RANNSÓKNASKÝRSLUR FERÐAMÁLADEILDAR HÁSKÓLANS Á HÓLUM

Preliminary Report of the 2023 Field Season:

Coring and Excavations at Efri-Ás, Laufskálaholt, Brekkukot, Grafarkot, Kálfsstaðir, Kjarvalsstaðir, Nautabú, Ingveldarstaðir, Skúfsstaðir, Garðakot, Hringver, Hólakot, and Viðvík in Hjaltadalur with additional geophysics at Skúfsstaðir

HJALTADALUR ARCHAEOLOGICAL SETTLEMENT PROJECT

By

Guðný Zoëga, John M. Steinberg, Chiara M Torrini, and Trace J Podder

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Photo on front page – Starting excavations at Viðvík. From left to right, Trace Podder, Chiara Torrini, and Guðný Zoëga.

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Útgefandi: Háskólinn á Hólum.
Sími (+354) 455 6300.
Vefpóstur: thjonustubord@holar.is
Veffang: www.holar.is

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Ljósmyndir: Guðný Zoëga, John Steinberg, Florencia Bugallo, Gabríel A Ágústsson, Mary ‘Mia’ D Armstrong, S. Ylfa Leifsdottir, Kristen M Delatour, Trace J Podder, Chiara M Torrini, Marisa Patalano

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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 skýrslunni er grein gerð fyrir niðurstöðum HASP fornleifarannsóknarinnar sumarið 2023. Tilgangur verkefnisins er að rannsaka byggðasögu og byggðaþróun á Hólum og í Hjaltadal. Verkefnið var í formi borkjarna og könnunarskurða á jörðunum Efra-Ási (með Laufskálaholti), Brekkukoti, Grafarkoti (afbýli frá Víðinesi) Kálfsstöðum, Kjarvalsstöðum, Nautabúi, Ingveldarstöðum, Skúfsstöðum, Garðakoti, Hringveri og Viðvík (með Hólakoti). Einnig var jarðsjármæling gerð í túni á Skúfsstöðum. Býlin 12 sem rannsökuð voru sumarið 2023 virðast öll stofnuð nokkru fyrir gjósku úr Heklu sem féll 1104. Á bæjunum Garðakoti, Kálfsstöðum, Kjarvalsstöðum, Nautabúi, Ingveldarstöðum og Viðvík eru vísbendingar um stöðugleika í búsetu fram yfir síð-miðaldir. Á Skúfsstöðum virðist samfelld búseta á gamla bæjarstæðinu en einnig fundust ummerki skammtímabúsetu í túni. Bæjarstæði Efra-Áss virðist hafa færst lítillega með tímanum. Hólakot er yfirgefið skömmu eftir 1300 og Hringver er yfirgefið á fyrri hluta 20. aldar. Niðurstöður jarðsjármælinga við bæjarhólinn á Skúfsstöðum benda til þess að undir sverði liggi hringlaga garðlag, um 20m í þvermál. Garðlaginu svipar til kirkjugarðsveggja úr frumkristni. Verði staðfest að þetta sé grafreitur er það í fyrsta sinn sem kirkjugarður úr frumkristni hefur fundist hérlendis með jarðsjármælingum, án þess að nokkrar heimildir séu til um kirkju- eða kirkjugarð á jörðinni.

Abstract

This report outlines the 2023 work, including Geophysical survey, Coring, and Excavations at Efri-Ás, Laufskálaholt (on the Efri-Ás land of the Ásholt summer house), Brekkukot, Kálfsstaðir, Kjarvalsstaðir, Nautabú, Ingveldarstaðir, Skúfsstaðir, Garðakot (part of Víðines) Grafarkot (part of Víðines), Hringver, Hólakot (part of Viðvík), and Viðvík) in Hjaltadal as part of the Hjaltadalur Archaeological Survey Project (HASP). This is the third 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 12 farms investigated in 2023 all seem to have been established well before the Hekla 1104 (H1104) tephra fell. The farms at Garðakot, Kálfsstaðir, Kjarvalsstaðir, Nautabú, Ingveldarstaðir, and Viðvík have continuous sequences that indicate long-term stability up to the early modern period. The farm mound at Skúfsstaðir seems to be continuous, and there is a distinct, smaller, and shorter occupation area on the farmstead. The main farm mound at Efri-Ás seems to have shifted over time. Hólakot is abandoned shortly after AD 1300 and Hringver is abandoned in the mid-20th century. The geophysical results from Skúfsstaðir suggest the presence of a round wall 21 m in diameter, consistent with a churchyard boundary wall. If investigation of this round anomaly yields a burial ground, it would be the first time that a churchyard wall was identified by geophysical prospection at a farm without any documentary evidence of ever having had a church.

Introduction

The report details the results of the 2023 fieldwork at Skúfsstaðir, Efri-Ás, Hólakot, Garðakot, Kálfsstaðir, Kjarvalsstaðir, Nautabú, Hringver, Ingveldarstaðir, Viðvík,

Laufskálaholt, Grafarkot and Brekkukot in Hjaltadalur as part of the Hjaltadalur Archaeological Survey Project (HASP). 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.

General permits for the survey of Hjaltadalur and associated excavations were granted by the Cultural Heritage Agency of Iceland. Items accessioned to the National Museum database can be found at https://sarpur.is/Leit.aspx?search=2023-47&filter=32&typeID=0.

Minjastofnun Íslands #: 202106-0097

Þjóðminjasafn Íslands #: 2023-47

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 suggested that Hjaltadalur is naturally sheltered by large mountain ranges that result in a slow rate of erosion.

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, et al., 1995, Arnalds, 2004, Arnalds, 2008). 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 (Magnússon and Vídalín, 1930, Johnsen, 1847). 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. 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 thicknesses 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 wholesale and create substantial discontinuities at their edges.

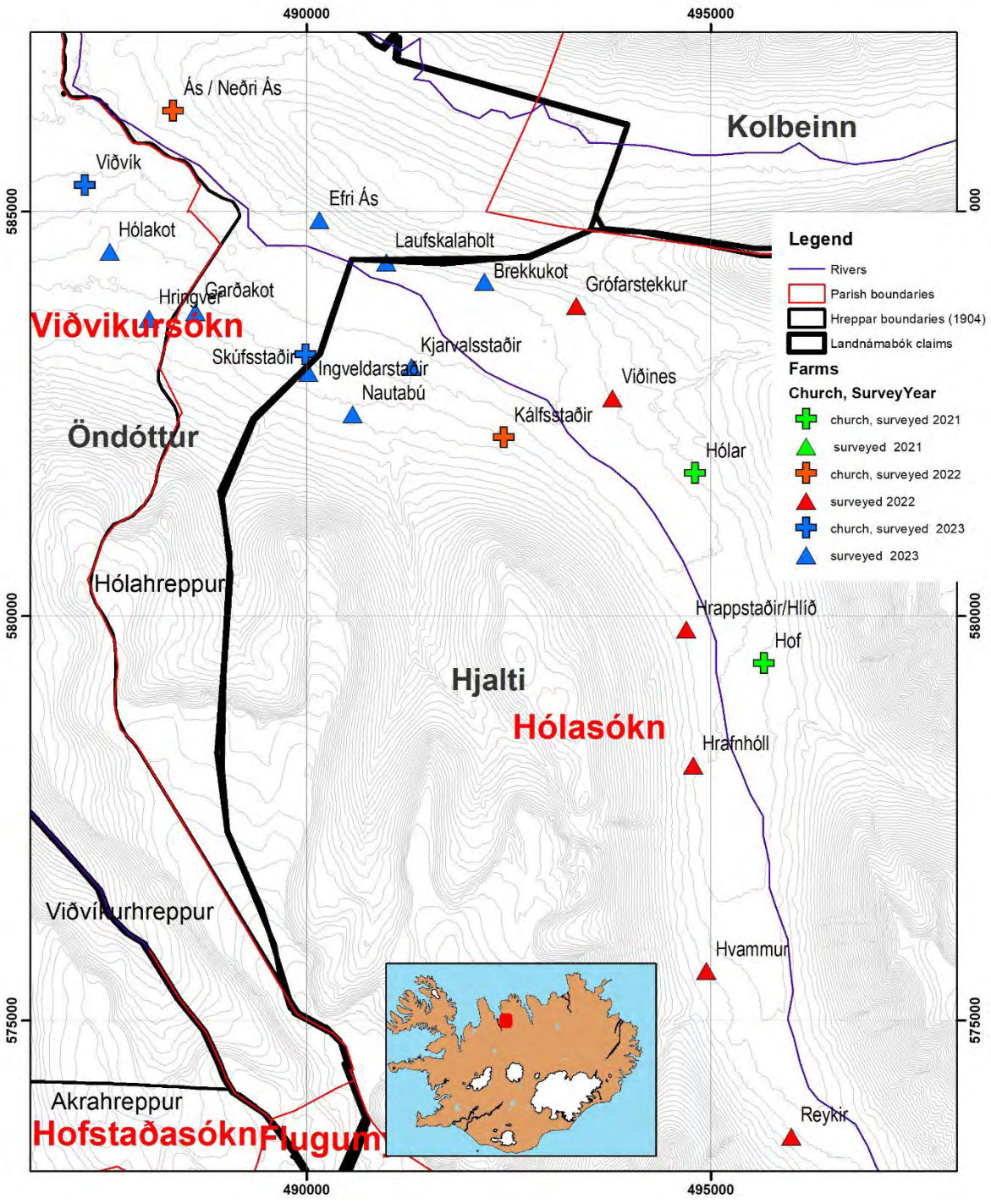


Figure 1. Map of Hjaltadalur. Farmsteads with churches are denoted by '+'. Farmsteads in blue are reported below. Farmsteads in Green were surveyed in 2021. Farmsteads in red were surveyed in 2022. Twenty-meter interval topography lines are shown, along with hreppur and parish (sokn), boundaries. Best guesses as to original land claims are also outlined in bold.

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).

❖ Historic:

➢ Hekla A.D. 1766 (H1776). 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 (H1300): A gray-blue to dark black tephra (Larsen, 1984, Sveinbjarnardóttir, 1992, Larsen, et al., 1999, Larsen, et al., 2002, Larsen, et al., 2001).

➢ Hekla A.D. 1104 (H1104, and often referred to as 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 (Lárusdóttir, et al., 2012, Aldred and Sigurgeirsson, 2005). 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 (Zielinski, et al., 1997, Schmid, et al., 2017). The tephra originates from the Vatnaöldur fissure swarm associated with the Torfajökull and Bárðarbunga volcanos (Larsen, 1984, Dugmore and Newton, 2012). 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 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 Hjaltadalur

According to documentary sources, the Hjaltadalur valley refers to the land claim of Hjalti Þórðarson who settled at Hof. Hólar, later the most important farm in the valley, however, is not mentioned in the *Book of Settlements* 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 (Pálsson and Edwards, 1972). According to *Landnámabók* (Íslenzk fornrit I) 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 1). The order is described such that Öndóttur bought land from Sleitu-Björn and Kolbeinn took possession of a separate claim that was originally part of Sleitu-Björn's land. Hjalti Þórðarson then takes possession of the valley of Hjaltadalur that was part of Kolbeinn's land. Hjalti Þórðarson was an influential and wealthy chief (Pálsson and Edwards, 1972) and his settlement farm, Hof, is just south of Hólar. Öndóttur land boundaries were specifically described but are difficult to place in the landscape. The most defined boundary is the "brook north of Nautabú," which is assumed to be Skúfsstaðir creek, and on the other side of the valley as below Hálsgróf, which is assumed to be the saddle on the long hill (As) between Kolbeinsdalur and Hjaltadalur.

The farm of Ás is mentioned in *Kristnisaga* (Grønlie, 2006) as potentially the earliest church in Iceland. *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), 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 church burned down and was replaced by a second pre-bishopric Hólar church. 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. Sigurðardóttir (2011) notes two other documented churches in the survey area at Kálfsstaðir and Viðvík. The surveyed area of the Hjaltadalur valley consists of 21 farms, 17 of which appear in the documentary record with specific values and farmstead populations (Table 1).

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). 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.

Table 1. Values (18th C.) and farmstead populations (19th C) of Hjaltadalur farmsteads.

Place Name	*Book of Settlements*	Church	Property Value (18th C.)	Household Size (19th C.)
Reykir				11.5
Hvammur			60.0	8.8
Hrafnhóll			10.0	5.8
Hof	Yes	Yes		10.3
Hrappstaðir/Hlíð			30.0	
Hólar	Yes	Yes		35.0
Víðines				8.3
Kálfsstaðir		Yes	60.0	11.5
Kjarvalsstaðir			20.0	6.5
Nautabú	Yes		20.0	7.8
Ingveldarstaðir			24.0	8.0
Skúfsstaðir		Yes?	60.0	12.3
Efri Ás			30.0	10.0
Garðakot			20.0	7.3
Ás/Neðri Ás		Yes		11.8
Viðvík	Yes	Yes	40.0	14.0
Holakot			20.0	

The 2023 project

The 2023 project involved work at 13 different farmsteads. Here we report on the activities during the project. This report primarily covers coring, excavation, and geophysics at those locations. Data from samples taken during the project is still in process.

Efri-Ás

At Efri-Ás (designated as 264-0) there are two modern farmhouses: the older one with a garden to the east and the newer one to the west. The modern farmhouses are separated by about 100 m (Figure 2). The Efri-Ás active barns and farming infrastructure are located 300 m to the east of the two modern farmhouses. Efri-Ás is about 150 m northeast of the Hjaltadalur river. The latest turf farm house, visible in a photo on page 266 in Pálsson (2011) is on the old farm moun investigated by this work, about 30m above the younger farmhouse.

Summary

During the 2023 field season, the area around Efri-Ás was intensively cored and two test pits were excavated. The results from these investigations suggest a pre Vj~1000 occupation that expanded between 1104-1300 and contracted slightly after 1300 (Table 12). The expansion of the farmstead is mostly due to the footprint of the farmstead extending about 25 m further east. This eastern area received more deposits after AD 1300 than the original location, suggesting an overall shift to the east.

History and Previous Work

The Efri-Ás farm is first mentioned in the history of bishop Lárentíus Kálfsson in the late 13th century (Biskupa Sögur I). Ás is mentioned in saga material as a single farm but in 1388 two farms are mentioned, Efri-Ás and Neðri-Ás. The assumption has been that Neðri-Ás was the original Ás mentioned in the sagas, with the subsidiary Efri-Ás established, probably in the 11th-12th century (Pálsson, 2011).

The farm, like most farms in the area, was later owned by the Hólar estate, mentioned in the property list of the Hólar bishopric from 1388 but it not mentioned in the registry of bishop Sigurður from 1550 (DI III). In land registers 1686-75 the farm has a tax value of 40 hundreds (Lárusson, 1967) but had reduced to 30 in 1802 (Pálsson, 2011). In the 1388 property registry, Efri-Ás is mentioned with its tenant farm Hálsgróf. The location of the tenant farm remains unknown but has been a cause for much speculation—see Jónsson (1927) and Pálsson (2011). In the southern part of the farm is a sectioned off property around a summerhouse called Ásholt. Directly east thereof lie the remains of unnamed ruins, presumably an ancient farmstead. The ruins lie on the area of Laufskálaholt and it has been suggested that the farmstead could originally have been called Laufskáli (Pálsson, 2011).

No previous archaeological work has taken place at the main Efri-Ás farm. Carter (2015) states that coring had taken place at the farm site of Efri-Ás, but those cores were from the site of Laufskálaholt (see below).

Coring

During the 2023 field season, 218 cores were taken around Efri-Ás in an area over 17.5 ha. The survey area of Efri-Ás included the inner fields directly adjacent to the modern farm complex, several of the outer fields, and a garden area located in the backyard of the old eastern farmhouse. Coring results suggest that the cultural deposits at Efri-Ás date from pre-H1104 to post-H1300. The largest concentration of cultural material at Efri-Ás was identified along an elevated slope just to the North of the modern farmhouse. Isolated finds of cultural material were also present. Three cores placed 30 meters uphill of the farm mound (230540, 230541, 230536) retrieved LDC material that dated to both pre-H1104 and post-H1104. It is likely that these finds correspond to the location of a Viking-age animal outbuilding and are not significant farm mound deposits. Several other cores placed in the fields surrounding the farm complex also contained LDC layers, none of which contained a reliable tephra sequence. Scattered turf deposits were also identified in the northernmost field and the outer fields to the south and southeast, but most of these could not be dated. The exception was the turf layer retrieved from core 230623, which was likely deposited sometime before 1104.

Eighty-two of the cores taken at Efri-Ás contained farm mound deposits. Of these cores, 35 contained good “yes” evidence for pre-H1104 cultural deposition. 30 cores contained good “yes” evidence for cultural deposition between H1104-H1300, and 4 contained “yes” evidence for cultural deposition after H1300 (Table 10Table 10). Coring conducted within the largest concentration of cultural material suggests movement of the farm mound midden over time. The high density of pre-H1104 cultural material on the western side of this concentration contrasts significantly with the apparent absence of confirmed post-H1300 midden in the same area (the exception being core 230725, which contained a post-H1300 midden layer). Similarly, the appearance of post-H1300 deposits in the eastern half of the midden (and the lack of a definitive pre-H1104 layer in Test Pit 1) suggests a change in deposition sometime after 1104.

The H1104 tephra retrieval in farm mound cores at Efri-Ás was higher than the Hjaltadalur average, while retrieval in non-farm mound cores remained the same (see Figure 2 for locations of cores with H1104). Vj~1000 tephra retrieval was greater than expected for both farm mound and non-farm mound cores. H1766 retrieval was somewhat comparable to the Hjaltadalur average in non-farm mound cores, yet at a lesser rate in farm mound cores. H1300 retrieval followed a similar pattern. Landnám tephra retrieval at Efri-Ás appeared to follow the Hjaltadalur average for both farm mound and non-farm mound cores (Table 9). Out of all the cores taken at Efri-Ás that contained farm mound deposits, 4 contained the H1104-H1300 sequence and only one (230701) had midden deposits directly on top of the LNS.

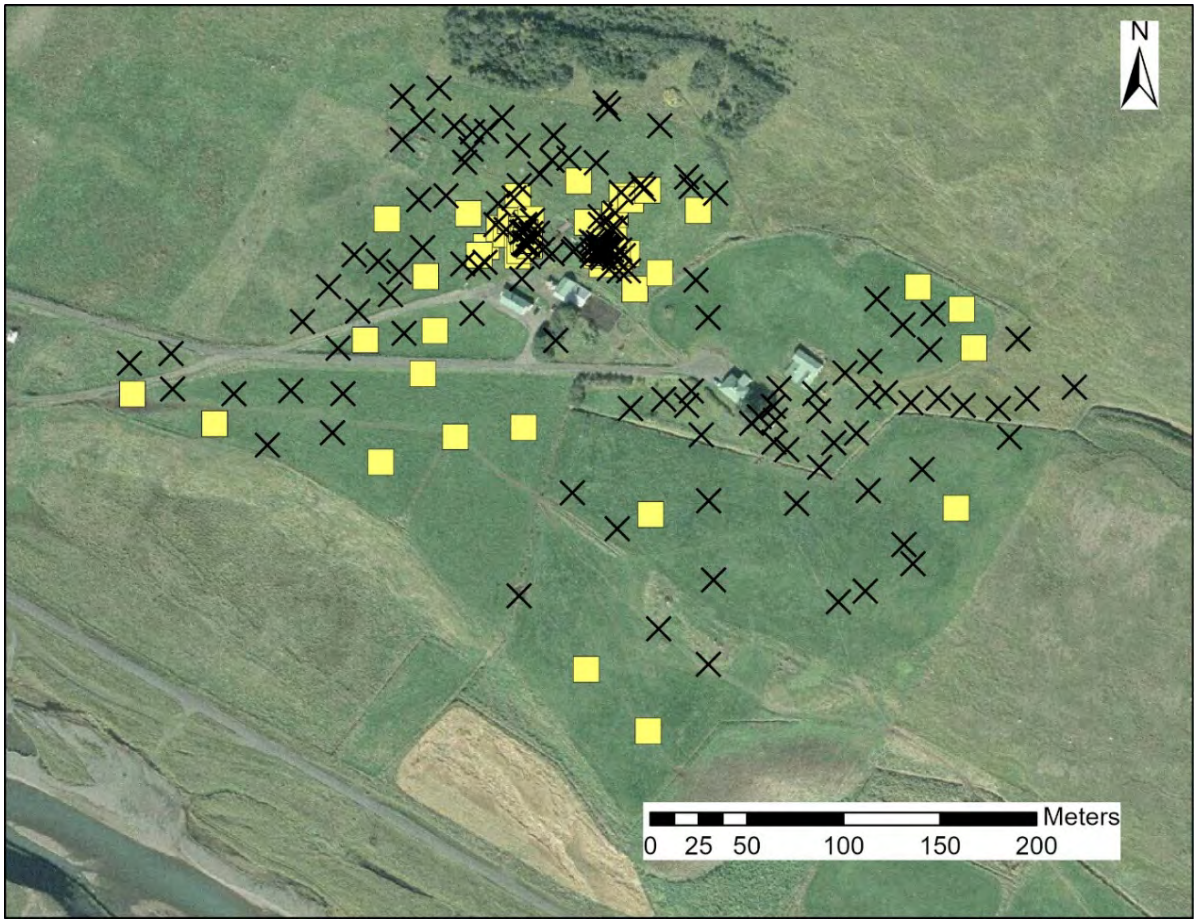


Figure 2. Efri-Ás overview coring results. Cores with H1 are marked in yellow. Locations of cores without the H1 tephra are marked with "X".

Excavations

There were two excavations at the main Efri-Ás farm mound (264P0). Initially, there appeared to be two areas where cores suggested that there were sequences with midden below H1104. The eastern area seemed to have deeper and more substantial deposits below the H1104, thus, Test Pit 1 (TP1) was placed in the Eastern cluster. However no in situ H1104 was found during the excavation and this cluster was determined to not have pre-1104 cultural material at all. The H1104 tephra, observed in the cores, was in turf deposits in the excavation. This revision is reflected in the pre-1104 farm size (Figure 4). Test Pit 2 (TP2) was placed following the completion of TP1 in the western cluster of cores that exhibited midden below the H1 tephra. This pit had a complete sequence of H1300, H1104, Vj~1000, and LNS and was interpreted as representing some of the early cultural activities at Efri-Ás, .given that there are 25 cm of cultural deposits below the Vj~1000 that rest on the LNS.

