturbed layer of soil and then 10 cm thick light colored layer of clayish soil with sand admixed. Below that there is a dark coloured peat. The tephra layer Hekla-3 was found in the peat at 12 cm depht. Below Hekla-3 there is blackish peat with logs.

Hólar in Hjaltadalur

Test pit #16, 1x1 m, west of the church at Hólar (gps. p.243).

No tephra layers were found in situ but a lot of patches of tephra were seen, such as from H-1104 and Vj~1000 (gray greenish in color) or the V-Sv tephra. Minor amount of organic material was present in the pit. Dark colored peat with logs was seen at the bottom of the pit. This test pit was located in a old hayfield with a disturbed soil near the surface.

Test pit, 1x1 m, at the base of Virkishóll, north of the church of Hólar (gps. p.244).

No in situ tephra layers were seen in this pit. A cultural layer/midden was found at 1 m depth, almost at the bottom of the pit. Two seperate layers of midden were seen 4-6 cm

thick each. Above them, towards the surface, the soil is mixed/disturbed, containing patches of turf and small rocks. The layers dip away from Virkishóll.

Test pit west of the church, close to the cemetary (gps. p.245).

This was almost a 1.8 m deep pit, partly filled with water when examined. At the bottom there was a 25-30 cm thick layer of midden. Approximately 5 cm above that in a brown organic soil there was at thin, 2-3 mm, gray greenish tephra layer in situ, the only one found in this pit (sampled). Based on microscopic analysis it was concluded that the tephra represents H-1300. A fine aeolian soil is 5 cm above the tephra layer. Above that here is 50 cm thick dense layer with turf admixed. No tephra was found in this layer (samples were taken). Above this layer there is a 65 cm thick layer of midden with peat ash and turf admixed. The uppermost feet of the profile is heavily disturbed by earthworms.

Test pit, 1x1, in a hayfield SW of the old farm mound at Hólar (gps. p.246, core#211461).

No tephra layers were found in this pit. At the bottom of the pit remains of a wall (with rocks) was seen and above that there was a thick deposit of midden.

Test pit, 1x1, in a hayfield south of the church (gps. p.247, core#210820).

A before no tephra layers in situ were found, but a few patches of H-1104 were seen in a layer of peat ash. A cultural deposit was seen down to Hekla-3 (formed 3000 BP) containing a lot of animal bones.

Test pit, 1x1, in a hayfield NW from the old farm mound (gps. p.248, core# 211364).

Near the bottom of the pit there is a dark coloured turf next above the Hekla-3 tephra, 10-15 cm thick. Above that there is a midden with peat ash admixed, 25-30 cm thick. Then there is a dense midden with charcoal and turf, 25 cm thick. In the uppermost feet of the section there is a mixed/disturbed soil. No historical tephra layers in situ.