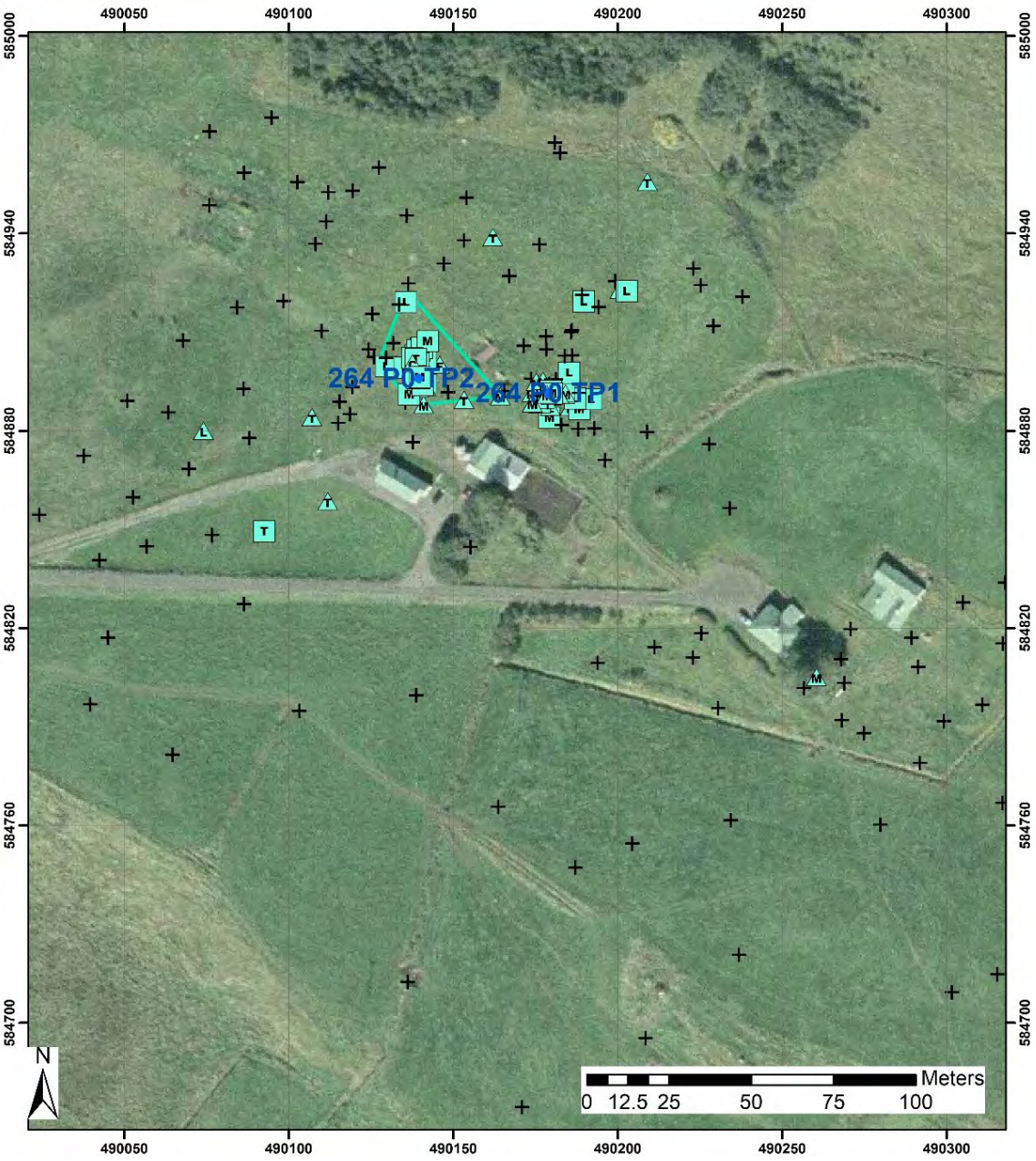


Figure 3. Efri-Ás pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit locations for TP1 and TP2 are in blue.

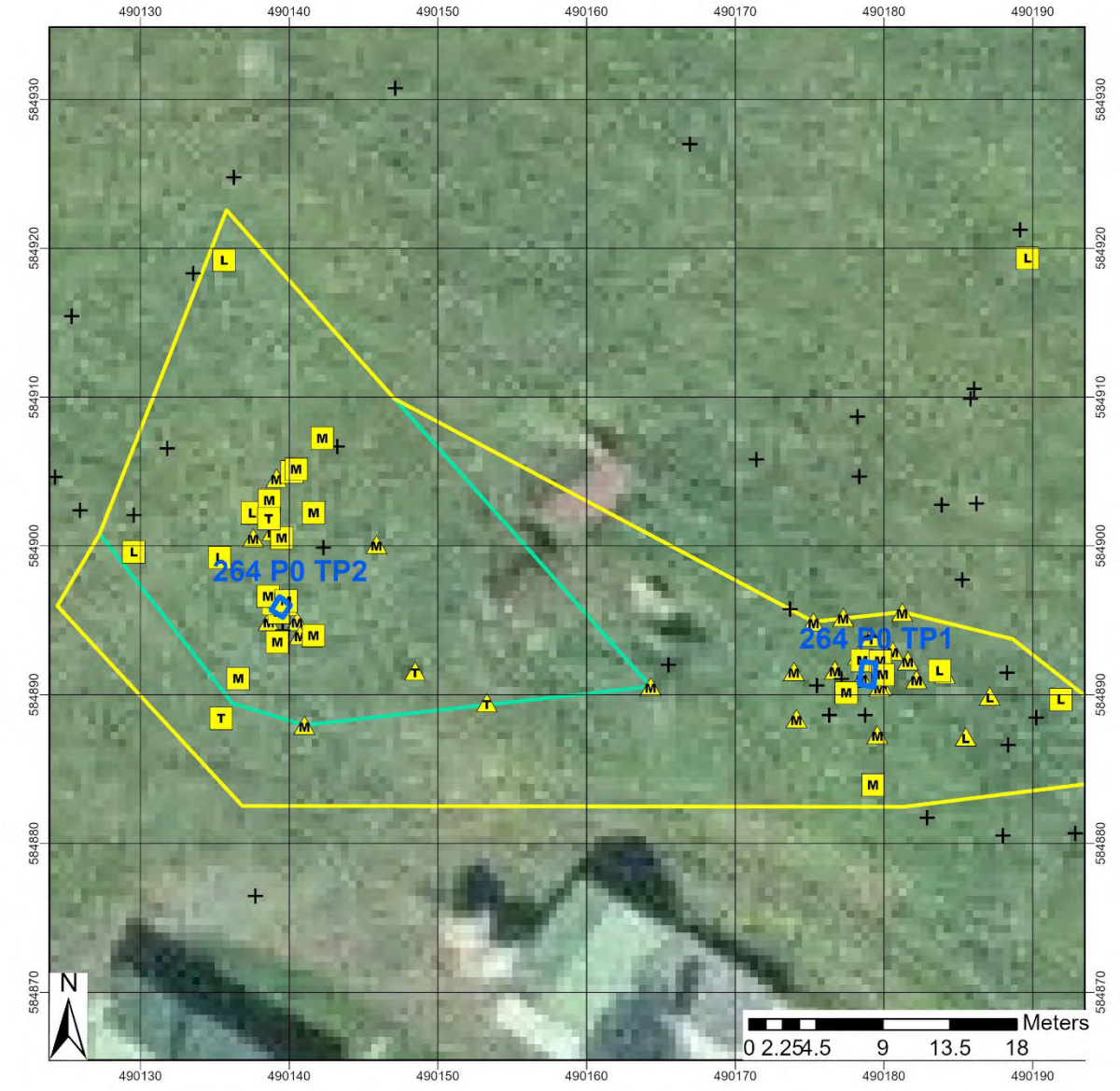


Figure 4. Close up of Efri-Ás with 1104-1300 coring results. Interpolated pre-1104 (teal) and 1104-1300 farmstead size (yellow) is presented. Test pit locations are in blue.

Test Pit 1

TP1 was placed based on coring data. Cores in the Eastern cluster at Efri-Ás suggested the presence of pre-1104 midden. Core 230579 (1104 at 117cm bgs) was by the NW corner of the pit, 230788 (1104 at 112cm bgs) was by the NE corner, 230751 (no tephra) was by the SW corner, and 230750 (1104 11cm bgs) was by the SE corner.

The general sequence of TP1 (Figure 5) is a modern root mat [101] followed by a disturbed layer [131] containing an awl made of animal bone. A pit [132] was dug into the disturbed layer. The bottom of the pit and the disturbed layer were resting on a layer of post-1300 midden [133] followed by a thin layer of turf [134]. This was followed by approximately 35 cm of post-1300 midden [135] containing a possible textile. This layer was resting on top of the H1300 tephra [136]. Below the tephra was about 15cm of turf [137] and

two relatively thick layers of LDC [139, 139] on top of an Aeolian subsoil [140]. Excavation was terminated after reaching a sterile Aeolian layer.

This pit did not have an in-situ 1104 as expected from the cores. Furthermore, the H1300 tephra was found at approximately 110-115cm bgs, around the same or above the level at which the cores identified the H1104. One core, 230579, had a dark tephra recorded at this depth that was misinterpreted as Vj~1000. In the field, this lack of H1104 led to TP2 being placed in the Western cluster that were positive for cultural deposits under the H1104 tephra. Further analysis of the cores and the inconsistent depth and presence of the H1104 tephra, along with the sequence in TP1, substantially discounts the possibility of cultural activity in the Eastern cluster before AD 1104.

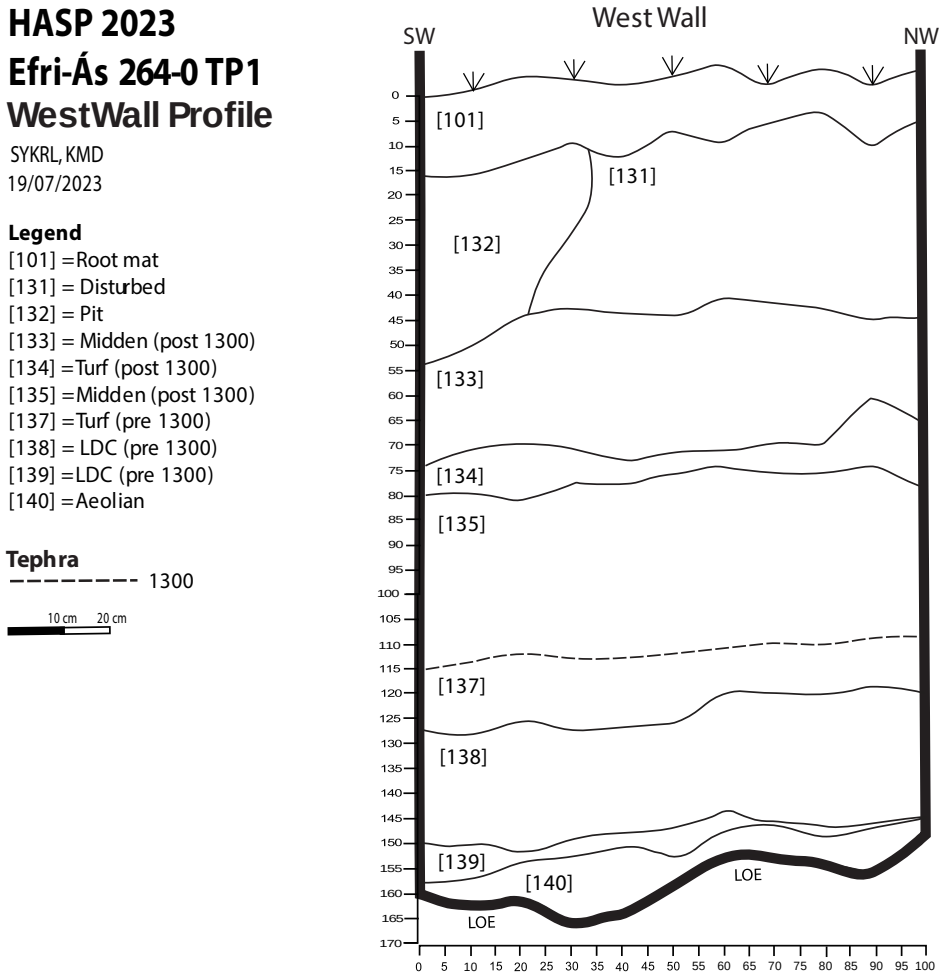


Figure 5. Profile of West wall at Efri-Ás test pit 1.

Interpretation: Initial use was some time before 1300, but it cannot be confirmed that it was before 1000 or 1104. Only LDC was found before 1300, so there was no indication that this section of the farm mound was used heavily before 1300. Habitation continued after 1300 and was likely significant to create such a thick layer of midden [135]. At some point after 1300, the midden was capped with turf and another midden was created on top.

Figure 6. Image of context 136 (H-1300 tephra) from Efri-Ás P0 TP1.

Test Pit 2

TP2 was placed based on coring data and the results from TP1. The cores in the Western cluster indicated midden below H1104 and cultural material up to H1300. Cores 231323 and 231331 were both inside the unit and both had a continuous sequence of midden above and below an in-situ H1104. Core 231329, 10cm west of the unit, and Core 231333, 6 cm to the northeast of the pit, both contained midden below and above an in-situ H1104. The sequence of the cores matched up very well with the pit; all the cores mentioned had H1104 at around 75 cm bgs, and the tephra layer was found at 80-85 cm bgs in the test pit. The difference of less than 10 cm is accounted for by compression in the process of extracting the cores.

The sequence of TP2 (Figure 7) started with a modern root mat [101] followed by a disturbed layer [151] on top of the H1300 tephra [1300]. The H1300 tephra was initially missed and added to the profile later. Below the H1300 tephra was a layer of LDC [160]

made up of mostly aeolian soil that was initially counted as part of the disturbed layer above. This was followed by a 10 cm layer of midden [152] with charcoal and bone on top of an in-situ H1104 [153]. Under the H1104 tephra was another layer of midden with charcoal and bone [154] on top of an in-situ Vj~1000 [159]. The Vj~1000 tephra was not initially detected and added to the profile later. Immediately under the Vj~1000 tephra was a layer of LDC [155] which was originally identified as a charcoal midden. A layer of midden [156] with charcoal, turf, animal bones, and cobbles was underneath the [155] context. This [156] context had large stones at the bottom (Figure 8) suggesting a fire pit. This potential fire pit sits on top of the Landnám sequence [197], which extends across most of the unit, and is particularly prominent in the Eastern wall. Sterile aeolian soil [158] was reached under the LNS and excavation was terminated. Contexts 159, 160, and 1300 were added after the original profile was drawn.

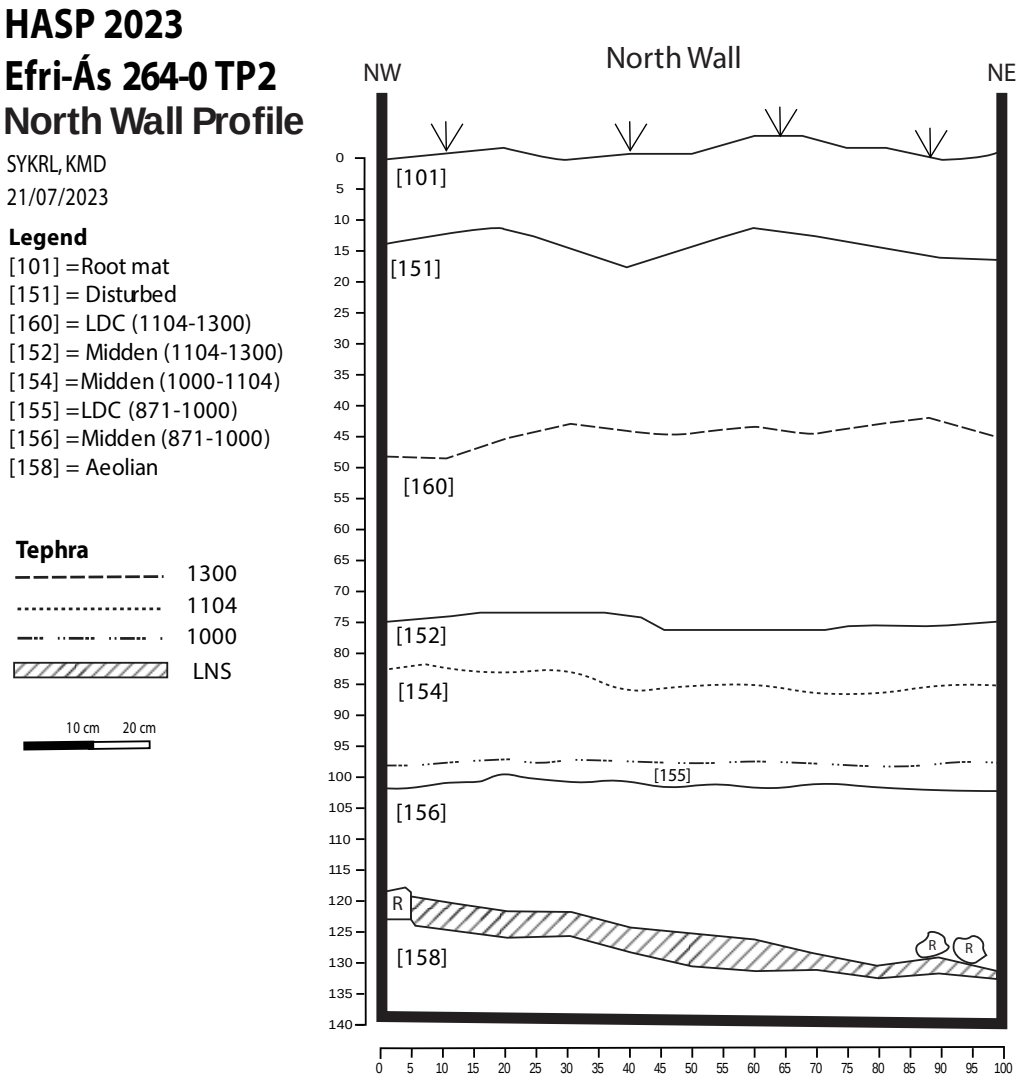


Figure 7. Profile of North wall profile from Efri-Ás test pit 2.

Interpretation: The TP2 sequence suggests occupation from immediately after the Landnám tephra to at least 1300. There appears to have been a burning event, possibly a fire pit, very soon after the Landnám tephra and well before the Vj~1000. After the Vj~1000 tephra there was less charcoal ash and more peat ash. Before 1300, the midden deposition slowed down significantly to LDC that was mostly aeolian, indicating less intense occupation up to and after 1300 in this part of the site. While single cooking pits before 1104 are not rare, the fact that this burning event is directly above the Landnám tephra is significant.

Figure 8. Image of [157] bottom showing LNL and associated rocks.

Laufskálaholt

Laufskálaholt is designated as 264-2 in the report. The Laufskáli area was previously a part of Efri-Ás but was recently separated from the main farm and a summer house, Ásholt, built there in 2010. An area of approx. 120 by 100 meters is surrounded by an old boundary wall just east of the Ásholt. Within the area are the prominent ruins of a stekkur and some older more indistinct ruins. The Laufskálaholt area is about 170 m north of the Hjaltadalur river. The area is approximately 1km to the southeast of the current farmhouse at Efri-Ás.

Summary

During the 2023 field season, the area around old ruins on Laufskálaholt was cored and one test pit was excavated. The results from these investigations suggest a very small pre- AD 1104 occupation and an even more limited occupation after AD 1104. The site was likely abandoned sometime after 1104, and there was not enough evidence to interpolate a farm mound at Laufskálaholt after AD 1104 (Figure 65, Figure 66, Table 12).

History and Previous Work

The archaeological site of Laufskálaholt consists of a few ancient ruins within a bounded field. Pálsson (2011) suggests the archaeological ruins could have been a farm called Laufskáli, giving its name to its surrounding area. As the name of the site is not known, it is identified as Laufskálaholt in the report.

Carter (2010), Carter (2015) suggested that the coring she presents in her thesis had taken place at the location of the Efri-Ás farm, but those cores were taken at what is today called Ásholt and should be associated with a small farm at Laufskálaholt. These earlier coring results are reproduced in Figure 87. Five of the 8 cores had evidence of pre-1104 occupation, three of them (27, 28 and 12) had an in situ 1104. The others only cultural material mixed with H3, suggesting an early date. The area around cores 27 & 28 were investigated in 2023 and could not be confirmed. The deposit by core 12 was confirmed and a test pit excavated nearby.

Coring

During the 2023 field season, 159 cores were taken around Laufskálaholt in an area over 2.2 ha. The survey area included fields to the east of the standing summerhouse. Coring results suggest that the cultural deposits at Laufskálaholt date primarily to before AD 1104, with the possibility of later cultural materials that did not have bounding tephras to confirm. The largest concentration of cultural material was towards the eastern boundary of the field immediately adjacent to the summerhouse. None of the cores in this area had clear evidence of pre-1104 occupation because the H1104 tephra preservation was very poor. Some cores did have cultural material at a depth close to prehistoric tephras (232770 and 232771). There was also a cluster of turf further to the east without a firm date that likely represents an outbuilding (Figure 9). No deposits with evidence of burning were encountered in these eastern area.

Twenty-three of the 159 cores from Laufskálaholt contained cultural material. Of these cores, 1 contained good “yes” evidence for pre-H1104 cultural deposition. No cores contained good “yes” evidence for cultural deposition between H1104-H1300 or good “yes” evidence for cultural deposition after H1300 (Table 10). Midden deposits at Laufskálaholt (n=3) were located at an average depth of 0.23 m. Turf deposits (n=19) were located at an average depth of 0.48 m, and the singular LDC deposit recovered was located at a depth of 0.35 m (Table 11).

Landnám tephra retrieval at Laufskálaholt was higher than the Hjaltadalur average both in farm mound cores (with cultural material) and non-farm mound cores (no cultural material). Vj-1000 tephra retrieval was higher than average in non-farm mound cores but

lower than average in farm mound cores, and H1104 retrieval followed the same pattern. H1300 retrieval was below average in both categories (Table 9). Out of all the cores taken at Efri-Ás that contained farm mound deposits, none contained both H1104 and H1300.

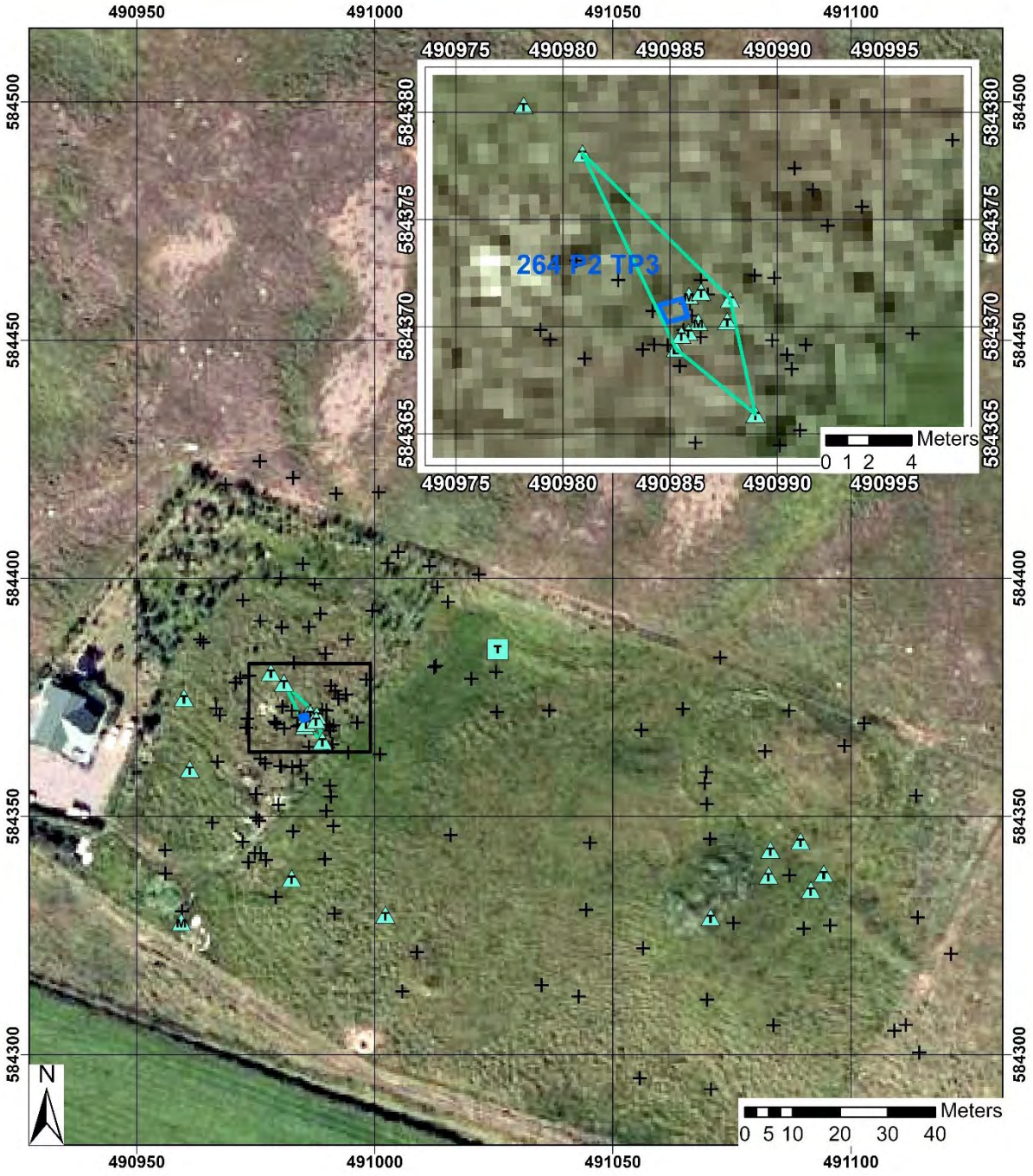


Figure 9. Laufskálaholt pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit locations are in blue.

Excavation

There was one excavation at Laufskálaholt (264-2) which was designated Test Pit 3 because Laufskálaholt is on the land of Efri-Ás, where two test pits had already been placed during

the 2023 season. TP3 was difficult to place because of the extremely poor preservation of tephra in cores with cultural material. TP3 was placed in the only area to have suspected pre-1104 midden. The excavation was able to confirm a pre-1104 floor but did not suggest any occupation after 1104.

Test Pit 3

TP3 at Laufskálaholt was placed based on coring data. There was very poor tephra preservation in this area and tephra was not in the same core as those with cultural deposits. In fact, there were only three cores recording an 1104 tephra. Core 232772, which was close to the cluster of samples midden, recorded H-1104 at 22cm bgs but had no cultural material; Core 232793 was the same but recorded H-1104 at 11cm bgs. Core 232734, which was about 16 meters away from the area where midden was found and had no cultural material recorded and an H1104 at 23cm bgs. This yielded a rather tentative depth of 1104 from 11-24 cm bgs. The pit recorded H1104 ranging from 15-30cm bgs, which roughly corresponds with the cores. The two cores that were marked as maybe for pre-1104 midden had midden starting at 20cm bgs (232771) and 30 cm bgs (232770), so it is very possible that this midden dates to before 1104. This is reflected in the farm mound extent (Figure 9). The depth of H3 is very variable around this area, ranging from 10-71cm bgs. One possible reason for this is that the area is full of thufur, and their variable heights could impact the depth at which tephras and deposits are recorded.

The sequence of TP3 (Figure 10) started with a modern root mat [101] and a disturbed layer [291] which are represented together in the profile. This is followed by a layer of Aeolian soil [292] towards the SW corner of the unit. The H1104 tephra [293] appears below context 292 in the south wall and directly on top of context 295 in the SE corner. A layer of midden [294] that appears below 293 on the south wall extended across the east wall and was considered uniformly pre-1104 (Figure 11). Below the midden is a layer of turf mixed with H3 [295]. Below this turf layer in the NE corner of the unit is a floor [297]. In the east wall of the profile, the turf layer and floor are followed by disturbed aeolian soil. In the south wall, the turf layer is followed by a layer of H3 [296] and then the Landnám sequence. Excavation was terminated because H3 was reached. See Figure 58 for Harris Matrix.

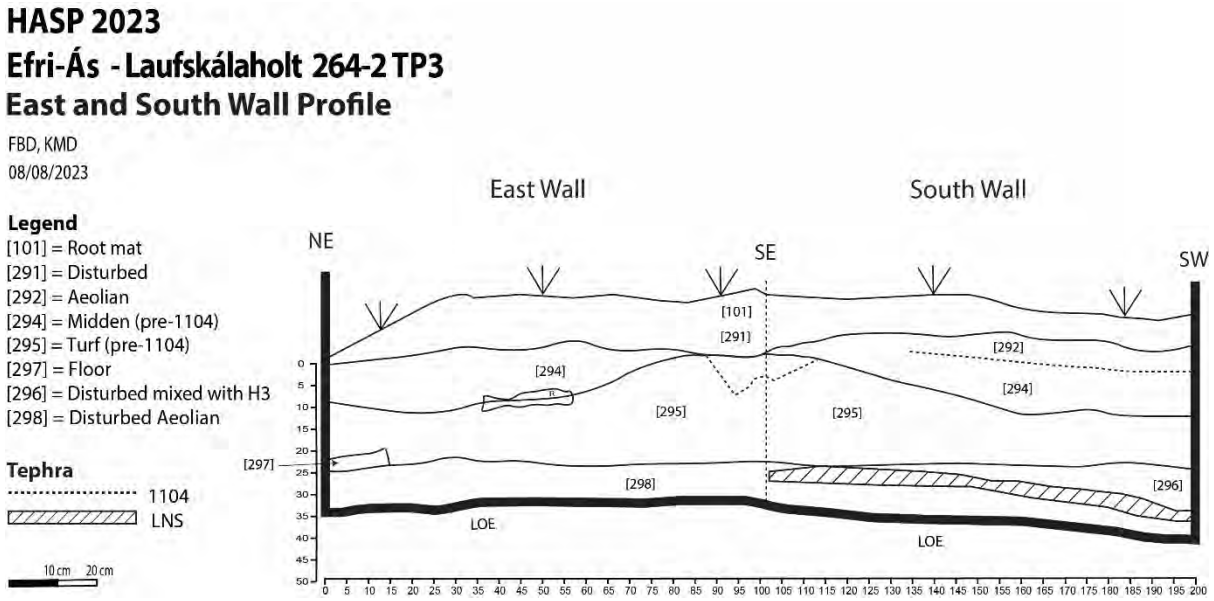


Figure 10. Profile of East and South walls at Laufskálaholt test pit 3.

Interpretation: This sequence represents an occupation likely after Landnám extending to AD 1104. The mixed turf [295] with a floor at the bottom [297] likely represents a structure that dates to before AD 1104; the H1104 in the center is likely from a roof collapse which would have taken place after the tephra fell. This structure is tentatively interpreted as a pit house that was later filled with midden [294]. Post-AD 1104, there is no evidence of well-dated cultural occupation. Thus, there are no 1104-1300 and post-1300 farmstead extents (Figure 65, Figure 66).

Figure 11. Image of pre-1104 midden [294] at Laufskálaholt, looking north.

Brekkukot

Brekkukot is located on the hillside about 380 m north of the modern farm of Laufskáli and about 60m south of the dirt track that goes from the Hjaltadalur river to Halsgróf and then into Kolbeinsdalur. Today it is on the land of the modern-day farm of Laufskáli but originally it belonged to the farm Víðines.

Summary

During the 2022 field season, the area around Brekkukot was intensively cored and a single test pit excavated. The excavation suggests an occupation from before 1104 that extended to shortly after 1104, when the area excavated was not used until shortly before 1766. There was enough coring evidence of post-1104 cultural materials (Figure 67) to technically consider Brekkukot occupied in all three periods, but there is a serious lacuna in the post-1300 period until shortly before 1766. This sequence is very similar to Grófarstekkur, which was surveyed in 2022 (Zoëga and Steinberg, 2023).

History and Previous Work

The modern farm Laufskálar, formerly named Brekkukot, was originally a tenant farm of Víðines and was in the location of the current investigation. As part of Víðines, it was under the ownership of the Hólar estate, but an independent farm since 1805. Brekkukot is not mentioned in the 1388 property registry of the Hólar bishopric which suggests it might have been established later (Pálsson, 2011). In the census of 1703, 5 people live at the farm (Magnússon, 1947). In a footnote in the 1847 Jarðabók, the farm Brekkukot was considered to have been 20 hundreds in value, same value as the home farm Víðines (Johnsen, 1847). The farm was located on the hill about 400m above the modern day Laufskálar but moved to its present location in the mid-20th century and renamed Laufskálar (Pálsson, 2011).

Coring

During the 2023 field season, 88 cores were taken around Brekkukot in an area over 1.5 ha. The coring results suggest that the cultural deposits run from pre-1104 to post-1300 and were almost all concentrated in a small area approximately 360 sq m meters north of the modern farm of Laufskála. Two post-H1300 turf deposits were found outside of this concentration: one in a field to the west of the modern farm and another approximately 50 meters east of the interpolated Viking-age farmstead. It is possible that these deposits may represent more modern outbuildings.

Forty-two of the 88 cores taken at Brekkukot contained cultural material. Of these cores, only 4 contained good “yes” evidence of cultural deposits before H-1104. One core contained a floor deposit, another contained a midden deposit, and the other two contained low density cultural material. 2 cores contained good “yes” evidence of deposits dating from H1104-H1300, and 6 cores at Brekkukot contained good “yes” evidence of cultural deposits post-H1300 (Table 10). Midden deposits at Brekkukot (n=13) were located at an average depth of 0.88 m. Turf deposits (n=13) were located at an average depth of 0.54 m, LDC deposits (n=5) were located at an average depth of 0.87 m, and the singular floor deposit recovered from coring was located 1.13 m below the surface (Table 11).

Tephra preservation in cores containing cultural material was poor at Brekkukot. The H3/H4 sequence was represented in 12 of the cores at an average depth of 0.91 m, and H1104 was recorded in only 7 of the cores at an average depth of 0.7 m (Table 9). Most of the cores taken at the site did not provide a complete tephra sequence that could be used to confidently date cultural deposits.

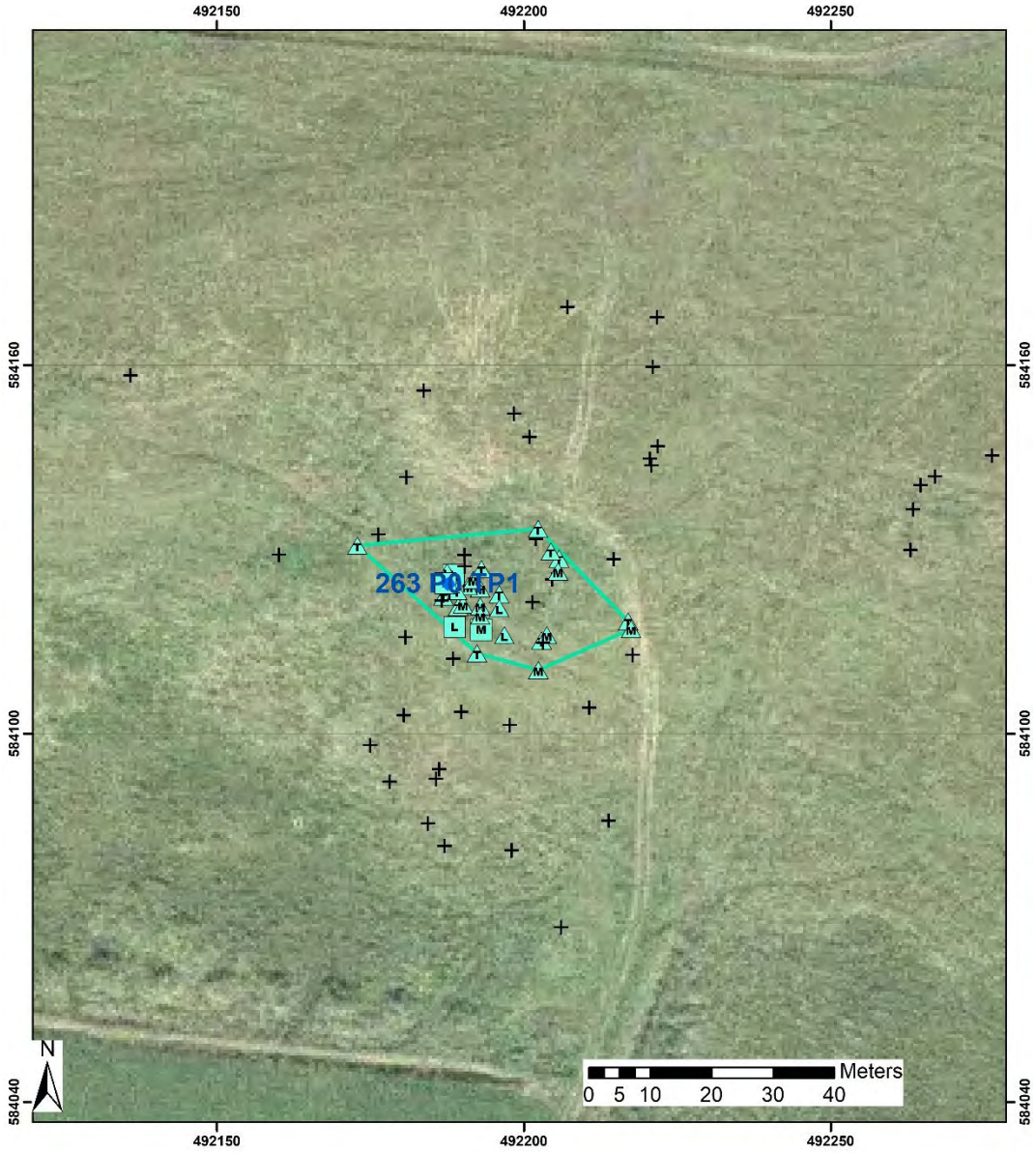


Figure 12. Map of Brekkukot pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue.

Excavations

There was one excavation at Brekkukot. Test Pit 1 (TP1) was placed over a series of cultural depoists, one of which may have been a floor deposit with an in-situ H1104 recorded above it (Core 232948). Midden and LDC with 1104 recorded above (Core 232940 and 232943 respectively) were observed 5-10m to the southeast of the pit. The TP1 excavation is interpreted as several distinct phases: midden deposition from before 1104 until a short while after; a period of abondonment; turf deposition immediately before 1766; and creation/use of charcoal after 1766.

Test Pit 1

TP1 was placed based on coring data. Core 232948, which was in the NW sector of the unit, was prioritized because it contained a floor deposit below a distinct H1104 identifeid at 60 cm bgs). This closely matched the sequence in TP1. Core 232926, in the center of the unit, while not yielding any tephra, did have a very distinct turf layer from 40-50cm, again matching part of the test pit sequence.

Figure 13. Image of core 232948 from Brekkukot with a dark floor layer.

The sequence of TP1 (Figure 14) begins with a thin layer of root mat that transitions immediately to turf [200]. In the NE corner, there is a charcoal pit [211] which was used after the 1766 tephra fell. In the NW section of the unit, the 1766 tephra is resting upon a layer of turf [201]. Below both [211] and [201] was an sterile layer of aeolian deposit [202]. Following this sequence was a midden deposit [203] sitting on top of a layer of H1104 tephra in situ. Below this H1104 tephra was an LDC deposit that was split into two contexts: an upper [205] and a lower [206], both of which contained faunal remains. Below these was a midden deposit [207] which also contained faunal remains. This corresponds to the floor identified in core 232948, as both appear very dark and charcoal-rich in images (Figure 13, Figure 15). Below the midden was a layer of LDC [208] that also contained faunal remains. Towards the very bottom of the pit was a layer of upcast material [209] that consisted of mixed Landnám and H3 tephra with some cultural material. A layer of H3 tephra [210] below this upcast layer marked the limit of excavation.

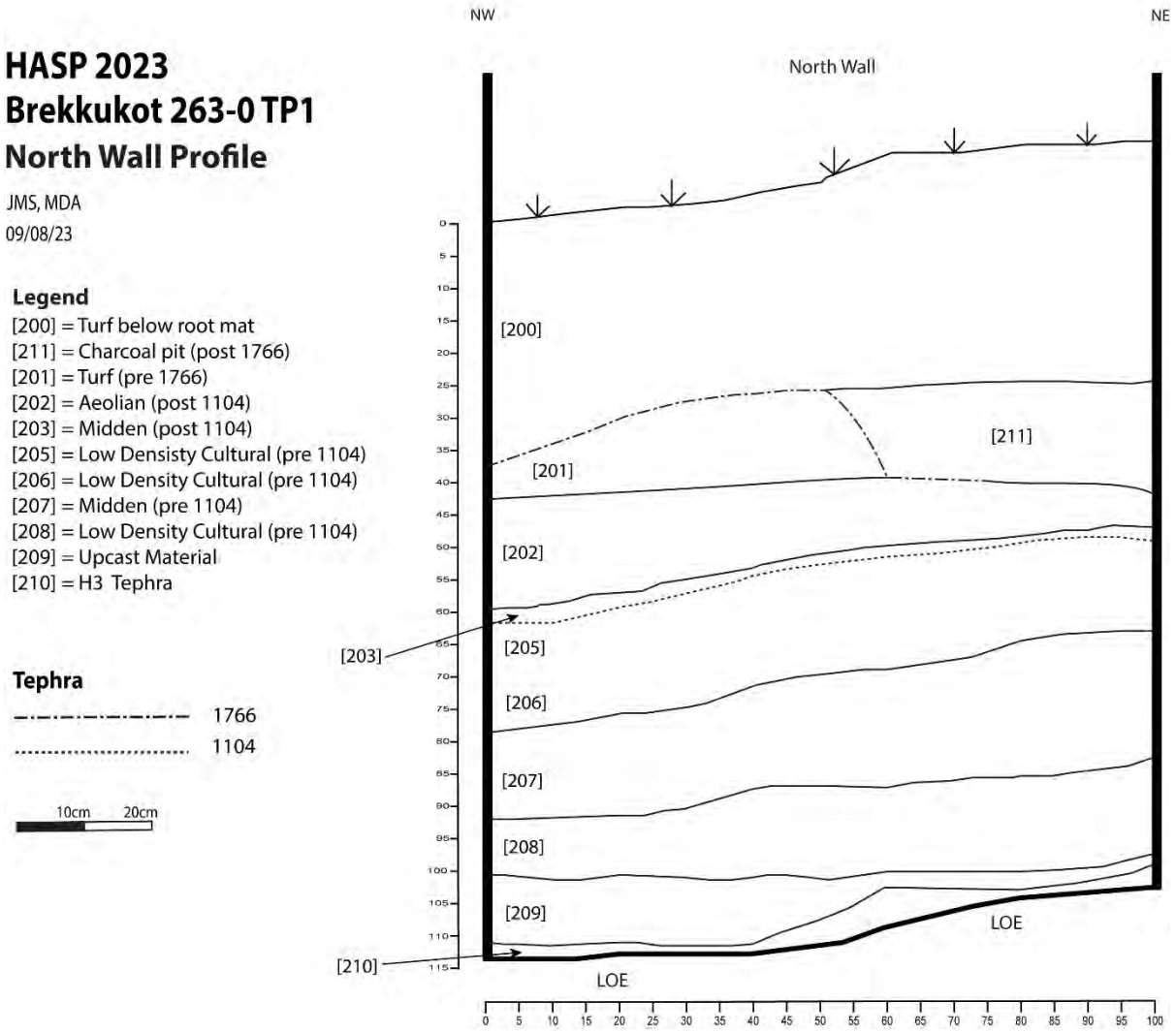


Figure 14. Profile of North wall from Brekkukot test pit 1.

Interpretation: Initial occupation began before 1104. There is one core (232894) that indicates a very early settlement with midden almost directly on top of the Landnám tephra (Figure 16), but the rest of the 10 cores that retrieved the Landnám tephra had a natural layer above it, and the only core that retrieved Vj~1000 did not have cultural material, so it is likely that the occupation at Brekkukot did not begin immediately after Landnám. The pre-1104 occupation of Brekkukot is represented by LDC followed by an intensification to midden with large amounts of charcoal (Figure 15). This is followed by two LDC layers suggesting a deintensification of use in that spot. After 1104, there was a small amount of further midden deposition and then there is no evidence of use until immediately before 1766, when there was turf deposited. After 1766, the area next to the turf was used as a charcoal pit, and then the entire area was capped with turf.

Figure 15. Image of pre-1104 midden at Brekkukot with high charcoal content [207], looking east.

Figure 16. Image of core 232894 from Brekkukot showing midden just above LNS (at 115cm bgs).

Grafarkot

Grafarkot is a farm mentioned in several texts associated with Hólar, but its location is unknown (Pálsson, 2011). Pálsson relates an early 1600's mention of Grafarkot, and it is mentioned in 1709 (Magnússon and Vídalín, 1930) as an abandoned place. Pálsson (2011) suggests that Grafarkot must be near Brekkukot, perhaps on the land that is today Laufskálar. As a quick test of that theory, several cores were taken at what is today the functioning farm

of Laufskálar near the old barn. In one core post-1300 turf was identified (Figure 17). No other cultural deposits were identified during the small test.

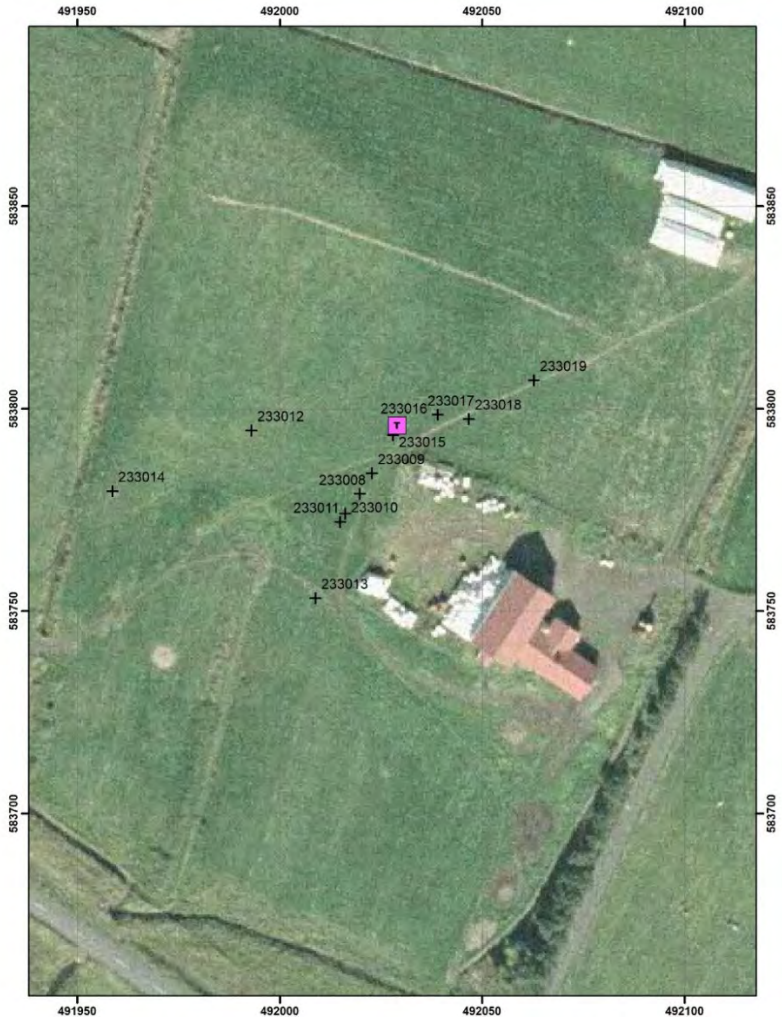


Figure 17. Coring at the Grafarkot (Laufskálar). There was only one positive core at Grafarkot (post-1300 turf)

Kálfsstaðir

Kálfsstaðir is 1.4 km east of Kjarvalsstaðir and about 475 m south of the Hjaltadalsá river. The modern farmhouse is about 20 m south of the center of the archaeological farm mound. A dirt road (Hjaltadalsvegur) bisects the traditional farm mound. The modern farmhouse is to the south of the road, while the work described here took place north of the road.

Summary

During the 2023 field season, a test trench was excavated to confirm the presence of burials and determine the preservation of human remains. This 1 x 2.5 m trench (TT2) identified a single grave shaft and revealed part of an interment. The sequence suggests that burial in the cemetery commenced prior to 1104. There is no evidence for later burials in this excavation, but the excavated trench covers a small part of the cemetery. Burial conditions, particularly the damp soils, had softened the bones so the remains were not removed.

History and previous work

Kálfsstaðir is first mentioned in the Saga of *Þórður hreða* and again in the *Saga of the Sturlungs*. 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 smooth out the field (Pálsson 2011:86).

For details about history and previous work at Kálfsstaðir, see Zoëga and Steinberg (2022, 2023). Initial archaeological geophysics using a conductivity meter was conducted at Kálfsstaðir in 2021 (Zoëga and Steinberg 2022). A test pit (TP1) in the nearby midden and a GPR survey were completed in 2022 (Zoëga and Steinberg, 2023). This work established the extent of an early medieval cemetery mentioned in sources but levelled in 1970.

Excavations

There was one excavation at Kálfsstaðir in 2023. Test Trench 2 (TT2) was placed within the extent of the cemetery first identified in 2021 and confirmed through geophysics in 2022 (Figure 18).