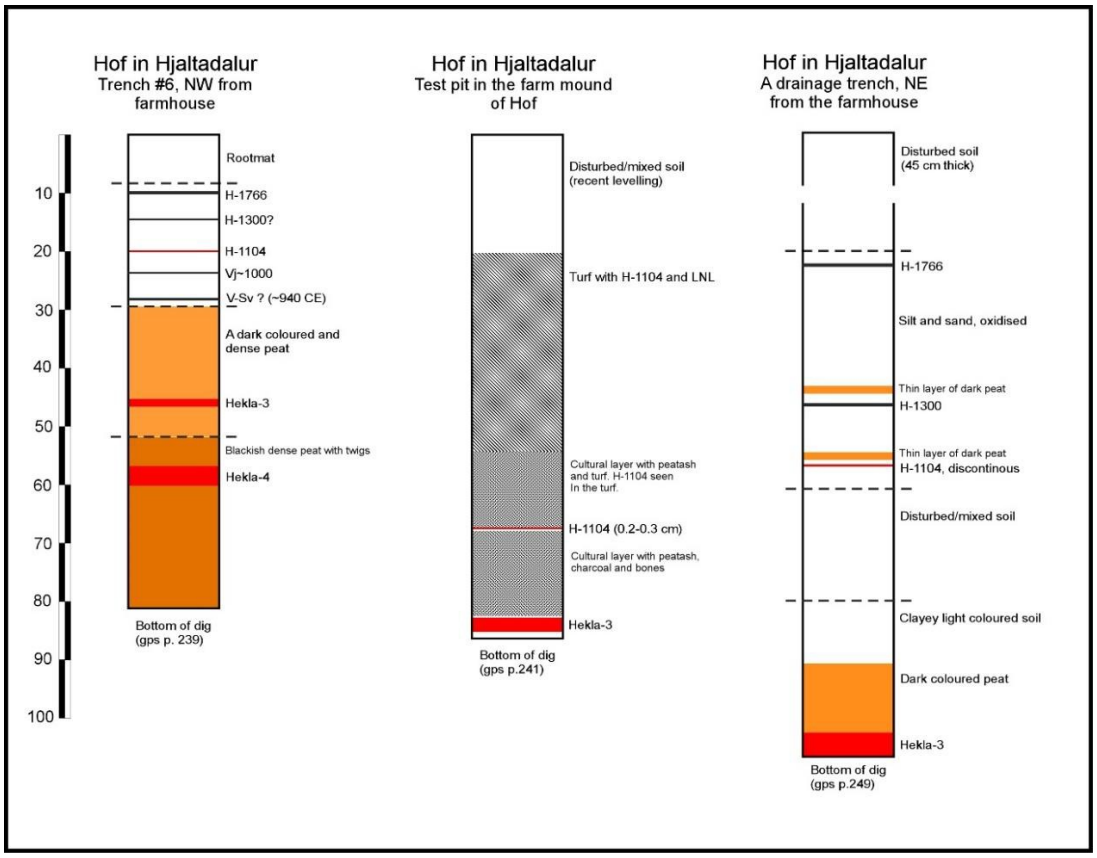

Figure 5. Profiles measured at Hof in Hjaltadalur.

Sites visited in the summer of 2022

Following are short notes on each of the sites visited 1st of August 2022. No profiles were measured but accurate drawings from the archaeologists were used in the field. Weather conditions were bad this day, a heavy rain and a strong wind.

Neðri-Ás (gps. pts. 462, 463 and 464).

A 8 m long bank (manmade/eroded) of soil adjacent to a storehouse was examined. In this bank a cross-section of a ruin with turf walls and a floor layer was exposed. Slabs of rock were seen at the floor. The tephra layer H-1104 was seen discontinous in soil above the building. Patches of LNS and Hekla-3 were identified in the turf.

A test pit, 1x1 m, north of the farmhouse (p. 463). LNS was seen at the bottom of the pit and also H-1104 (0.5 cm thick) and H-1300 (0.4 cm thick) were seen. The LNS and H-1104 were seperated with 19 cm of soil and H-1104 and H-1300 with 22 cm of soil. From H-1300 up to the surface there was 65 cm thick soil. Cultural layer was seen some 8 cm above the LNS and upwards.

A test pit, 1x1 m, close to the stable/cowshed at Neðri-Ás (p. 464). The tephra layer H-1104 was seen 12 cm above cultural layers. A dense cultural layer composed of midden, bones, charcoal and stones was seen at the bottom of the pit.

Grafarstekkur, test pit 1x1 m (gps. p. 465).

Cultural layers were seen below H-1104 in the pit. H-1300 was seen closer to the surface. The pit was just about 40 cm deep.

Víðines, test pit 1x1 m (gps. p. 466).

The tephra layer Vj~1000 was seen above a dense turf. Furthermore H-1104 was seen 5 cm above Vj~1000. H-1300 was also found. The tephra layers clearly indicate an early settlement at Víðines.

Reykir, test pit 1x1 m (gps p. 467).

The tephra layer H-1104 was seen close to the bottom of the pit and a thin cultural layer underlying it. Some 8 cm above H-1104 the tephra layer H-1300 was seen in situ. Next above H-1300 there was a 14 cm thick coarse and dense material belonging to a landslide. Dense cultural layers were seen some 0.5 m above the landslide. The tephra layer H-1766 was not found at this site.

Hvammur (gps p. 468).

A deposit from a landslide was identified at the bottom of this test pit. Hekla-1300 was seen 10 cm above the landslide and further 20-25 cm above that H-1766 was found.
Samples were collected form the tephra layers. A few patches of light coloured tephra, possibly representing H-1104, were seen overlying the landslide.

Hrafnhóll, test pit 1x1 m (gps. p. 469).

As at Hvammur a landslide deposit was seen at the bottom of the test pit. Above the landslide LNS, Vj~1000 and H-1104 were seen. Possibly H-1300 was also preserved in this pit.

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