Test Trench 2

Test Trench 2 was placed based in the northern part of the church yard, as determined by geophysics and coring from the 2021 and 2022 seasons (Figure 18). The remains of the cemetery were leveled in 1970 as part of the creation of a modern-day hayfield (Ísaksson, 2008). Today, there is no visible sign of the cemetery on the surface. A roughly east-west test trench was excavated. The test trench was 2.5 meters in length and 1meter in width. Depth at the north end was about 60 cm bgs, and at the east end, it was about 40 cm bgs. The main objective of the excavation was to locate a grave and establish that this was indeed a cemetery. Therefore, the trench was not dug down to sterile. Because the field sloped down to the north, the lower (northern) end of the trench was about 30 cm below the upper end.

Below the root mat [101], there was a 7-10 cm deep mixed layer resulting from the field leveling [231]. Below that was a 5-30 cm thick layer [232] of mixed turf and midden material, likely from when the cemetery was leveled. The turf contained thick lenses of the H1104 tephra. Below was a 3 cm thick aeolian layer on top of the in situ H1104 tephra [234]. A 3-6 cm thick aeolian layer was also directly under the tephra (Figure 19). The tephra extended throughout the trench except for about 70 cm at the northern end, where it lay against a turf wall [238] that spanned from east to west. The turf wall was made of reddish turf and lay under the fill layer of [232] and partly covered by the aeolian layers on either side of the H1104 tephra. Right underneath the turf wall was a layer [239] of yellowish turf and soil, which had been placed under the wall for leveling. Below the [235] aeolian layer was a layer [240] of striated turf, a fill layer, used for leveling the cemetery. At the top of that layer

appeared a cut of a grave [237] and mottled grave fill [236] with large flecks of H3 tephra, soil, and mixed midden material.

As the primary focus was on locating and excavating a grave, the southern end of the trench was not made deeper. The western end of the grave cut was excavated further, and at a depth of about 50cm, the top of a skull appeared. The skull was cleaned but, due to the moisture in the soil, the bones were very fragile. The rest of the grave was not excavated further. The skull was examined, 3D photographed, and then covered up again.

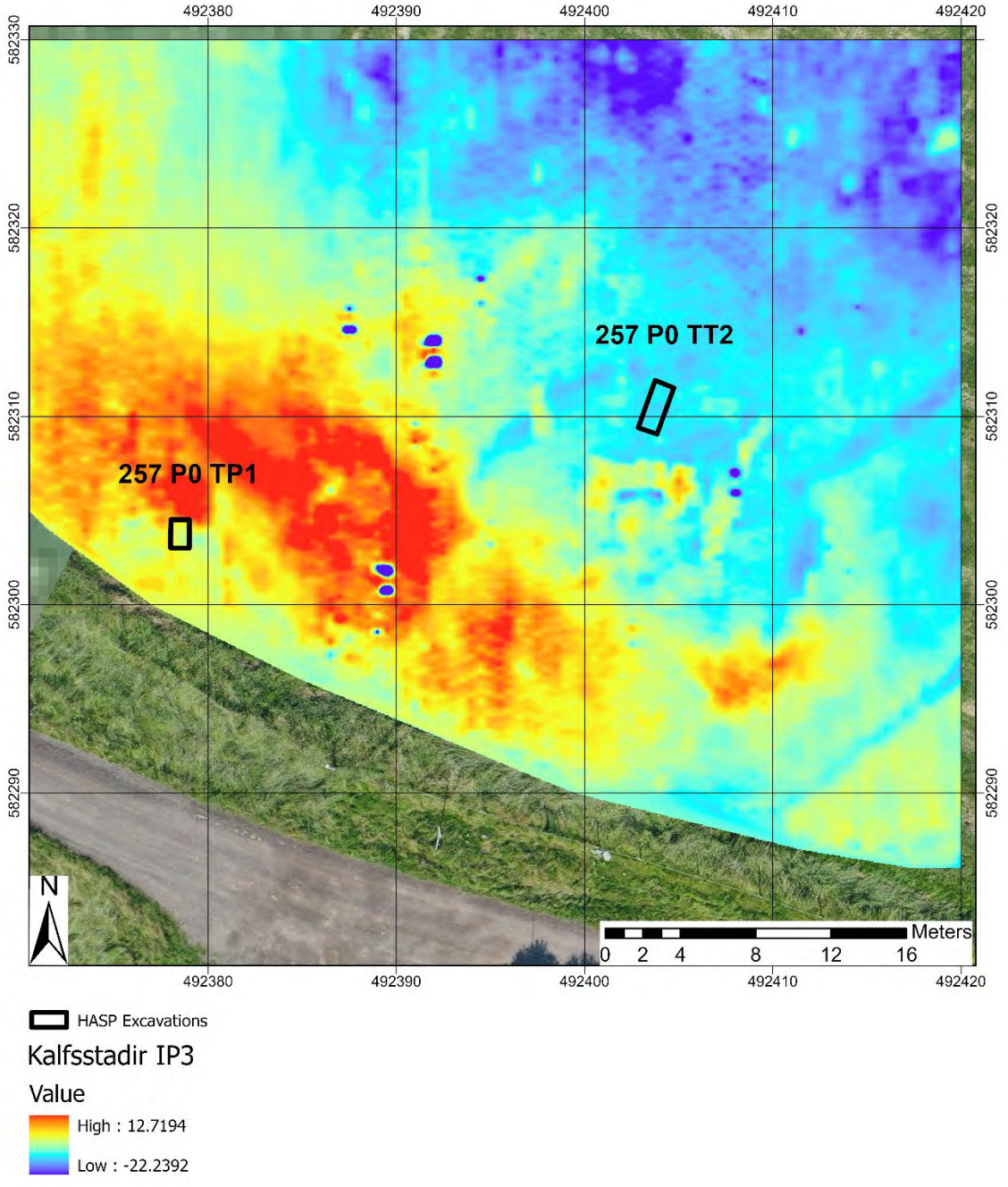


Figure 18. Kálfsstaðir IP3 component with location of Test Pit 1(placed in the farm mound midden in 2022) and Test Trench 2 placed in the churchyard described here.

To create a more detailed picture of the establishment of the cemetery, a 30 cm wide addition to the trench was excavated through the cemetery wall [238]. The deepest cultural layers were established by recording the sides of the grave cut. Below the levelling layer [239] underneath the turf wall and the levelling layer beneath the entire cemetery [240] was a 5-10cm thick layer [241] of LDC with specks of peat ash, charcoal, and burnt bone. The layer included large flecks of Landnám tephra. Below that was the Vj~1000 tephra layer [242] in situ. Below that was an 8 cm thick greasy midden layer [243] with wood ash and charcoal. Below that was a 20 cm thick mixed layer [244] of soil and H3/H4 tephras. Below is H3 in situ (Figure 20).

Figure 19. The eastern profile wall of test trench 2 in the cemetery. The grave is located in the middle of the trench, and to the left of it is a turf wall made of reddish-colored turf. The eastern section shows the in-situ white 1104 tephra above the grave and the earliest part of the turf wall.

Interpretation: The Kálfsstaðir cemetery was established around the turn of the 11th century in an area that was previously used as a domestic midden and habitation area. The uncertain dating of the Vj~1000 tephra necessitates a wide range for the dating of the cemetery. It is obvious that some time passed between the Vj~1000 tephra and the establishment of the cemetery as there is a layer of cultural deposits [241] above the tephra and beneath the levelling layer of [240]. The layer [240] represents a deliberate act of leveling in preparation for establishing the burial ground. The layer seems to extend

throughout the cemetery, even underneath the cemetery wall. This form of landscaping preparation is well-known in other contemporary cemeteries. Soon after the levelling layer was deposited, the partially excavated grave was dug, the body interred, and then the grave refilled. The grave is about 30 cm south of the cemetery wall, indicating that it is one of the outermost graves in the cemetery. The aeolian layer [235] between the grave and the H1104 tephra indicates that some time passed between the burial and the H1104 tephra fall. Thus, the grave is most likely from the first half of the 11th century. The presence of turf with H1104 in the mixed layer [232] above the cemetery indicates that the layer represents the final leveling phase of the cemetery once it was discontinued. This may also indicate that the cemetery wall had been repaired or reconstructed after AD 1104. The cemetery wall, visible in the section of the trench (Figure 19), was pre-1104, but it was obvious that its upper half had been damaged. It is uncertain whether the wall had been partially demolished before the leveling in 1974. Due to the soil being removed from above the cemetery during field construction in 1974, the later phases of the cemetery remain speculative. However, the presence of in situ H1104 tephra above the grave and the cemetery wall indicates that the establishment of the cemetery pre-dated the H1104 tephra. However, it must be noted that the test trench only represents a small part of the cemetery and my not be representative of the sequence in other parts of the cemetery.

The skeleton: The skeleton was in a fragile state and therefore was neither fully excavated nor removed for further analysis. In-situ observation of the skull indicated that the skeleton was likely that of an adult female. An unusual feature of the body's position was that the right arm had been flexed, positioning the hand just below the right lower jaw. In the earliest Christian cemeteries, the skeletons are typically positioned with hands flexed down by the sides. The head had been propped up by placing soil or turf around it, but no evidence of a coffin was found. Due to the cemetery's location on a slope and the soil's water retention, it is uncertain whether the preservation of the cemetery justifies further excavation to recover skeletons for analysis.

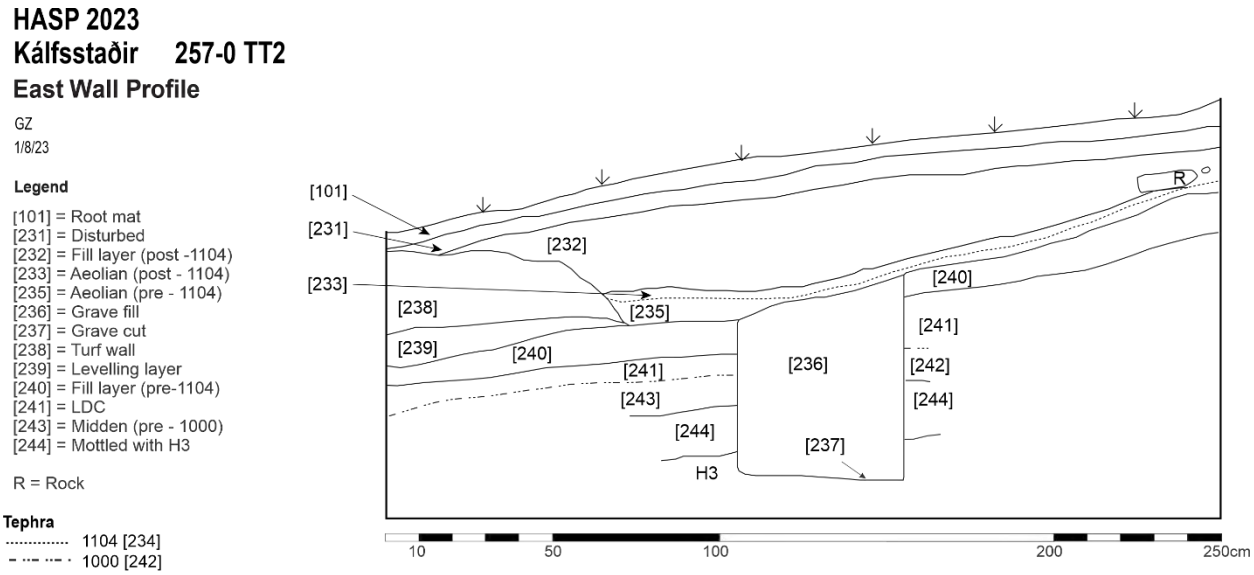


Figure 20. Kálfsstaðir TT2 east wall profile.

Figure 21. Kálfsstaðir TT2 Left: orthorectified photo of entire trench showing grave fill and the reddish turf in the cemetery wall directly above it. Right: orthorectified close-up of the exposed skull and the right arm.

Kjarvalsstaðir

Kjarvalsstaðir is located 1.4 km west of Kálfsstaðir and 1.2 km east of Nautabú, about 530 m south of the Hjaltadalsá river. It is also about the same distance to the west to Nautabúsá river. The modern farm is about 40 m north of the farm mound. The modern barn is about 90 m east of the farm mound. Nautabúsá can be a high-energy watercourse and the gravel deposited by the stream encroaches on the eastern edges of the farmland.

Summary

During the 2023 field season, the area around Kjarvalsstaðir was intensively cored and a single test pit excavated. The results suggest a continuous occupation from soon after Landnám tephra fell, to past 1300. The farm expanded after AD 1104 and stayed relatively consistent in size after 1300 (Figure 69, Figure 70, and Table 12). The modern farm buildings are about 50 m north of the farm mound area.

History and Previous Work

The farm Kjarvalsstaðir is first mentioned in the 1388 property list for Hólar (DI III, 1896) and remained under Hólar ownership until it was sold in 1802 (Magnússon, 1970). In the land

registries of 1686 and 1695, Kjarvalsstaðir are valued at 30 hundreds (Lárusson, 1967), but in 1847 the value is estimated at 20 hundreds (Johnsen, 1847). No previous archaeological work had been undertaken at the farm.

Coring

During the 2023 field season, 216 cores were taken around Kjarvalsstaðir in an area over 7.5 ha. The coring results suggest that the cultural deposits run from pre-H1104 to post-H1300. Almost all these deposits concentrated in an area approximately 80 meters south of the modern farmhouse, likely corresponding to what had been the original Viking-age/medieval farm mound (Figure 22). During the early stages of coring, it was determined that a significant portion of the farm mound had been bulldozed. This was noticeable in the stratigraphic variation of certain parts of the interpolated farm mound that could not be explained by the nature of pre-modern material deposition. The remains of this material could be found along a slope to the southwest of the farm mound. Some cultural deposits were found approximately 60 meters southeast of the farm mound. These were likely associated with a turf outbuilding that had been built sometime after 1300 that lies far outside the extent of the core farm mound. Other cultural deposits were found in the fields that surrounded Kjarvalsstaðir, yet these too were likely unrelated to the farm mound. A stone structure is located approximately 150 meters southeast of the farm mound. Cores were taken in and around the structure, but nothing was found.

Seventy-three of the 216 cores taken at Kjarvalsstaðir contained cultural material. Of these cores, 21 contained good “yes” evidence of cultural deposits before H1104, 28 cores contained good “yes” evidence of deposits dating from H1104-H1300, and an equal number of cores contained good “yes” evidence of deposits post-H1300 (Table 10). Midden deposits at Kjarvalsstaðir (n=27) were located at an average depth of 0.69 m. Turf deposits (n=13) were located at an average depth of 0.42 m, and LDC deposits (n=16) were recovered at an average depth of 0.66 m. The singular floor deposit identified at Kjarvalsstaðir (at a depth of 0.94 m) was found near the northern border of the interpolated pre-H1104 farm mound (Table 11). The location of this floor deposit also corresponds with the northern wall of the test pit.

Tephra preservation at Kjarvalsstaðir was good. H1104 was represented in 41% of the cores containing cultural material and H1300 was found in 34%. The cores also indicate that Kjarvalsstaðir has the best-preserved Landnám tephra in the valley, with 27% of the cores containing a Landnám sequence (LNS). Recorded tephra depths were more variable at this site due to the nature of the bulldozed farm mound, however depths taken in the main concentration of cultural material (near the eastern border of the interpolated farm mound) were very similar. H1104 at Kjarvalsstaðir could be found at an average depth of 0.57 m and H1300 at around 0.45 m (Table 9). In total, 15 of the cores that contained cultural material also contained a full H1104-H1300 tephra sequence. 10 of these cores contained a sequence that incorporated the settlement layer, which indicates initial site habitation shortly after the deposition of Landnám tephra.

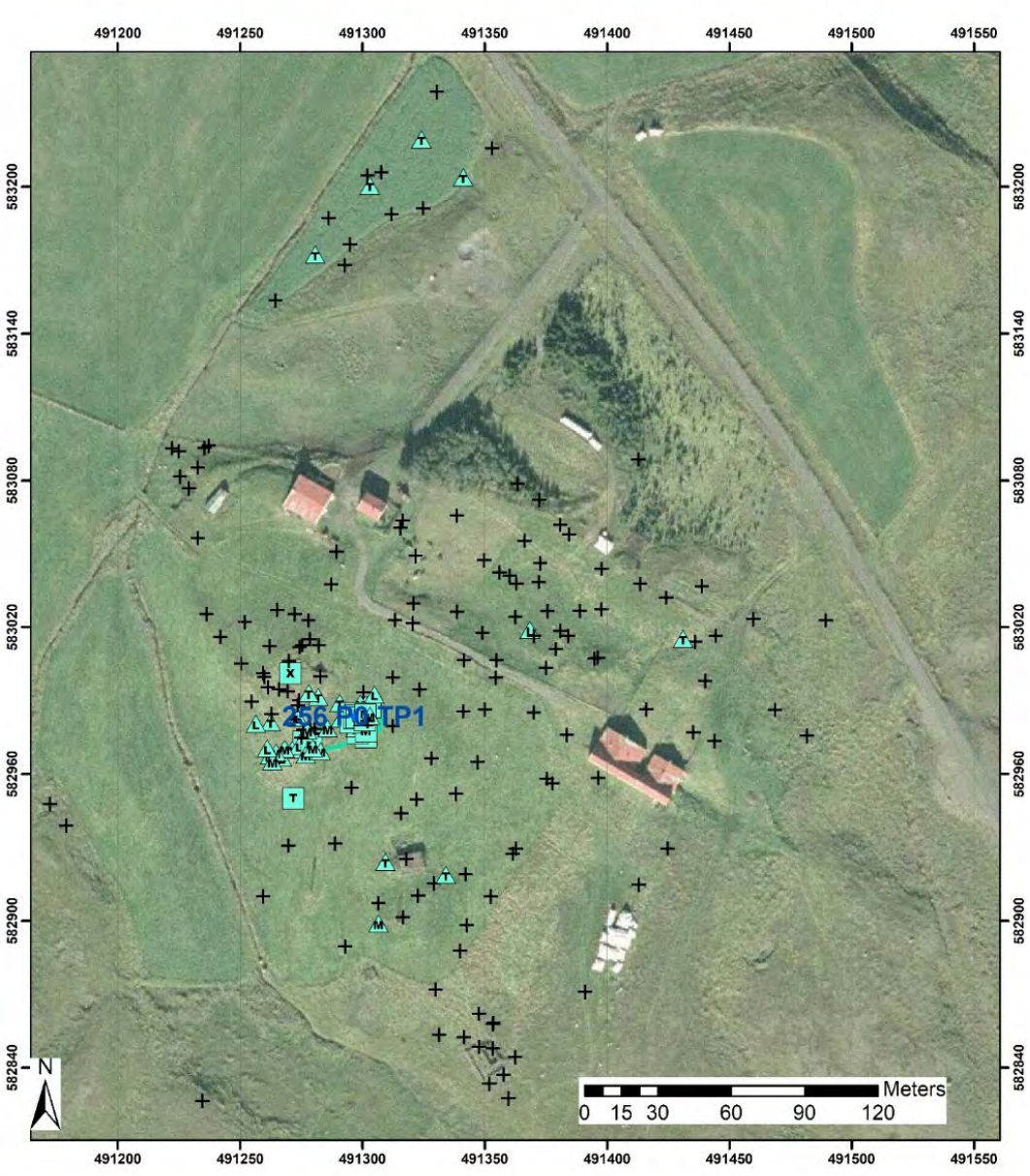


Figure 22. Map of Kjarvalsstaðir pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented.

Excavations

There was one excavation at Kjarvalsstaðir during the 2023 field season. Test Pit 1 (TP1) was placed in a concentration of cultural deposits that was located on the eastern side of the interpolated farm mound. This deposit contained substantial midden deposits with date ranges from the early Viking age into the modern era.

Test Pit 1

TP1 was placed based on coring data. The western section of the study area appeared bulldozed, so TP1 was placed in an area of midden concentration in the eastern half of the study area. Cores at this location (231791, 231929, 231931) contained a sequence of Landnám tephra, H1104, and H1300 tephra with cultural material. The pit itself was placed based on the sequences of 3 specific cores. The southwest corner of the pit corresponded to

231907, which contained possible midden within Landnám tephra that extended through a layer of H1104. The southeast corner of the pit corresponded to 231794, which contained a midden deposit extending through Vj~1000, H1104, and H1300 tephra layers. The northeast corner corresponded to 231793, which contained a midden deposit that extended through H1104 and H1300 tephra layers.

The stratigraphic sequence (Figure 23) begins with a modern root mat [101] followed by an H1766 tephra layer, which ran continuously along the West wall of the unit. This was followed by a layer of disturbed soil [251]. Below context [251] were two midden contexts, [252] and [253], which were originally excavated separately but grouped together in the profile. Context [253] was directly on top of the H1300 tephra [254], which was followed by another layer of midden [255]. The lower part of [255] contained more ash. Below context 255 was a layer of H1104 tephra [256] which extended across the majority of the profile but was absent in the Northwest corner of the unit. Further midden was recovered below the H1104 tephra and labeled as context 257. It was later determined that a layer of Vj~1000 tephra subdivided the deposit, so the context name was split into [257a] above Vj~1000 and [257b] below Vj~1000 (Figure 24). Below context 257b was a thick layer of Landnám tephra on top of a layer of H3 Tephra [258]. These two deposits marked the limit of excavation.

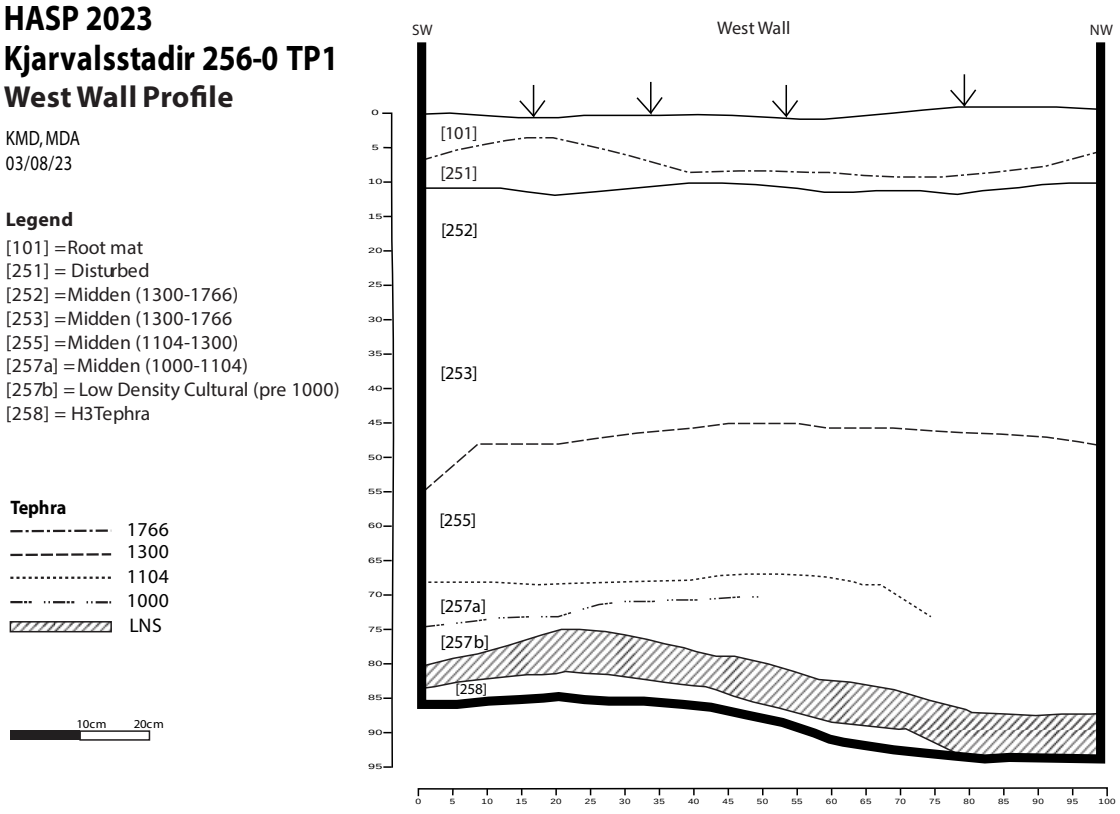


Figure 23. West wall profile at Kjarvalsstaðir test pit 1.

Interpretation: The settlement of the site likely occurred immediately after the deposition of the Landnám tephra because it was immediately followed by LDC in the excavation. The presence of midden extending through Vj~1000, H1104, and H1300 tephra layers also suggests that this site was continuously inhabited throughout the Viking age and medieval period. Midden accumulation increases after 1104 and again after 1300, suggesting intensification of activities throughout the medieval period. Based on the material recovered from the excavation, it appears that midden accumulation ceased by 1766. However, the appearance of the upper stratigraphic layers may be influenced by the bulldozing activities described previously and may not reflect an actual end to the midden accumulation.

Figure 24. Image showing top of 1000-1104 midden [257a] at Kjarvalsstaðir, looking north.

Nautabú

Nautabú is located about 750 m southwest of Kjarvalsstaðir and 650 m southwest of Íngveldarstaðir. It is about 1.3 km south of the Hjaltadalsa river. Nautabúsá river is just east of the farmstead. Nautabúsá can be a high-energy watercourse and the gravel deposited by the stream abuts the western edge of the farmland. The traditional farm mound is about 60 m southwest of the modern farmhouse buildings and about 80 east of the modern barns.

Summary

During the 2022 field season, the area around Nautabú was intensively cored and a single test pit excavated. The excavation suggests continuous occupation from at least before 1104, and potentially as early as the Landnám tephra, until sometime after 1300. The size of the farm mound increases slightly over time but is generally consistent (Figure 71, Figure 72, Table 12).

History and Previous Work

The farm Nautabú is mentioned in Landnámabók as a landmark in the land claim of the settler Öndóttur (Íslenzk fornrit I). By 1388 it was, like most farms in Hjaltadalur, owned by the Hólar estate from early on (DI III) until it was sold in 1802 (Magnússon, 1970). In the land registries 1686 and 1695, Nautabú was valued at 30 hundreds (Lárusson, 1967), and the value is the same in 1847 (Johnsen, 1847). Nautabú did not have any known subsidiary farms, but it has been postulated, based on the description of Landnámabók that the neighboring farm Ingveldarstaðir must have been split up from the original land claim of Nautabú (Pálsson, 2011:66). No previous archaeological work had been undertaken at the farm.

Coring

During the 2023 field season, 179 cores were taken around Nautabú in an area over 7.4 ha. The coring results suggest that the cultural deposits date from pre-H1104 to post-H1300 and were nearly all the cultural deposits were concentrated in an area approximately 100 meters southwest of the modern farmhouse (Figure 25). Cultural material was recovered on either side of a modern east-west farm road that cut across this area, likely representing the midden distribution of a single large farm mound. Several turf deposits were also found in Nautabú's surrounding fields, These turf depoists could not be dated with any reliability, did not have any burnt deposits, and are likely associated with the presence of outbuildings far from the interpolated farm mound boundaries. Widely dispersed turf deposits were recorded in the field to the south of the farm mound. Having been taken in a modern boggy area that produces natural layers identical in appearance to turf, it was determined that these cores may have been misidentified and we could not justify an extension of the interpolated farm mound boundaries.

Seventy-four of the 179 cores (excluding the 10 turf cores in the field to the south of the farm mound that were likely misinterpreted) contained cultural material. Of these cores, 24 contained good "yes" evidence of cultural deposits before H1104. 31 contained good "yes" evidence of deposits dating from H1104-H1300 and 19 provided good "yes" evidence of deposition post-H1300 (Table 10). Midden deposits at Nautabú (n=34) were located at an average depth of 1.02 m. Turf deposits (n=23) were located at an average depth of 0.58 m and LDC deposits (n=19) were found at an average depth of 0.74 m (Table 11).

Tephra preservation at Nautabú was fair, with H1300 being represented in 27% of the cores that contained cultural material. H1104 tephra was not as common, only being represented in 26% of the cores. Tephra depths varied to some degree at this site, yet were fairly consistent across the core farm mound area. H1104 averaged a depth of 0.65 m and

H1300 a depth of 0.49 m (Table 9). A significant outlier was found in core 231099, which had an H1104 depth of 1.42 meters. Another outlier was discovered in core 231139, which contained an H1300 tephra at 1 meter. This disparity could possibly be explained as a misidentification of an in-situ Landnám tephra, which occurred at a similar depth across the site. In total, 10 of the cores at Nautabú that contained cultural material also contained a full H1104-H1300 tephra sequence. Three of these cores also contained layers of Landnám tephra that suggested site habitation shortly after or at the time of Iceland's settlement.

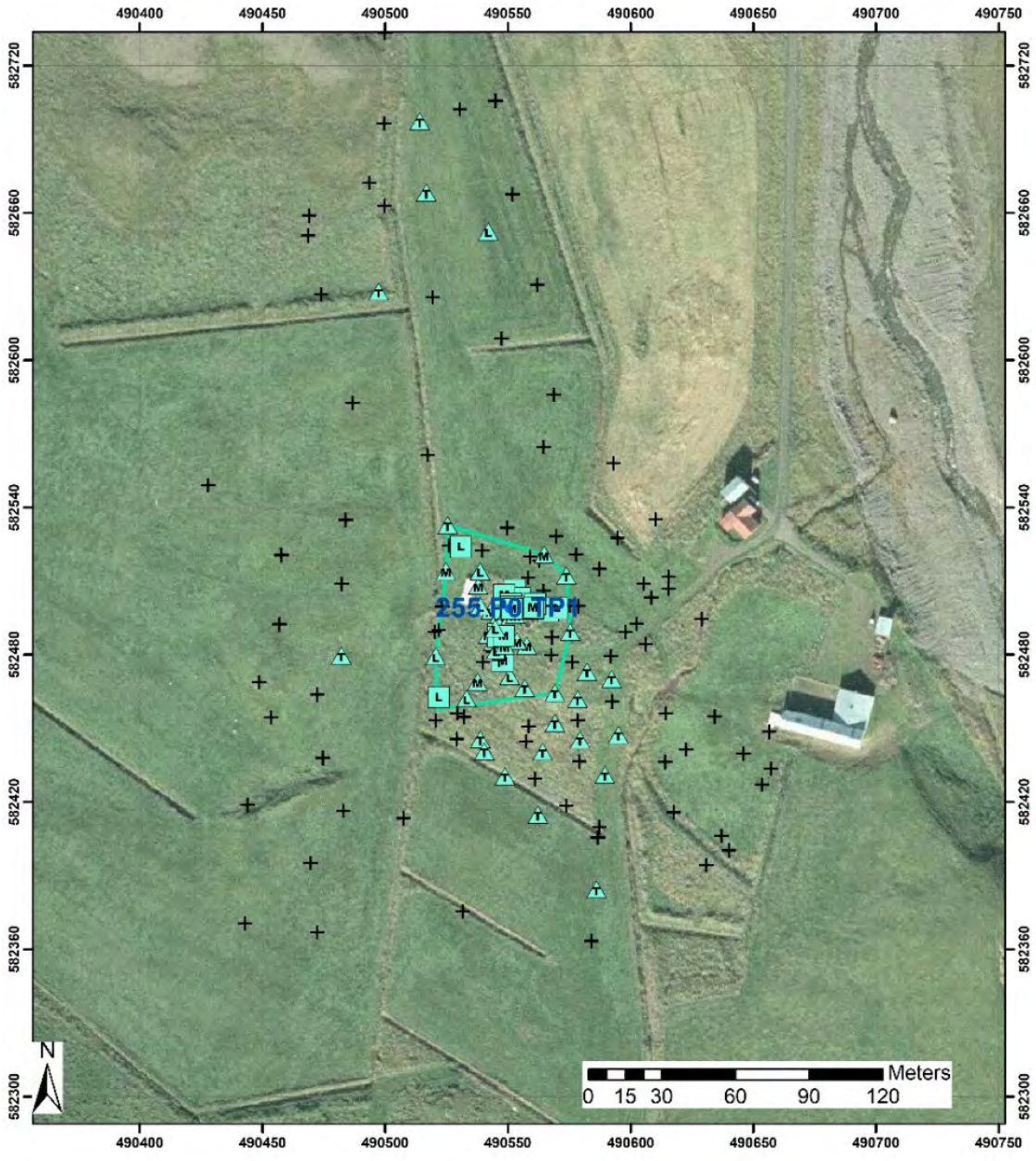


Figure 25. Map of Nautabú pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue.

Excavations

There was one excavation at Nautabú during the 2023 field season. Test pit 1 (TP1) was placed in a concentration of cultural deposits that occurred in the middle of the interpolated farm mound, just north of a farm road that cuts through the center of the survey area. TP1 contained midden and turf deposits that dated from pre 1104 to 1300.

Test Pit 1

TP1 was placed based on coring data. Two clusters of cultural deposits were identified in the initial survey. These clusters lay on either side of a farm road running east-west through the interpolated farm mound. The coring data suggested the presence of pre and post 1104 cultural material as well as a good tephra sequence in both areas, however it was decided that the pit be placed in the northern cluster because of the higher concentration of pre 1104 midden. The pit was situated between 3 cores in particular: 231123 (which corresponded with the southeast corner of the pit) suggested a midden deposit that extended through Landnám, Vj~1000, and H1104 tephra layers; 231124 (which corresponded with the northeast corner of the pit) suggested a sequence similar to 231123; and 231125 (which was placed half a meter to the west of the pit) suggested a low density cultural deposit that extended through Landnám, Vj~1000, H1104, and H1300 tephra layers.

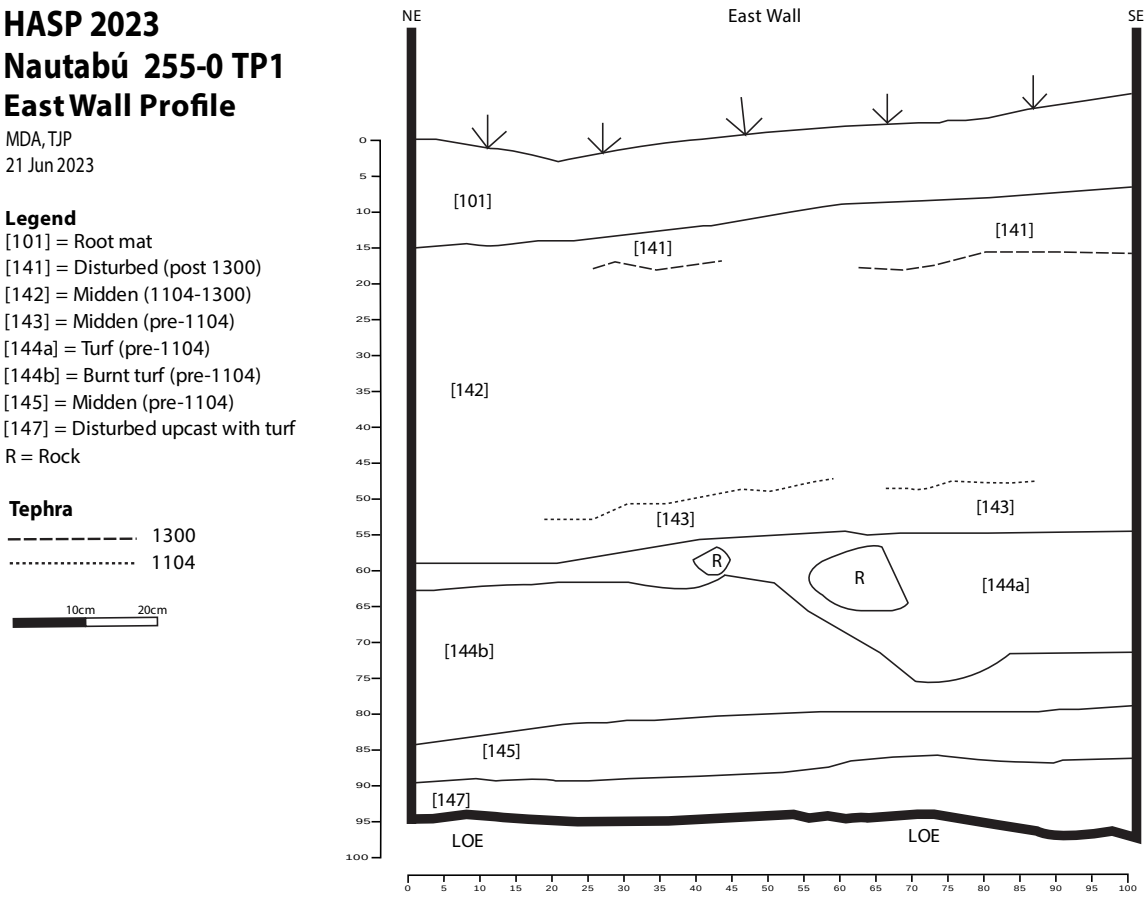


Figure 26. Profile of East Wall at Nautabú test pit 1.

The stratigraphic sequence (Figure 26) began with a root mat [101] above a low-density cultural layer that was heavily disturbed [141]. This disturbed deposit contained some charcoal and bone inclusions and was directly above the H1300 tephra, which did not appear throughout the profile. Immediately below the H1300 tephra were two midden deposits [142, 143] separated by a layer of disturbed H1104 tephra which was at first believed to be in the same turf that was found in Context 143. The deposits contained both bone and charcoal inclusions. Soil samples of Context 142 were taken every 15 cm for use in flotation. Originally Context 143 was thought to be a layer of turf but was later reinterpreted as a continuation of the midden found in Context 142. Below this midden was a layer [144] which was originally believed to be a natural iron pan. It was later determined that the upper part of the deposit [144a] contained turf while and the lower part [144b] contained iron-rich burnt turf (Figure 27). Below the burnt turf layer was a midden deposit [145] that contained some charcoal inclusions but no faunal remains. This is followed by context 147, which was originally interpreted as H3 tephra and marked the end of excavation. It was later determined that [147] was another cultural deposit containing disturbed upcast material and turf. A flotation sample was taken from the NE wall profile. The [147] disturbed upcast material and turf rested on a pre H3 compressed natural bog surface which marked the final limit of excavation. A second excavation on the part of the farm mound that lies south of the dirt farm road is suggested to better understand the early sequence.

Interpretation: The site was settled sometime before AD 1104 and was continuously inhabited throughout the late Viking age and medieval period. The test pit sequence and surrounding cores suggests board stability in the location and intensity of occupation. Although the nearby cores suggested the presence of midden at or around the Landnám tephra layer, evidence of this relationship was not recovered from the test pit. Before 1104, there was a considerable turf burning event (Figure 27). The substantial accumulation of midden between 1104-1300 hints at a possible intensification of activity after 1104.

Figure 27. Image showing pre-1104 burnt turf [144b] at Nautabú, looking west.

Ingveldarstaðir

Ingveldarstaðir is located about 80 m east of Skúfsstaðaá creek and about 200 m east of Skúfsstaðir, which is just across the creek. The farm is about 1.3 km south of Hjaltadalsá river. The modern barn and farmhouse are separated by about 50 m. There are visible ruins about 150 m southwest of the modern farmhouse abutting the river.

Summary

During the 2023 field season, the area around Ingveldarstaðir was intensively cored and a single test pit excavated. The result of the work suggests continuous occupation from sometime after AD 1000 to after 1300. The farm mound extent increased slightly over time (Figure 28, Figure 73, Figure 74).

History and Previous Work

Ingveldarstaðir is first mentioned in the property list of the Hólar bishopric from 1388 (DI III, 1896). As mentioned in the Nautabú section (above) it has been suggested that Ingveldarstaðir was originally split off from Nautabú *Landnámabók* (Íslenzk fornrit I, Pálsson, 2011). The old value of the farm was 24 hundreds, which was lowered to 17.1 in 1861 (Ný Jarðabók fyrir Ísland 1861). The farm had one subsidiary farmstead, Signýjarkofar but it was probably short-lived and its location is now not known (Pálsson, 2011).

Coring

During the 2023 field season, 184 cores were taken around Ingveldarstaðir in an area over 11.1 ha. The survey area was restricted to the periphery of the farm mound and the surrounding agricultural fields because of a modern residence on top of the farm mound and electrical lines that fed through the center of the mound (Figure 28). The coring results suggest that the cultural deposits ran from pre-H1104 to post-H1300. Most of the cultural deposits were found along the periphery of the interpolated farm mound, with one significant cluster of material located 10 m northeast of the modern residence. Two isolated finds of LDC and turf deposits were located in the surrounding fields but it is unlikely that these finds are associated with meaningful farmstead deposits.

62 of the 184 cores taken at Ingveldarstaðir contained cultural material. 19 of these cores contained good “yes” evidence of deposits before H1104. 25 of the cores contained good “yes” evidence of cultural deposits dating from H1104-H1300, and 20 cores contained good “yes” evidence of deposits post-H1300 (Table 10). Midden deposits at Ingveldarstaðir (n=13) were located at an average depth of 0.67 m. Turf deposits (n=4) were located at an average depth of 0.36 m, and LDC deposits (n=33) were located at an average depth of 0.42 m (Table 11).

Tephra preservation at Ingveldarstaðir was good, with H1104 tephra layers being represented in 41% of the cores and H1300 tephra occurring in 31%. Tephra depths were relatively consistent across the site, with H1104 averaging 0.41 m and H1300 averaging 0.27 m (Table 9). In total, 10 of the cores that contained cultural material also contained a full H1104-H1300 tephra sequence. Half of these cores also contained the LNS, which suggested site habitation shortly after the beginning of Iceland’s settlement.

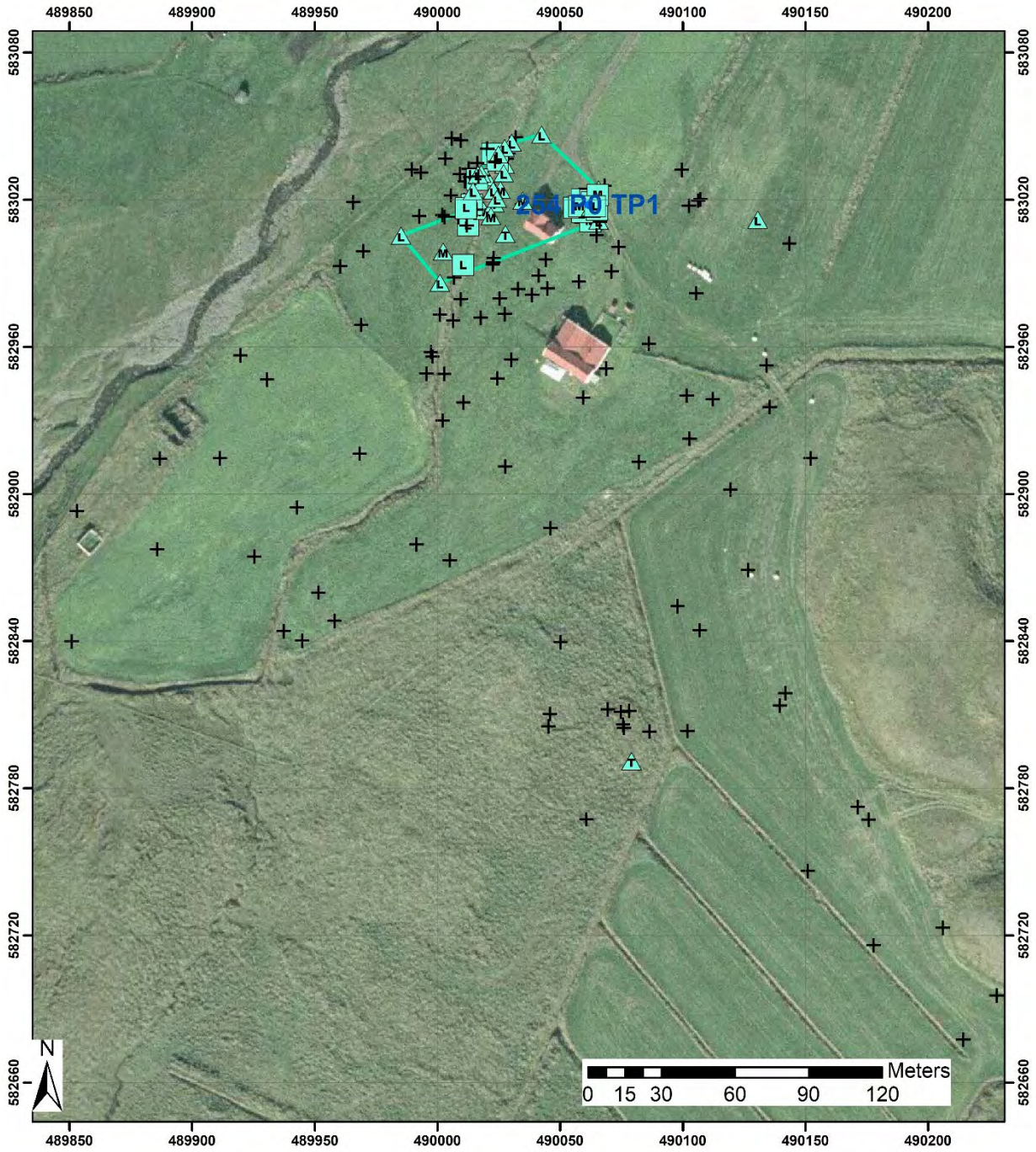


Figure 28. Map of Ingveldarstaðir pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue.

Excavations

There was one excavation at Ingveldarstaðir for the 2023 field season. Test pit 1 (TP1) was placed in a concentration of cultural deposits that was present on the eastern side of the interpolated farm mound. This deposit contained midden deposits, with LDC and small amounts of turf, that dated from post Vj~1000 to post H1300.

Test Pit 1

TP1 was placed based on coring data. Cultural deposits were found in both the western and eastern portions of the survey area surrounding the modern farmhouse. Cores on the eastern side of the subject area (231439, 231437, and 231440) suggested the presence of both pre and post H1104 midden. Core 231414, which was located on the southeast corner of the pit, contained low density cultural material that also suggested the same date range.

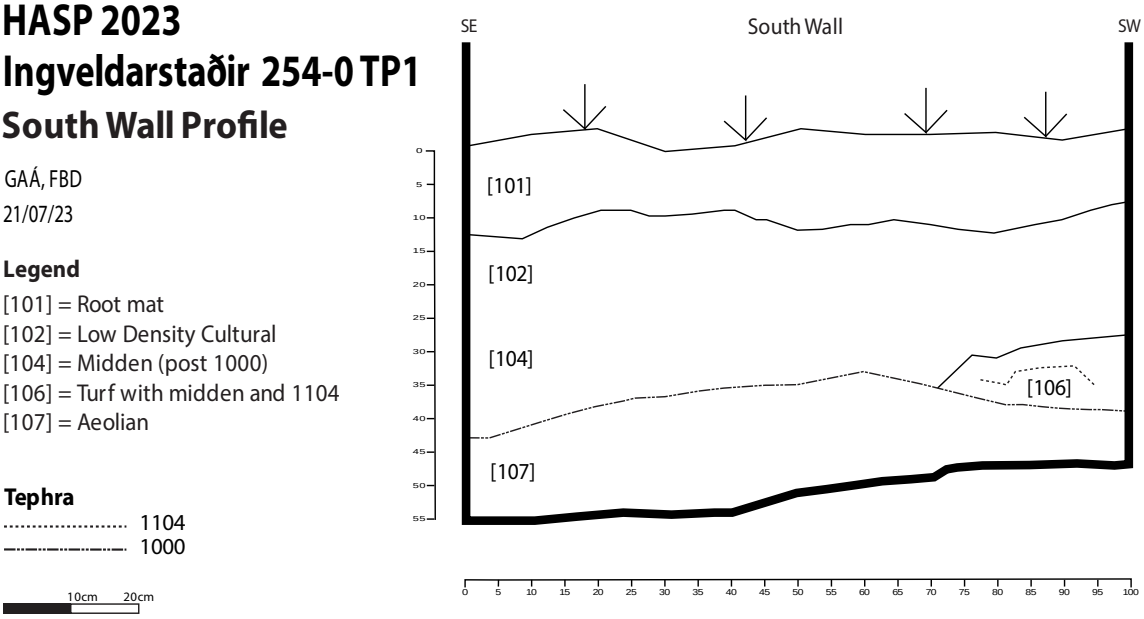


Figure 29. South wall profile at Ingveldarstaðir.

The stratigraphic sequence (Figure 29) begins with a modern root mat [102] followed by a low-density cultural layer [102] that contained inclusions of charcoal and fragmentary faunal remains. Context 102 slowly transitioned into a defined midden layer [104] with an iron object (likely a hook) recovered from the deposit. In the SW corner, there was a section of turf that contained an H1104 tephra [106]. The H1104 tephra was originally considered in situ and later determined to be part of a turf block. The midden [104] and post-1104 turf [106] were both resting on an in-situ Vj~1000 tephra which was above natural aeolian soil [107] that marked the limit of excavation.

Interpretation: The excavation of TP1 did not support the hypothesized sequence of cultural material that the cores suggested. Neither an in-situ H1300 tephra nor an in-situ H1104 tephra was recovered from the excavation. This called into question the validity of other H1104 tephra that had been recorded in other cores, as it was possible that these tephra layers were also in turf and could not provide reliable dating. However, an intact layer of Vj~1000 tephra marked the very bottom of the excavated farm midden (Figure 30). An analysis of the coring data from the site also showed that the H1104 tephra and H1300 tephra could be found at similar depths across the interpolated farm mound and in association with cultural material. This suggested that in-situ tephra layers could be found at the site and could be used to date the cultural material that was recovered from the cores. In this context, the

sequence of material recovered from TP1 and the coring results suggests that this site was settled sometime after 1000 and saw continuous habitation throughout the late Viking age and medieval period. Fewer concentrations of cultural deposits occur after 1300, suggesting a deintensification of activities after that date. This is also reflected in the excavation of TP1, which shows a transition from a well-defined midden to a sparse low-density deposit.

Figure 30. Image of south wall profile at Ingveldarstaðirshowing 1104 in turf [106] and Vj~1000.

Skúfsstaðir

Skúfsstaðir is located about 80 m west of Skúfsstaðaá river and about 200 m west of Ingveldarstaðir, which is just across the river. The farm is about 1.1 km south of the main Hjaltadalsá river. The modern farmhouse is about 50 m from the area of the farm mound.

Summary

During the 2023 field season, the area around Skúfsstaðir was cored intensively, two test pits were excavated, and two geophysical surveys employing conductivity were conducted. The results suggest a significant occupation from before AD 1000 into modern times and geophysical results indicate the presence of an early Christian cemetery. Before AD 1100, two separate areas have evidence of occupation indicated by midden and charcoal deposits. These two occupation areas are about 200 m apart and are likely contemporaneous. After AD 1300, only the main farm mound was occupied. If subsequent excavations confirm a cemetery at the farm, it would be the first instance in Iceland of a medieval cemetery being identified with geophysics, without the assistance of documentary evidence.

History and previous work

Skúfsstaðir, like so many farms, is first mentioned in the property list of the Hólar bishopric from 1388 (DI III). In a land registry from 1686-1695 (Lárusson, 1967) the tax value of the farm is valued at 60 hundreds, which indicates a high-status farm. This high value puts Skúfsstaðir in the top 10% of valued farms in Skagafjörður. Pálsson (2011:58) suggests that

perhaps the adjacent Garðakot farm may have been split off from the original land of Skúfsstaðir. Pálsson also speculates that, based on the value of the farm, it should have had a church—which seems to have been borne out by the 2023 geophysics (see below). In 1861 the value of the farm has been reduced to 28,5 hundreds (1861). There is one known subsidiary farm, Grænagerði, but when or how long it was in use is not known (Pálsson, 2011;61).

Coring

During the 2023 field season, 228 cores were taken at Skúfsstaðir in an area over 15 ha. The survey area of Skúfsstaðir included land in the immediate area of the modern farmstead as well as the outer fields included within the farm's current property boundaries. Coring results suggest that the cultural deposits at Skúfsstaðir date from pre-H1104 to post-H1300. Two concentrations of cultural material were identified at Skúfsstaðir, separated by 200 m of apparently uninhabited space. This distance between the two deposits hints that there may be two separate occupations. The largest of the two concentrations was in a field approximately 20 meters north of the modern farmhouse and is associated with the traditional location of the farm mound. The second concentration of material was identified in another of the inner fields, approximately 110 meters southwest of the main building complex (Figure 31). Shallow layers of LDC material were identified in several of the cores taken in fields to the north of the largest deposit, but only one of these layers could be dated (Core 230048) and the tephra sequence found in this core suggests a much later date for the material recovered in these outer fields (post-1766). Additional turf deposits were identified in fields to the West of the main building complex, yet they occurred as isolated instances and could not be dated with any certainty.

One hundred and seven of the cores taken at Skúfsstaðir contained farm mound deposits. Of these cores, 33 contained good "yes" evidence for pre-H1104 cultural deposition. 30 cores contained good "yes" evidence for cultural deposition between H1104 and H1300, and 18 contained good "yes" evidence for post-H1300 deposition (Table 10). Midden deposits at Skúfsstaðir (n=50) were located at an average depth of .67m. Turf deposits (n=24) were located at an average depth of .59m and LDC deposits (n= 29) were located at an average depth of .26m (Table 11).

Coring around the two major concentrations of material at Skúfsstaðir suggests different date ranges for the two deposits. Both areas have evidence of pre-1104 cultural materials, and several cores in the farm mound deposit and a single core in the southern deposit (230205) contained layers of midden extending below intact Vj-1000 tephra. Both deposits also had cultural layers dating from 1104-1300, but cores taken in the southern deposit (230363, 230186) contained significantly less material, with only a small amount midden dating to post-H1104. Core 230271 is an exception, as it contained a significant amount of post-H1104 LDC material. While the occupation range continues past 1300 at the northern farm mound, no deposits dating to this period were identified in the cores taken at the southern occupation site. This suggests that the southern site was abandoned sometime between 1104 and 1300.

The H1104 tephra retrieval at Skúfsstaðir was in line with the average H1104 tephra retrieval encountered across all Hjaltadalur farms, both for cores containing farm mound deposits and for cores that did not contain farm mound deposits. For most other tephras, the rate of retrieval at Skúfsstaðir was less than what would have been expected in Hjaltadalur. There is an exception for H1766, which was retrieved at a higher rate than the overall average. Additionally, Vj-1000 retrieval was the highest out of any other farm in the valley (Table 9). Of the cores taken at Skúfsstaðir, 9 contained an intact H1104 and H1300 tephra sequence, while one (Core 230081) contained a full settlement sequence.

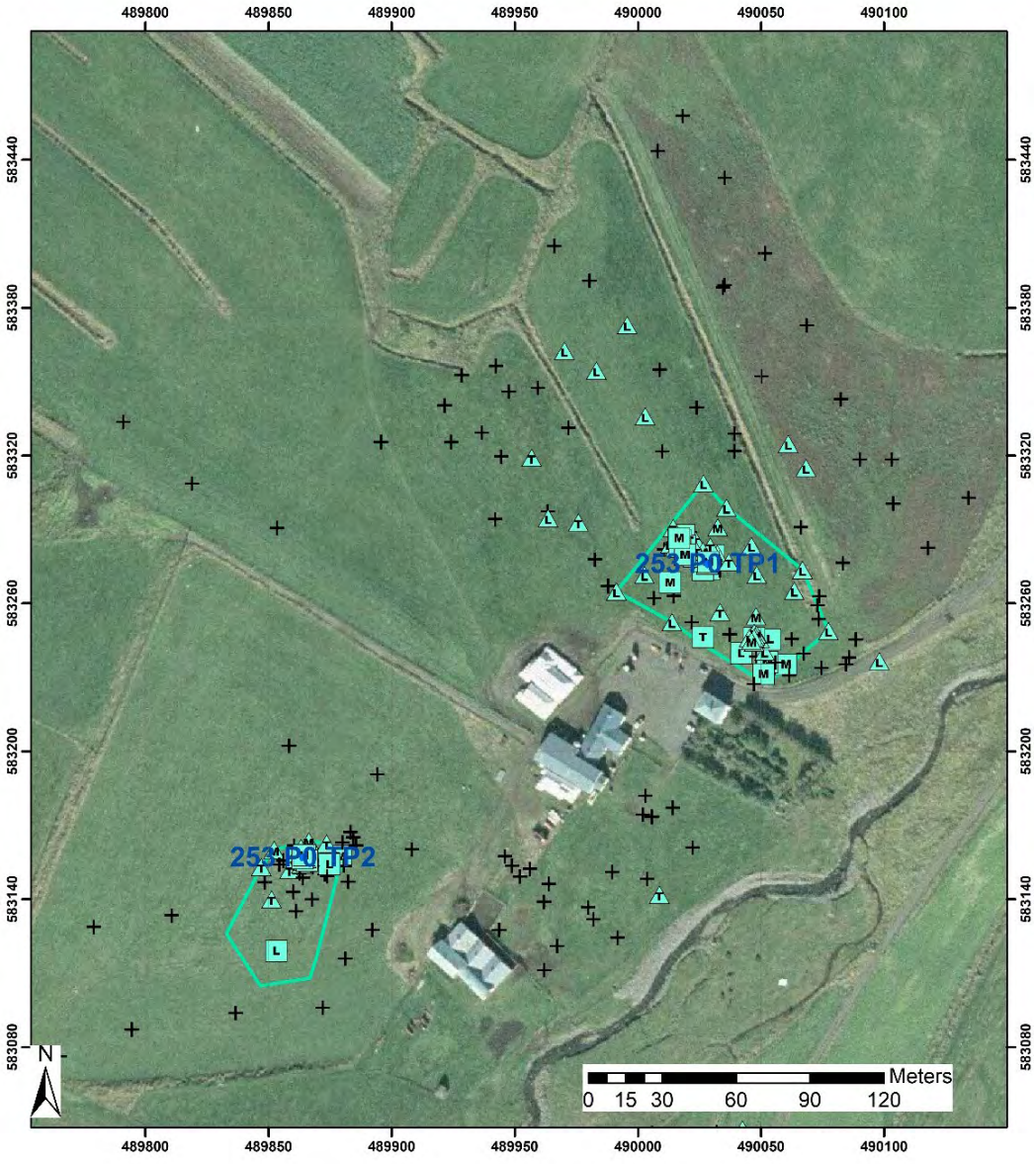


Figure 31. Skúfsstaðir pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. The test pit locations are in blue.

Excavations

There were two excavations at Skúfsstaðir in 2023, each within an interpolated area of occupation. Test Pit 1 (TP1) was placed in a cluster of pre-1104 cultural material in the NW

section of the main farm mound. This mound appeared to be deep, with multiple JMC 120cm cores never reaching sterile soil. This was confirmed through excavation, which showed very deep cultural deposits. The geophysical survey, taking place after both excavations were completed, suggests a church and cemetery in this area (Figure 40). Test Pit 2 (TP2) was placed in the cluster of pre-1104 cultural material to the SW of the modern farmhouse and contained cultural deposits from before 1104 but not after 1300.

Test Pit 1

TP1 was placed based on coring data in the NW section of the farm mound, where multiple cores recorded more than 40cm of midden below H1104. Core 230191, in the NW section of the pit, had midden directly under the root mat which extended through both H1104 and Vj~1000. Core 230166, just outside the NE corner of the unit, also contained midden below H1104. Core 230061, about 1m to the west of the unit, was very similar, with midden below an H1104 tephra at 78cm bgs. These cores were generally consistent with the pit, which had layers of midden and LDC close to the surface and continuing down to at least 1m below ground surface. Core 230166 was an especially good prediction of the excavation sequence because it had the initial disturbed layer, the subsequent midden, and the tephras were at similar depths to the pit.

The sequence of TP1 (Figure 32) started with a modern root mat [101] followed by a disturbed layer [102]. After the disturbed layer the midden deposit [103-107] began. This was initially excavated in separate layers of midden, LDC, and tephra that were combined when drawing the profile. These layers of midden were characterized by peat ash which was bright orange. There was an in-situ H1300 [108] with midden deposition that continued [109] below the H1300 tephra followed by a layer of LDC [111]. There was initially a context 110 between the two identified as H1104, but this was determined to be in turf. Below the LDC is an in-situ H1104 layer [112] that extended across the unit followed by another layer of LDC [113] and further midden deposition [114]. This was followed by an in-situ Vj-1000 layer [115] extending over most of the unit. Along the south wall and especially in the SE corner was a cut [118] from after 1000 but before 1104; this is not shown in the profile because it did not appear in the West wall. Under the Vj~1000 tephra was a layer of LDC and Midden [116-117]. At this point, excavation was limited to the NW corner. Below context 117 was a thick layer of turf [119] that appeared structural. Below the turf was a fire pit [121] with rocks and a substantial charcoal deposit, appearing almost completely black (Figure 33). Excavation was terminated at this point because the deposits were structural. This termination means that the nature of the earliest deposits at this location are still unknown. Core 230061, taken 1 m west of the test pit is the only core in the area to terminate out of midden (with a Vj~1000 at 1 m bgs and midden ending at 1.1 m bgs, but no Landnám sequence detected). The other cores in the area did not reach sterile soil. Nonetheless, the excavation up to termination suggests substantial pre Vj~1000 deposits. It is conceivable that the lowest turf layer [119] might be a leveling layer associated with a probable cemetery (see below), but that seems unlikely, given is pre-Vj~1000 date.

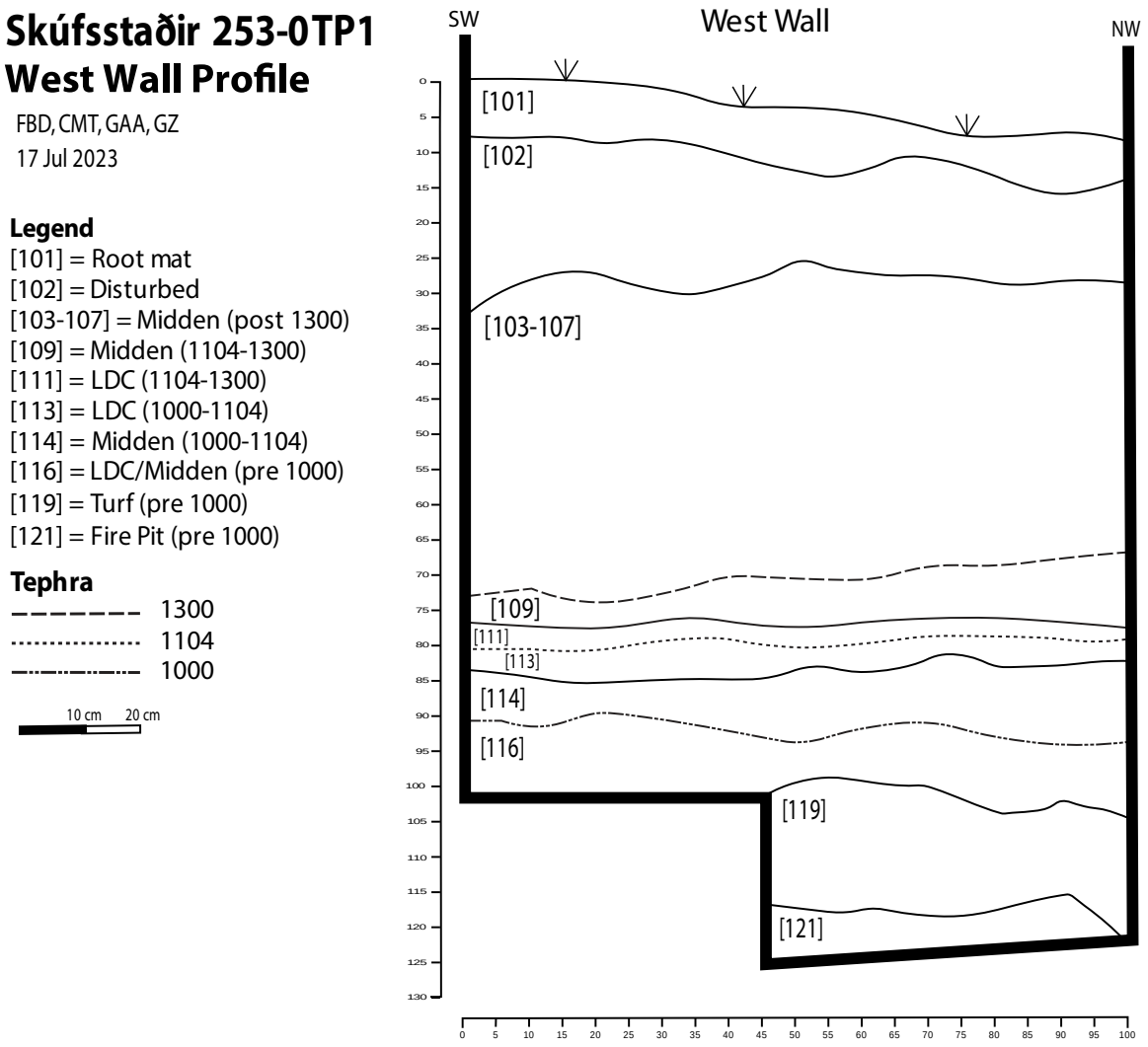


Figure 32. West wall profile of Skúfsstaðir test pit 1.

Interpretation: This sequence suggests a significant pre- Vj~1000 occupation. Further excavation is needed to understand the nature of these earliest phases of occupation at Skúfsstaðir TP1 as the LNS or prehistoric tephras were not identified in this test pit sequence. The turf above the fireplace could suggest a structure on top of the firepit or another kind of capping event and might be related to the cemetery potentially identified in the geophysical survey. The amount of cultural material before the Vj~1000, is thicker than the amounts from Vj~1000-H1104 and H1104-H1300. Based on the amount of midden deposited, the farm mound appears most active before theVj~1000 and after 1300. Based on the results of the geophysical survey, this test pit is likely inside the area of the supposed cemetery (Figure 40).

Figure 33. Image of west wall profile at Skúfsstaðir showing charcoal pit [121].

Test Pit 2

TP2 was placed based on coring data in the northern part of the smaller interpolated occupation area in a cluster of pre-1104 midden. One 6 cm Eijkelkamp core (230363) and two JMC cores (230362, 230210) showed midden below H1104. These cores were very accurate predictions of the excavation, which had the same sequence of root mat, aeolian, and midden at approximately the same depths.

The sequence of TP2 (Figure 34) started with a root mat [101] followed by a layer of aeolian soil [111] that was bounded on the west wall and part of the north wall by an in-situ H1300 tephra, which was initially identified as an unknown tephra and later determined to be H1300. Below this was a layer of turf mixed with upcast aeolian soil [112]. This was followed by an in-situ H1104 which was only visible on the west wall profile with more aeolian soil below [115]. This was followed by a charcoal midden that extended through the whole unit [113]. This layer did not seem to contain any peat ash, only charcoal. Below the midden was a very thin layer of aeolian soil [116] followed by the LNS, both of which only extended partly across the north wall. Below this was aeolian soil mixed with H3, so excavation was terminated. See Figure 60 for Harris Matrix. No Vj~1000 layer was observed in the test pit sequence or in any of the surrounding cores.

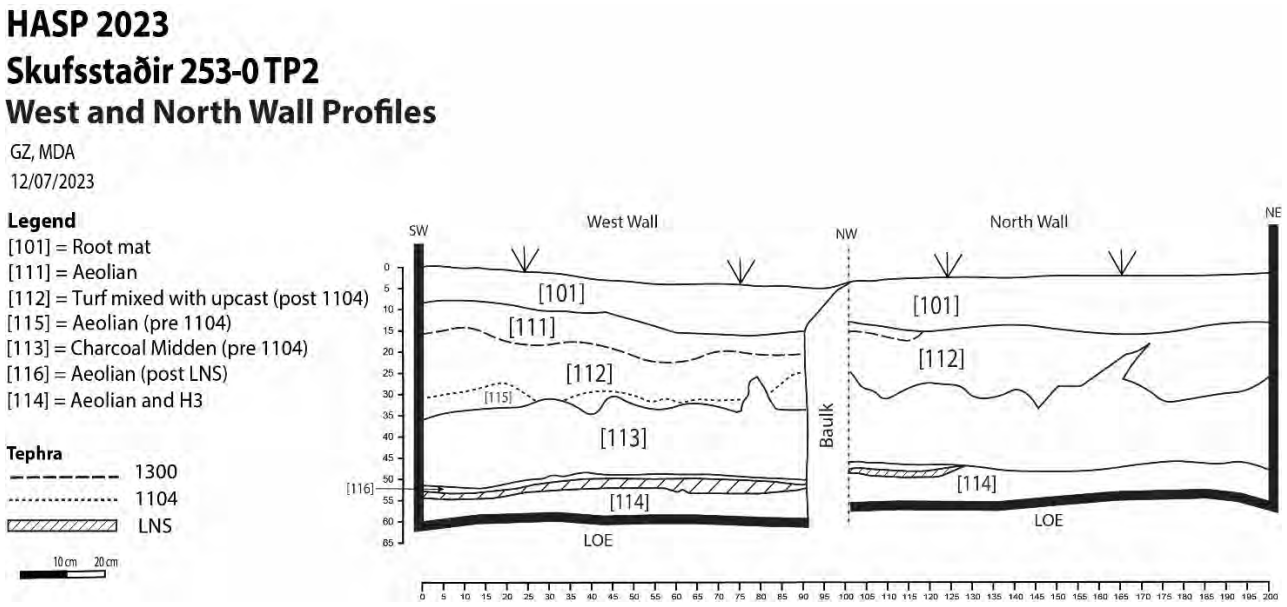


Figure 34. West and North wall profile of Skúfsstaðir test pit 2.

Figure 35. Image of LOE at Skúfsstaðir TP2, showing contrast between pre-1104 charcoal midden [113] and surrounding strata.

Interpretation: This area was initially occupied well before H1104 fell. The thin aeolian lens before the charcoal midden (between the LNS and the start of cultural deposition in part of the unit) suggests that there may have been a delay between Landnám and settlement at this site, but no Vj~1000 was observed to refine the establishment date. The thin pre-H1104 aeolian deposit [115] hints that the cultural activity may have stopped before H1104 fell. However, there are several cores that suggest the presence of LDC and midden on top of H1104, and therefore an 1104-1300 farm mound area has been estimated (Figure 75). After 1104 there is turf deposit which may have been part of a structure or disposed of on the location of a previous trash pile. After H1300, there is no evidence of cultural deposition.

Geophysics

Two conductivity surveys were conducted at Skúfsstaðir during the 2023 field season to test for churchyard turf walls. The two surveys overlapped to a large extent. There is no surface sign of any ruins at all, let alone the classic round early Christian church yard boundary wall, and there are no historical documents indicating a past church at Skúfsstaðir. The size of the pre-1104 farm mound (Table 12) and depth of cultural material below H1104 in Test Pit 1 hint that this was important early farm—a category of farmstead that often had churches (Zoëga, 2014, Zoëga, 2015). Originally, Skúfsstaðir also had a high tax value, which further prompted the geophysical survey (Table 1).

Both geophysical surveys were performed with a CMD Mini with transect spacing at 50cm. Transects were walked from south to north using fiducial rows every 5 m. Bulk conductivity (Con) and In-phase (IP) point data were visualized using ArcGIS 10.8 and ArcGIS Pro employing the natural neighbor technique. Con refers to the out-of-phase component of the induced magnetic field and represents all the combined conductivity within the volume of ground being sensed, measured in millisiemens per meter. IP refers to the in-phase component of the induced magnetic field and represents magnetic susceptibility, measured in parts per thousand. For further details, refer to Conductivity: Electromagnetic Principles. For details on grid establishment, see page 149.

CMD Survey Grid 1

The first CMD survey was over a large area (approximately 2500 square meters) of the old farm mound and was designed to see if there were any identifiable cemetery remains close to the pre-1104 midden and turf that had been found in the area (Figure 31). The survey took place after TP1 was filled in. The readings revealed a partial circle shape in the NW corner of the survey area, especially visible in Con3 and IP3 (Figure 38 and Figure 39), and a subsequent survey isolating that area was designated for an additional survey.

The Con data from grid 1 was surprisingly clear, given that in nearby surveys, IP has been the better component (Zoëga and Steinberg, 2022). It shows the west wall of the circular cemetery, a high conductivity area (red) that is probably associated with the farm mound ash pile in the eastern section of the survey area (Figure 36). Details of cemetery size and layout will be discussed in the second survey section. Two utility lines are visible in the NE corner of the survey area. There was little coring done in this area to confirm the anomaly as a pre-

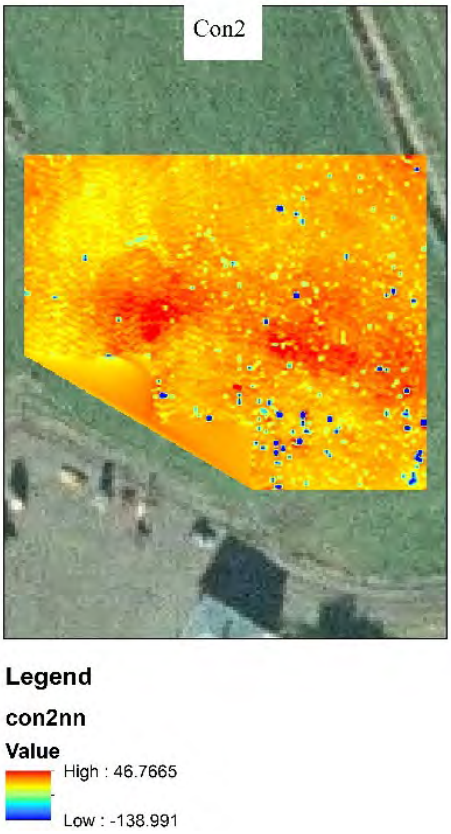
1104 midden, but a similar anomaly in the SE corner was cored and contained substantial pre-1104 midden and LDC.

The IP component also highlighted the western wall of the cemetery in survey grid 1 and part of northeastern section of the same wall. The very northern part was cut off by the extent limit of the survey area. The western potential ash midden does not appear as a uniform anomaly in the IP map displays and the utility lines are less obvious. Unlike at Kálfsstaðir (Zoëga and Steinberg, 2022), the IP3 component visualizations were less helpful in identifying the below ground structure.

CMD Survey Grid 2

The second CMD survey was smaller (approximately 900 square meters) and partially overlapped with the first survey to catch the entire circular wall outline that partially appeared in survey grid 1. This survey was also successful, and the visualizations showed a relatively complete circle in every component and antenna-transmitter spacing. The circle corresponded in shape and orientation with the partial circle from the grid 1 survey (Figure 40) and is consistent with a cemetery wall. This wall is unusual for appearing clearly in shallow slices in both conductivity and in-phase components.

In Con measurements, the wall's conductivity relative to the surrounding area appears differently. In Con1, the wall is lower relative to the surrounding area; in Con2 and Con3, the wall is higher relative to the surrounding area. In all antenna-transmitter spacings a ~20 m diameter circle is clear. There is no distinct indication of any antenna-transmitter spacing of a church structure in the center of the circle. Different sections of the wall are clearer in different slices; the northwest in Con1 and the west in Con2 and Con3. Along with the changing relationship relative to the surrounding area, this could suggest that the northwest section of the wall is different than the other sections. One possibility is that that wall section still has stones, while the other sections no longer do. It is also possible that the flattening of the field has caused different components of the wall to be preserved and/or closer to the surface.



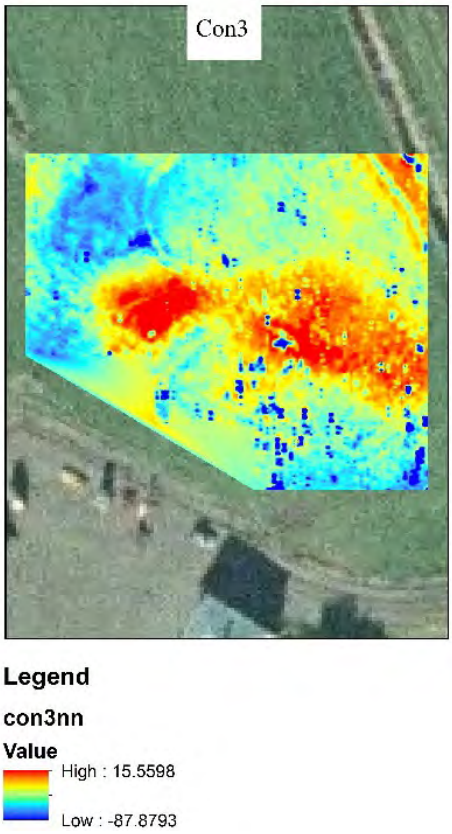
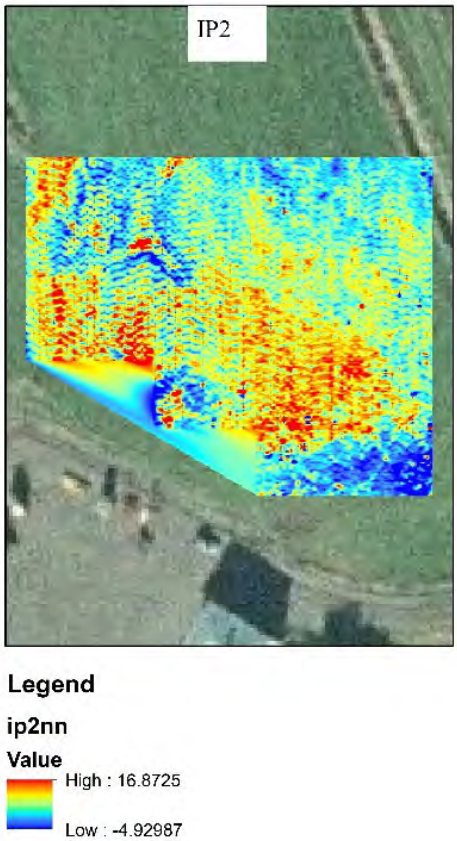


Figure 36. Skúfsstaðir grid 1 Con component.



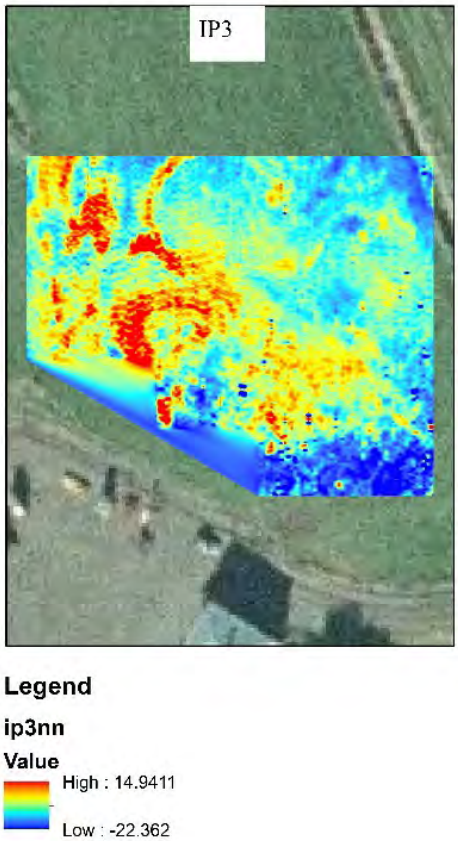


Figure 37. Skúfsstaðir grid 1 IP component.

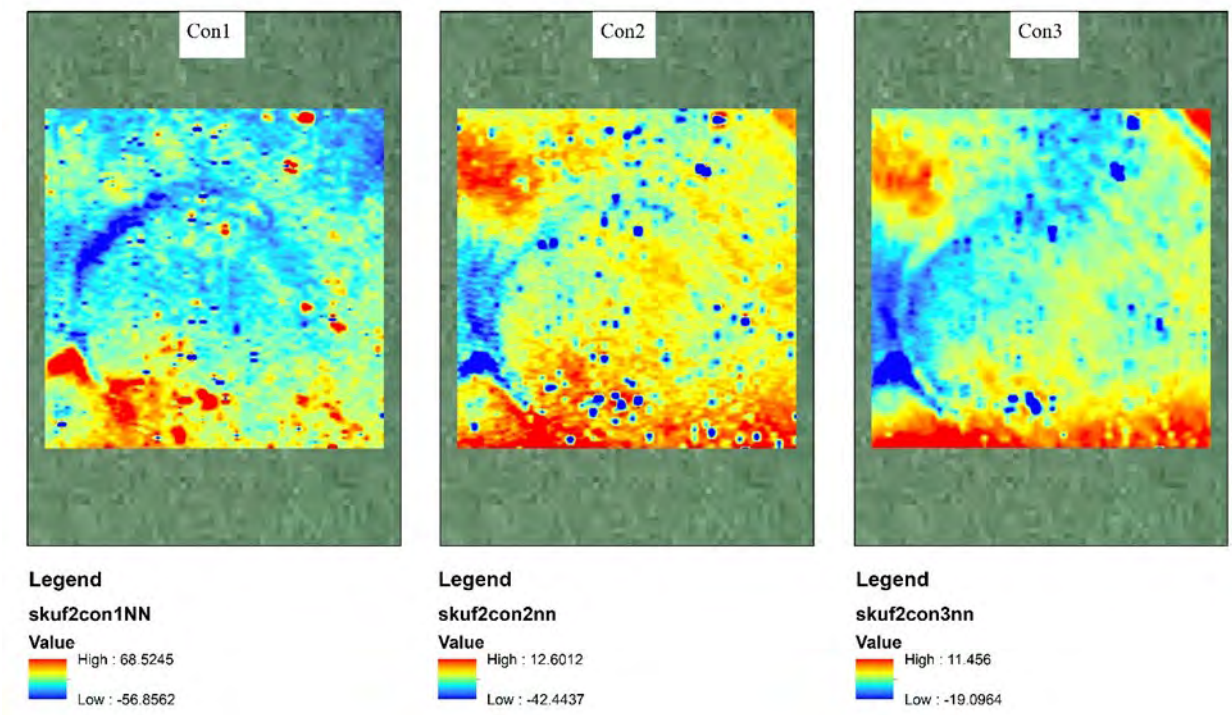


Figure 38. Skúfsstaðir Grid 2 bulk conductivity results.

The IP component visualization showed a greater contrast for a longer length of the circular wall. The wall insulation has the same changing relationship in IP readings from initially lower readings than the surrounding areas to higher in farther apart antenna-transmitter spacings (e.g., IP2 & IP3) than appeared in the conductivity component. In IP1, the entire length of the wall is lower than the surrounding area. In IP2, the western half is higher than the surrounding area and the eastern half is lower. In IP3, most of the wall is higher than the surrounding area. This again suggests that there is some kind of depth-related change to either the wall material or surrounding matrix that is different in various wall sections, which could indicate rebuilding or differential distribution. The wall anomalies create a visualization that is remarkably similar to the outline of the church at Kálfsstaðir generated from GPR and conductivity surveys (Zoëga and Steinberg, 2022). Figure 40 shows the Kálfsstaðir outline superimposed on the Skúfsstaðir data without any scale adjustments.

Interpretation: The diameter of the Skúfsstaðir cemetery appears to be 20-22 meters, which is within the range for early Christian cemeteries in the area (Zoëga, 2014, Zoëga, 2015, Damiata, et al., 2013). Unlike Kálfsstaðir, the location of the church structure itself is not apparent in any of the visualizations. The differential contrast of wall sections compared to surrounding areas in both Con and IP components suggests some kind of material difference between sections of the wall. The church at Kálfsstaðir was visible in fewer antenna-transmitter spacings, but it does not have the same dramatically different appearance for different wall sections, especially visible in Skúfsstaðir grid 2 IP2. See Appendix D – Geophysics for profiles generated to visualize this changing relationship.

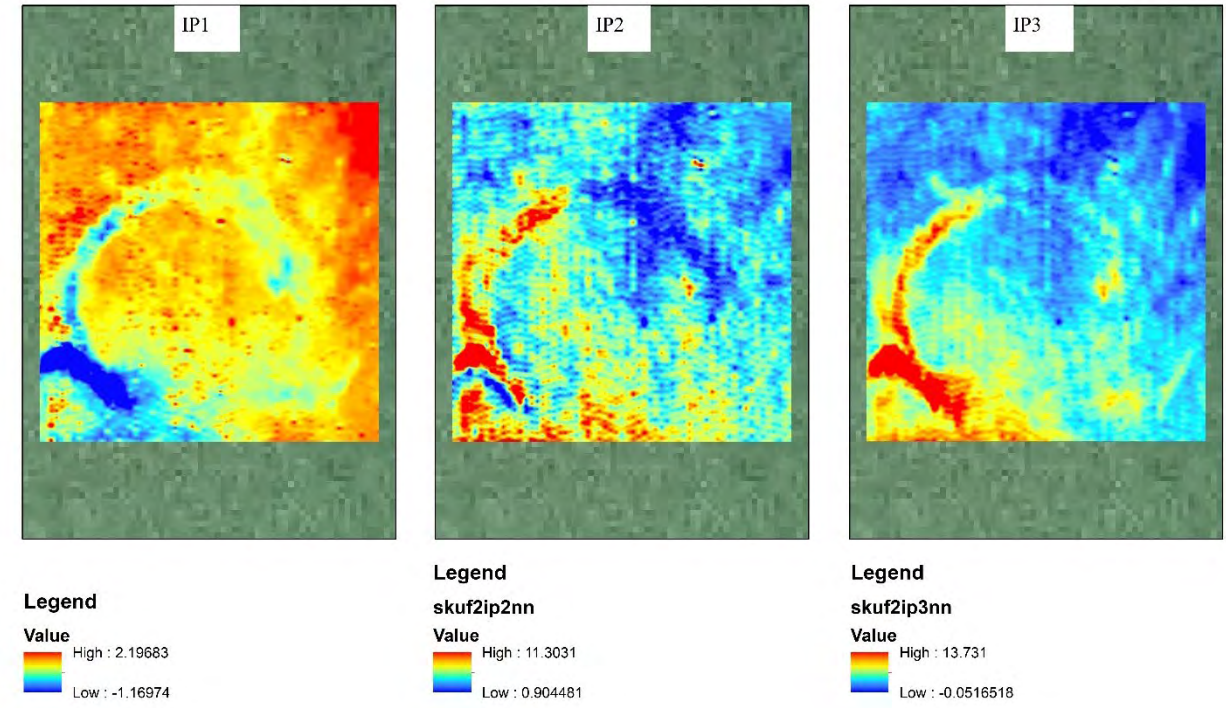


Figure 39. Skúfsstaðir grid 2 IP component.

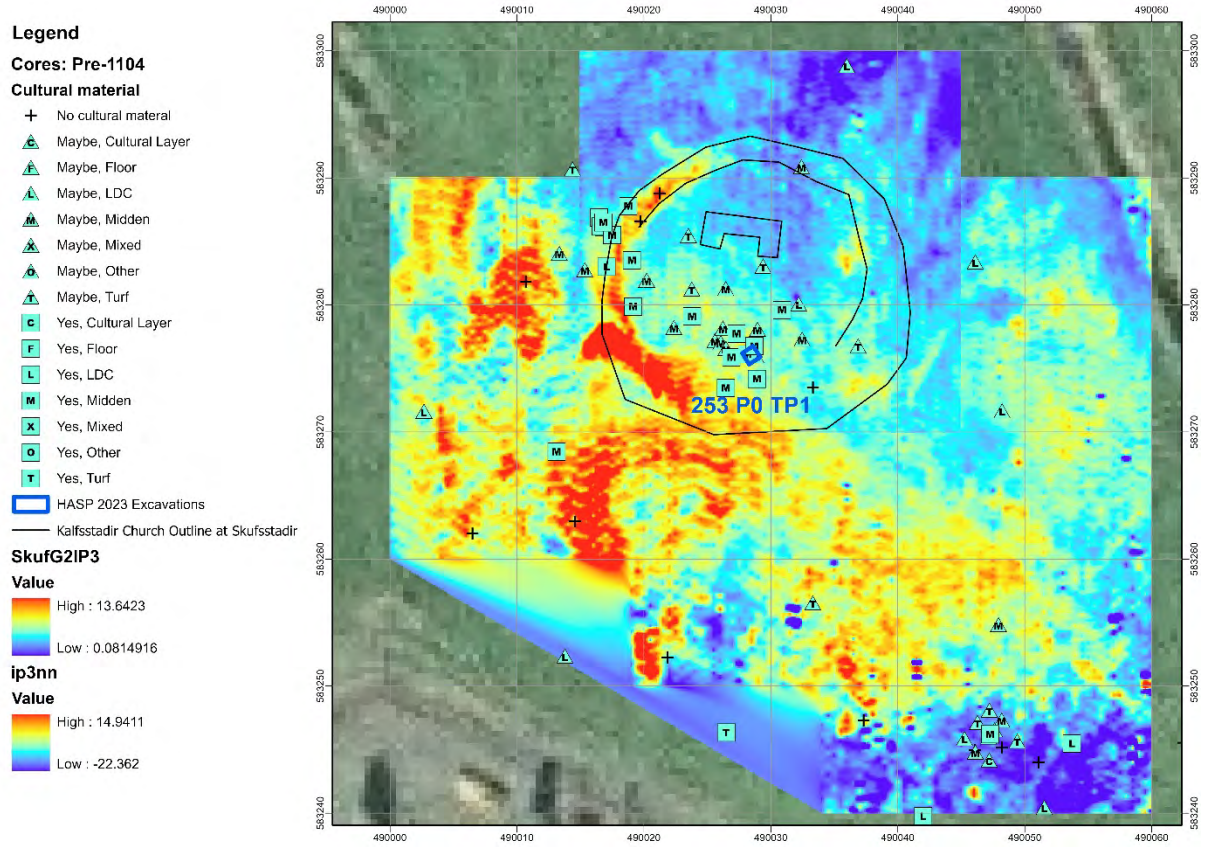


Figure 40. IP3 components on both grids at Skúfsstaðir with pre-1104 coring results, the cemetery outline from Kálfsstaðir (with only outer wall outline removed), and 2023 TP1.

Garðakot

Garðakot is approximately 1.4 km west of the farm of Skúfsstaðir and 550 m east of the farm of Hringver. It is about 1 km south of a bend in the Hjaltadalsá river. There are several structures at the farm, including a modern farmhouse, a 20th century farmhouse with a concrete foundation that is no longer used, horse stables, and several barns. The traditional farm mound appears to be under the older farmhouse, which is approximately 70 m northeast from the modern farmhouse and 20 m from the closest barn to the south.

Summary

During the 2023 field season, the area around Garðakot was intensively cored and a single test pit excavated. This investigation suggests a pre-1104 occupation that remained approximately the same size from 1104-1300 (Figure 77). After 1300, a second area of occupation was added south of the main farm mound (Figure 78). This area may represent an intensification of cultural activities at an outlying structure.

History and Previous Work

Garðakot is first mentioned in the 1388 land registry but is called Garðar at that time (DI III;410). There may, however, be a refence to the farm in The Saga of Þórður hreða (Attwood, 1997, Íslenzk fornrit XIV)) which mentions a battle at Garðshvammur which may have derived its name from the farm. The name Garðakot first appears in sources in 1388 (Pálsson, 2011;52). The farm´s tax value was 20 hundreds, reduced to 18,5 in 1861 (Ný jarðabók 1861;100). Pálsson has suggested that Garðar may originally have been a part of the land of the adjacent farm of Skúfsstaðir (Pálsson, 2011 ;58).

Coring

150 cores were taken around Garðakot in an area over 10.1 ha during the 2023 field season. The coring results suggest that the cultural deposits at the farm run from pre-1104 to post 1300. The majority of these deposits were concentrated in an area towards the northern end of the modern farm complex, surrounding the old farmhouse and extending out into the surrounding agricultural fields. The current farmhouse is further to the west and appears to not be near older cultural deposits. While the deposits around the old farmhouse appear disconnected, this is probably because of a modern road extending through the deposit, creating an area that could not be cored. A second area of concentration containing turf and midden deposits was identified in a field to the southeast of the complex, approximately 120 meters south of the first (Figure 41). A few instances of turf were recorded in outlying fields, and one of midden and, based on the coring results this appears to be a post-1300 small occupation (Figure 78).

Fifty-five of the cores taken at Garðakot contained farm mound deposits. Of these cores, 10 contained good “yes” evidence of cultural deposition before H1104. Half of these contained midden, while the other half represented a mix of confirmed LDC and turf deposits. Sixteen cores contained good “yes” evidence of cultural deposition between H1104 and H1300, and 14 cores contained good “yes” evidence of deposition after H1300 (Table

10). Midden deposits at Garðakot (n=18) were located at an average depth of 0.83 m, while turf deposits (n=14) were located at an average depth of 0.42 m (Table 11).

Tephra preservation at Garðakot was relatively poor, with 22% of the cores containing cultural deposits also containing a layer of H1104 tephra. 24% of farm mound cores contained H1300, a relatively high percentage for Hjaltadalur (Table 9). Several cores were able to recover good tephra sequences. 8 of the Garðakot cores with cultural material contained an H1104-H1300 tephra sequence, with two of these cores (231764 and 231768) containing a full settlement sequence. These two cores suggested that the site was settled sometime shortly after the deposition of Landnám tephra.

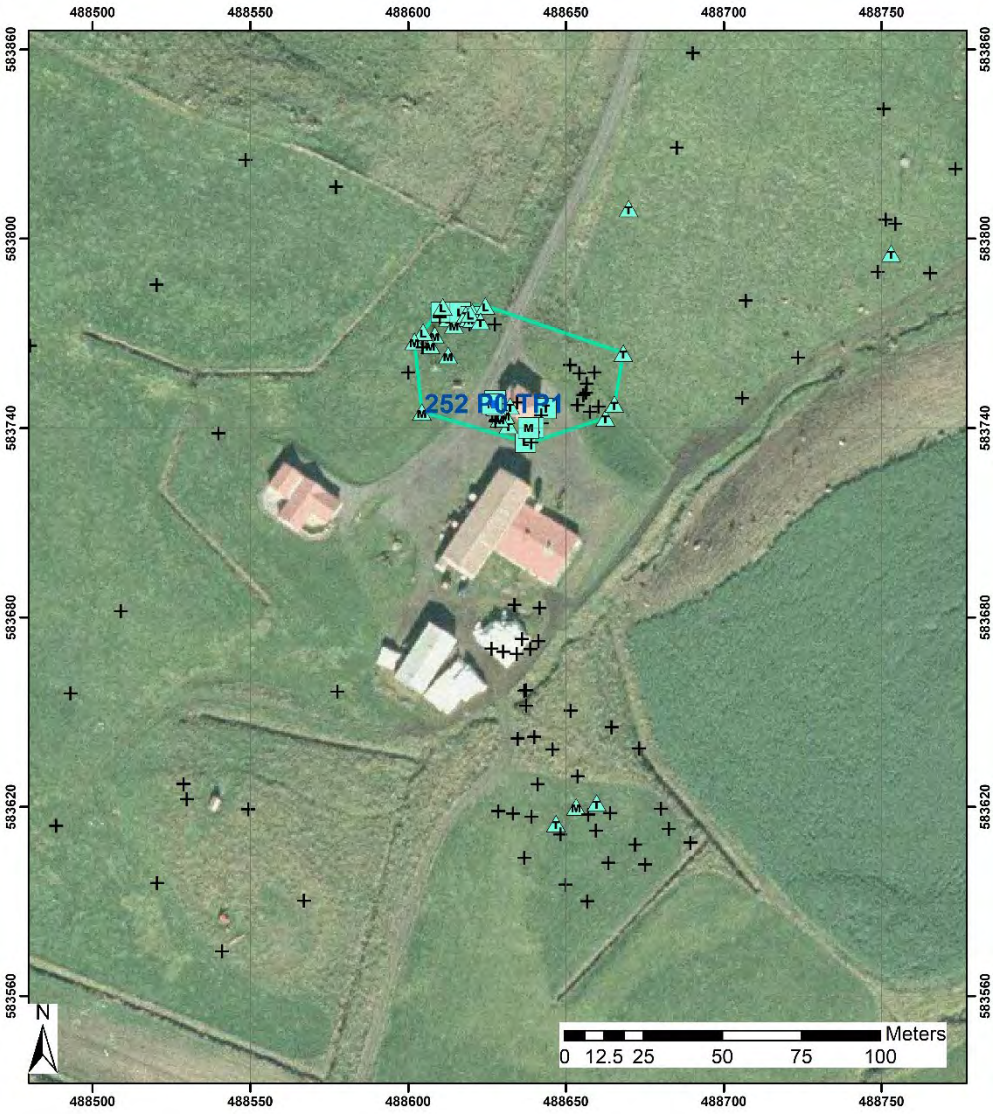


Figure 41. Map of Garðakot pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented.

Excavations

There was one excavation at Garðakot. Test Pit 1 (TP1) was placed in the only area that had a concentration of pre-1104 midden, directly to the SW of the old farmhouse. There was an

area inside the interpolated farm mound to the NW that contained one pre-1104 midden and two pre-1104 LDCs, but they were more spread out and less indicative of the oldest midden. TP1 was interpreted as midden from before 1104 to after 1300, containing a possible post-1104 fire pit.

Test Pit 1

TP1 was placed based on coring data that indicated a large amount of peatash midden under an in-situ H1104 tephra. Core 231722, to the west of the unit, had H1104 at 77cm bgs with around 5cm of midden below; Core 231770, to the north, had H1104 at 64 cm with around 15 cm of midden below; and Core 231768, in the east section of the pit, had H1104 at 89 cm bgs with approximately 15cm of midden below. These cores matched up generally well with the pit, which had H1104 in situ at approximately 80-90cm bgs with LDC and Midden below for no more than 20 cm. Core 231768 was an especially good prediction of excavation.

The sequence of TP1 (Figure 42) started with a modern root mat [101] and a disturbed layer [191] on top of a series of alternating midden and LDC [192-195] with a possible unknown tephra in the middle [194]. These layers were differentiated during excavation in case H1300 or H1104 was shallower than expected, and many of the layers contained turf with H1104. The midden and LDC was primarily peat ash, with some spots of charcoal. At the bottom of this section a very well-preserved in-situ H1300 tephra [196] was discovered, so contexts 192-195 were recorded together in the profile. Below the H1300 layer was about 25cm of LDC mixed with midden [197]. At the bottom of the LDC, an in-situ H1104 [198] began to appear but was patchy and mostly absent from the central south area, which contained many round rocks. It was determined that this was a fire pit [199] that post-dated 1104 and had been cut through the tephra (Figure 43). Many of the rocks from context 199 were fire-cracked, and the area contained much more charcoal than the other areas of the pit. Below both the H1104 and the firepit was a layer of LDC [200] followed by midden [201]. A single turf mixed in with the [200] LDC had a Vj~1000 layer identified. Excavation was terminated once H3 [202] was reached across the bottom of the unit. No in situ Vj~1000 ot Landnám tephra or sequence was observed in the test pit.

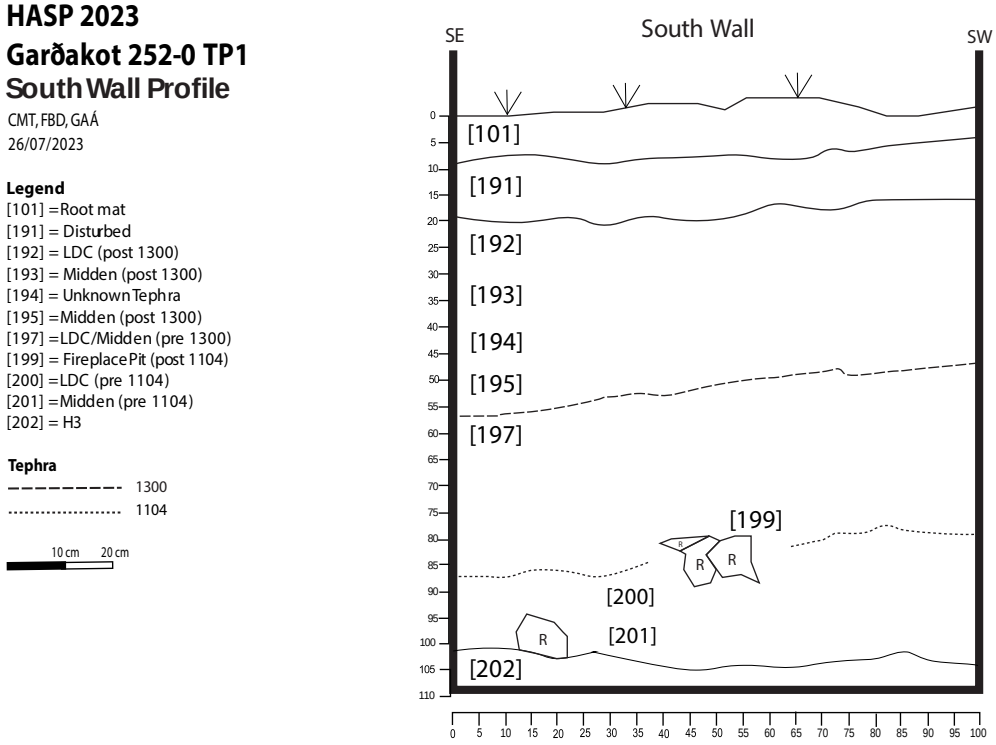


Figure 42. Profile of South wall at Garðakot test pit 1.

Interpretation: This sequence suggests pre-1104 occupation, though it is unknown how early this occupation extends. After 1104, part of the area was used for a fire pit (Figure 43). Occupation continued from 1104 to 1300, with more midden deposition than before 1104. After 1300, occupation also continued. The lowest midden layer may represent the earliest habitation.

Figure 43. Image of H1104 tephra [198] with post-1104 fire pit [199] at Garðakot, looking north.

Hringver

Hringver is approximately 950m southeast of the deserted farm of Hólakot and 550m west of Garðakot. It is approximately 1.4 km south of the closest bend in the Hjaltadalsa river. There are no currently standing structures. The farm was abandoned in the mid 20th century. There is a visible ruin that is probably relatively modern about 500m south of the traditional farm mound. There appear to be other ruins of turf structures surrounding the farm mound. The farm mound extends to where the current dirt road to the farm ends.

Summary

During the 2022 field season, the area around the abandoned farm at Hringver was intensively cored and a single test pit excavated. These investigations suggest an occupation beginning after 1000, and therefore later than many of the farms in the valley. The occupation continued through the deposition of H1300 and the farm was abandoned in the 20th century. The farm mound size increased over time (Figure 79, Figure 80) and was already quite large by 1104 (Table 12), which is interesting considering its seemingly late establishment date.

History and Previous Work

The now abandoned farm Hringver is first mentioned in the 1388 Hólar land registry, (Pálsson, 2011, DI III). The farm´s tax value was originally 30 hundreds, reduced to 17,1 in

1861. The farm was abandoned around 1963, and today there are no standing buildings at the farm (Pálsson, 2010;324).

Coring

During the 2023 field season, 201 cores were taken around Hringver in an area over 7.1 ha. A Trimble TDC650 was used at this farm to record core locations. The coring results suggest the presence of cultural deposits dating from pre-H1104 to post-H1300. Most of the deposits clustered around an abandoned turf ruin that was located at the southern end of a dirt road that cuts through the center of the Hringver farm. Several isolated turf deposits were found in the surrounding fields (Figure 44). A confirmed pre-1104 turf/LDC deposit was recovered in core 232140 approximately 100 meters east of the interpolated farm mound. Another LDC deposit was found 15 meters away in core 232141, but no tephra layers were found in this core that could be used to date the deposit. These finds are likely associated with the presence of a pre-1104 outbuilding, possibly one that was used to hold animals. A post-1300 turf deposit was found approximately 115 meters southwest of the interpolated farm mound and is likely related to a more modern turf construction.

Sixty-four of the 201 cores taken at Hringver contained cultural material. 25 of these cores contained good “yes” evidence of deposits below H1104. 30 cores contained good “yes” evidence of deposits between H1104 and H1300 and 23 cores contained good “yes” evidence of above-H1300 cultural material (Table 10). Midden deposits at Hringver (n=28) were located at an average depth of 0.70 m. Turf deposits (n=7) were found at an average depth of 0.33 m, and LDC deposits (n=16) were found at an average depth of 0.53 m (Table 11).

Tephra preservation at Hringver was excellent, with H1104 tephra layers being represented in 53% of the cores and H1300 occurring in 39%. Tephra depths were consistent across the site, with H1104 averaging 0.61 m and H1300 averaging 0.48 m (Table 9). In total, 21 of the cores containing cultural material also contained a full H1104-H1300 tephra sequence. 5 of these cores also contained additional layers of Landnám sequence, most of which suggested site habitation sometime after the Landnám tephra fell. Only one core, 232369, appeared to contain midden below Vj~1000.

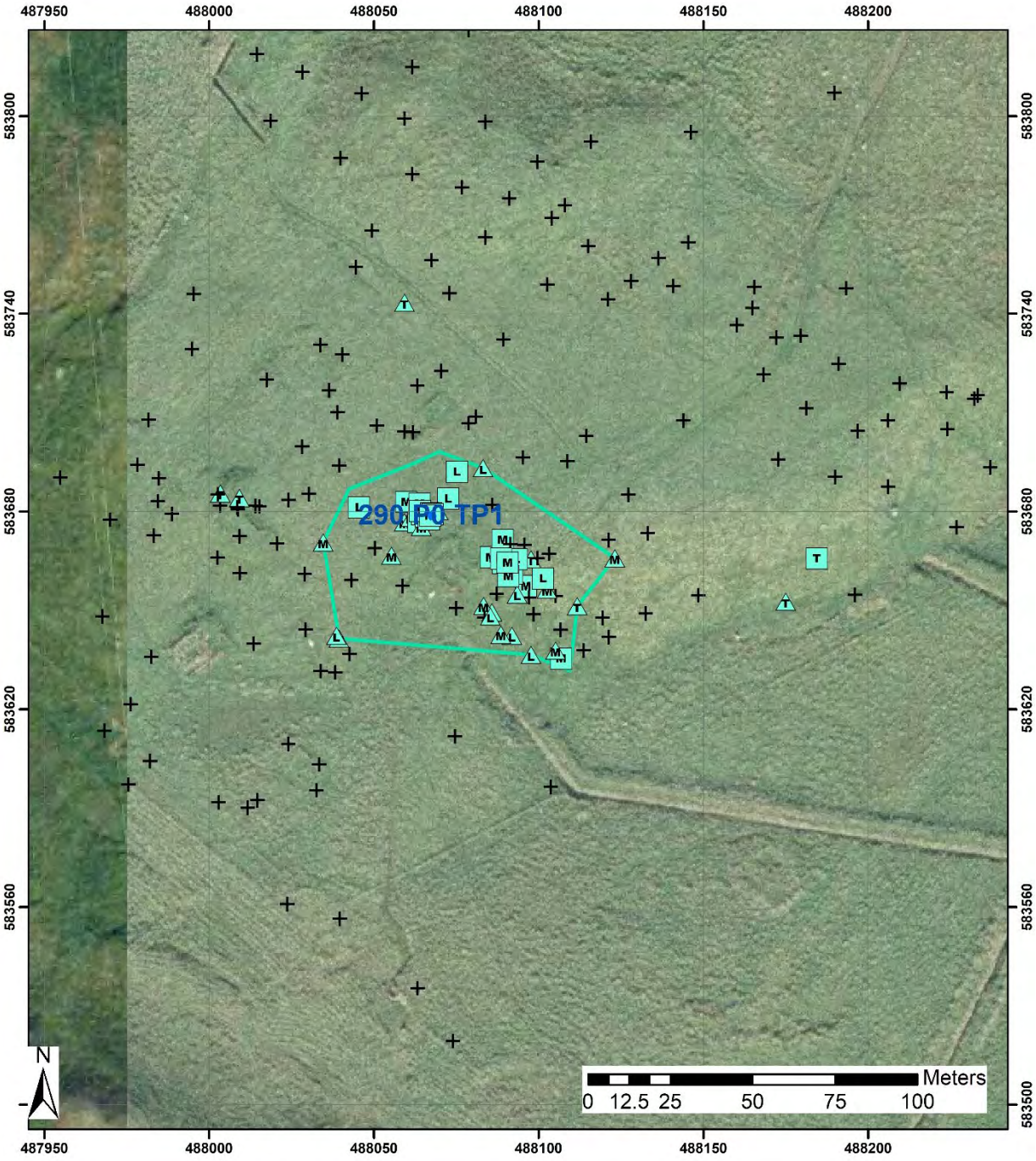


Figure 44. Map of Hringver pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue.

Excavations

One 1x1m test pit (TP1) was placed in the NW section of the interpolated farm mound because it had the most complete tephra sequences. There was another cluster of pre-1104 midden to the SE, but this was not tested because it appeared to be a more limited deposit. TP1 is interpreted as midden from after 1000 to after 1300 with a pit dug after 1300, but before the end of midden deposition.

Test Pit 1

TP1 was placed based on coring data. Cores in this area contained midden below an in-situ H1104, as well as an in-situ H1300 tephra. Core 232418, which was next to the west wall, had H1300, H1104, and H3 tephras with under 10 cm of midden below H1. Core 232413, approximately 2m from the west wall, contained H1300, H1104, and H3 tephras, with about 5 cm of LDC below H1. Core 232415, approximately 4m to the west of the excavation, also had H1300, H1104 and H3 with about 4 cm of midden below H1. This sequence was generally consistent with the excavation, which had H1300 in situ at 60-65cm bgs and H1104 at 85-90 cm bgs (very close to the depth from cores 232418 and 232413) with a little over 10cm of midden below H1104.

The sequence of TP1 (Figure 45) began with a modern root mat [101] and disturbed layer [271] on top of a post-1300 midden [272]. The H1300 tephra [273] was approximately 15-25cm below the start of the midden. A pit in the NE corner [274] was cut through the H1300 layer and into the midden [275] below; it is unclear where the beginning of the cut is, but it should be somewhere inside the post-1300 midden. Midden [275] continued below the H1300 tephra. The H1104 tephra [276] was approximately 30cm below the H1300 tephra. More midden [277] was below H1104 and before the Vj~1000 layer [281]. The Vj~1000 layer was only visible across part of the floor and part of the E wall profile (Figure 46). There was a small layer of aeolian deposit [280] below Vj~1000 and before the Landnám sequence [278] in the NE section of the unit. Under this was H3 [279], which was also directly under the midden [277] in the SE section of the unit. See Figure 59 for Harris Matrix.

Interpretation: This site appears to have been settled after the Vj~1000 and therefore after the first wave of settlement. Midden deposition was consistent past H1300. Midden deposition also grows more intense after 1104, which is consistent with Hringver's farm mound extent growing after H1104 (Table 12).

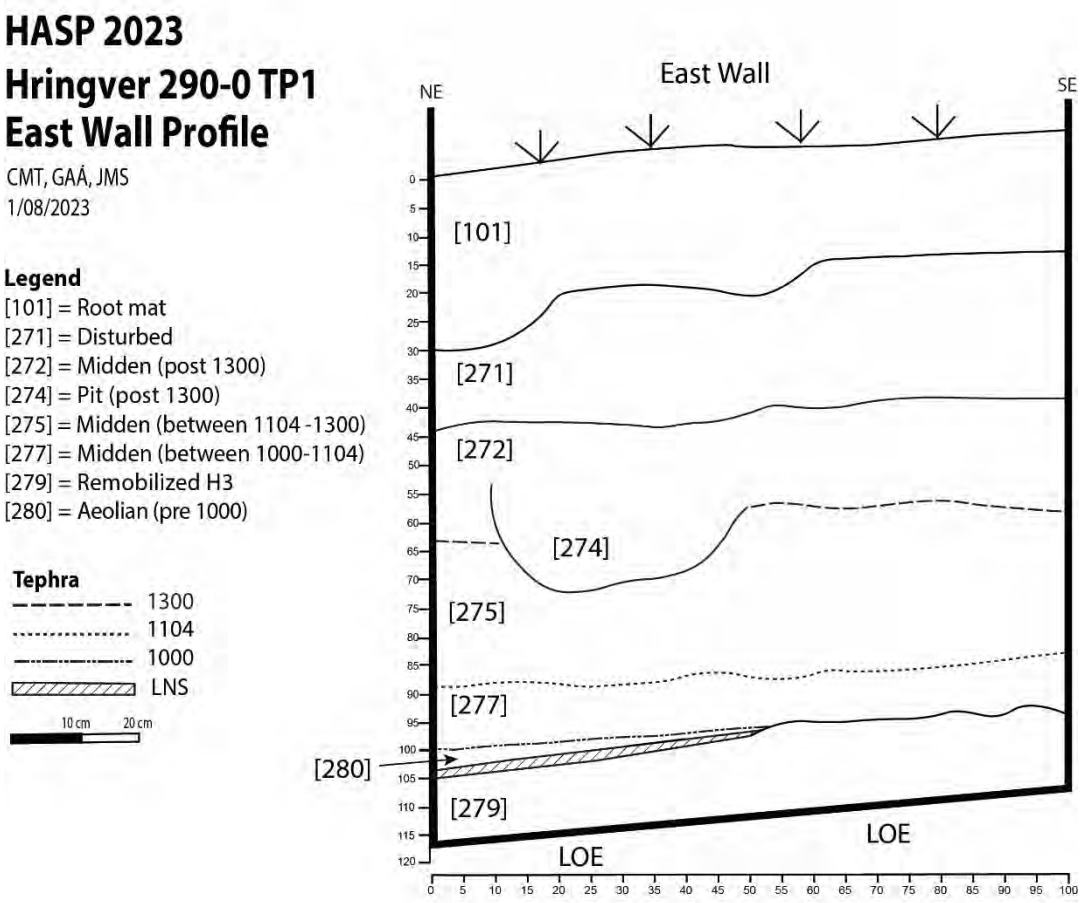


Figure 45. Profile of East wall at Hringver test pit 1.

Figure 46. Image of bottom of E wall profile at Hringver showing H1104, Vj~1000, aeolian before 1000 [280], and LNS. Vj~1000 only extends across part of the wall and has a lens of aeolian soil above it.

Hólakot

Hólakot, in the region of Viðvíkursveit, is approximately 950m southeast of the farm Viðvík and 950m northwest of Hringver. It is approximately 1.3km south of the Hjaltadalsá river and on the north side of the Hólavegur road. There are two modern farms, Steinhólar and Dalsmynni, 600 m and 1 km to the east. There are no standing structures at Hólakot, but several turf ruins enclosed by a homefield wall are visible on the surface (Figure 47). In the southern part of the enclosed field is a visible farm mound, where the 20th century farm was located. About 20m north of the farm mound are the ruins of 20 to 25 m long, 9 m wide north-south ruin with a slightly bowed western wall. This ruin, close to the center of the roughly circular homefield wall, is consistent with a Viking-Age long house or more precisely a skáli. The eastern edge of the homefield wall is difficult to identify as it runs into the edge of a bog. It is used as a horse pasture today.

Summary

During the 2023 field season, the area around Hólakot was intensively cored and three test pits excavated. This work expanded on the work of Zoëga, et al. (2009) and confirmed the early nature of the substantial occupation and the pre-1104 occupation of the potential skáli visible on the surface. These investigations suggest an occupation from before Vj~1000 but likely not right after the Landnám sequence. Occupation continued past H1300 but at some point after 1300, the farm was abandoned. The farm size was largest before 1104, shrinking during 1104-1300 and growing slightly after 1300 (Table 12). The site is spread out during both the pre-1104 phase (Figure 48) and the 1104-1300 phase (Figure 81) with confirmed post H1300 cultural deposits being concentrated around TP1 (Figure 82).

History and Previous Work

The now abandoned farm Hólakot is first mentioned in the 1388 Hólar land registry, then under the ownership of the bishopric (DI III). Hólakot is listed as an independent farmstead in subsequent registries of the bishopric (Pálsson, 2010). In the land registry of 1714 the farm is still independent but said to have been unoccupied for 7 years (Jarðabók, 1930;209) In 1802, however, the farm was sold as a subsidiary farm of Viðvík (Pálsson, 2010;333). The farm was re-occupied from 1921-1934 but has been abandoned since then and today there are no buildings at the site (Pálsson, 2010;334).

In 2008-9 Zoëga, et al. (2009) excavated three exploratory trenches (SK1, SK2 & SK3) at Hólakot, in addition to a several cores (the location of the trenches can be seen in Figure 47, with cores and trenches in Figure 88). SK1 was excavated into the wall and floor of an L-shaped structure. The results showed that the structure wall was pre-1104, and that the structure was probably a corral or an outbuilding of some sort. The turf wall included H3 and was partially under the H1104 tephra. There was some aeolian deposit between the H1104 and the top of the remains of the wall, indicating that the structure wall was not rebuilt after H1104 fell. The boundary wall surrounding the area was tested with SK2 which was placed on the inside of the wall. The bottom portion of the wall was poorly preserved turf with bits of dark tephra, probably the LNL and the Vj~1000. The top portion of the wall was better turf but had no tephra layers associated with it. The H1104 was clearly visible in the

test pit, its relationship to the wall is unclear. The Tephra layer was on top of some mixed earth with charcoal that was deposited up against the turf wall. This arrangement hints that the wall was originally built before the H1104 fell, and then rebuilt after the H1104 was deposited. The SK3 excavation yielded ambiguous results because of the poor preservation of any cultural remains post-1104 while the deposits below the H1104 tephra appeared to be sterile.

At about the same time, Tara D. Carter (2010), Carter (2015) took 30 cores at Hólakot. The positive results for the 25 cores with pre-1104 cultural deposits are presented in Figure 88. All but 2 of these cores had some sort of cultural material.

Figure 47. Hólakot with all excavations (Zoega et al. 2009 and HASP) and homefield wall and potential skáli outlined.

Coring

During the 2023 field season, 208 cores were taken around Hólakot in an area over 2.15 ha. The coring results suggest that the cultural deposits run from pre 1104 to post 1300. These cores were dispersed across a wide area that extended northward along the central axis of the abandoned farm. Three distinct concentrations of cultural material are visible in the distribution of these cores, each possibly corresponding to a different period of the site's habitation (Figure 48). Deposits dating to pre H1104 and H1104-H1300 were represented across most of the interpolated farm mound, yet it appears that cores containing good "yes" evidence of post H1300 deposition only concentrate in the area where TP1 was placed. A handful of turf cores were also recorded outside the immediate farm area, these being taken along the well-preserved turf wall that encloses the farmstead.

134 of the 208 cores taken at Hólakot contained cultural material. 76 of these cores contained good "yes" evidence of deposits below H1104. 15 of the cores contained good "yes" evidence of cultural deposits between H1104 and H1300, and 13 cores contained good "yes" evidence of deposits above H1300 (Table 10). Midden deposits at Hólakot (n=59) were located at an average depth of 0.52 m. Turf deposits (n=24) were located at an average depth of 0.45 m, and LDC deposits (n=46) were located at an average depth of 0.41 m (Table 11).

Tephra preservation at Hólakot was very good, with H1104 being represented in 59% of farm mound cores and H1300 occurring in 16.4% of farm mound cores. Tephra depths were not very consistent, with H1104 averaging .31m and H1300 averaging .32m in farm mound cores (Table 9). Eighteen of the cores containing cultural materials also contained both H1104 and H1300. Nine of these cores also contained LNS layers, but cultural deposits ended in all of them before the LNS, suggesting occupation may have not occurred directly after Landnám. This suggestion is reenforced by the presence of six cores with cultural material only above the Vj~1000 (the 7th core with Vj~1000 did not have cultural material at all).

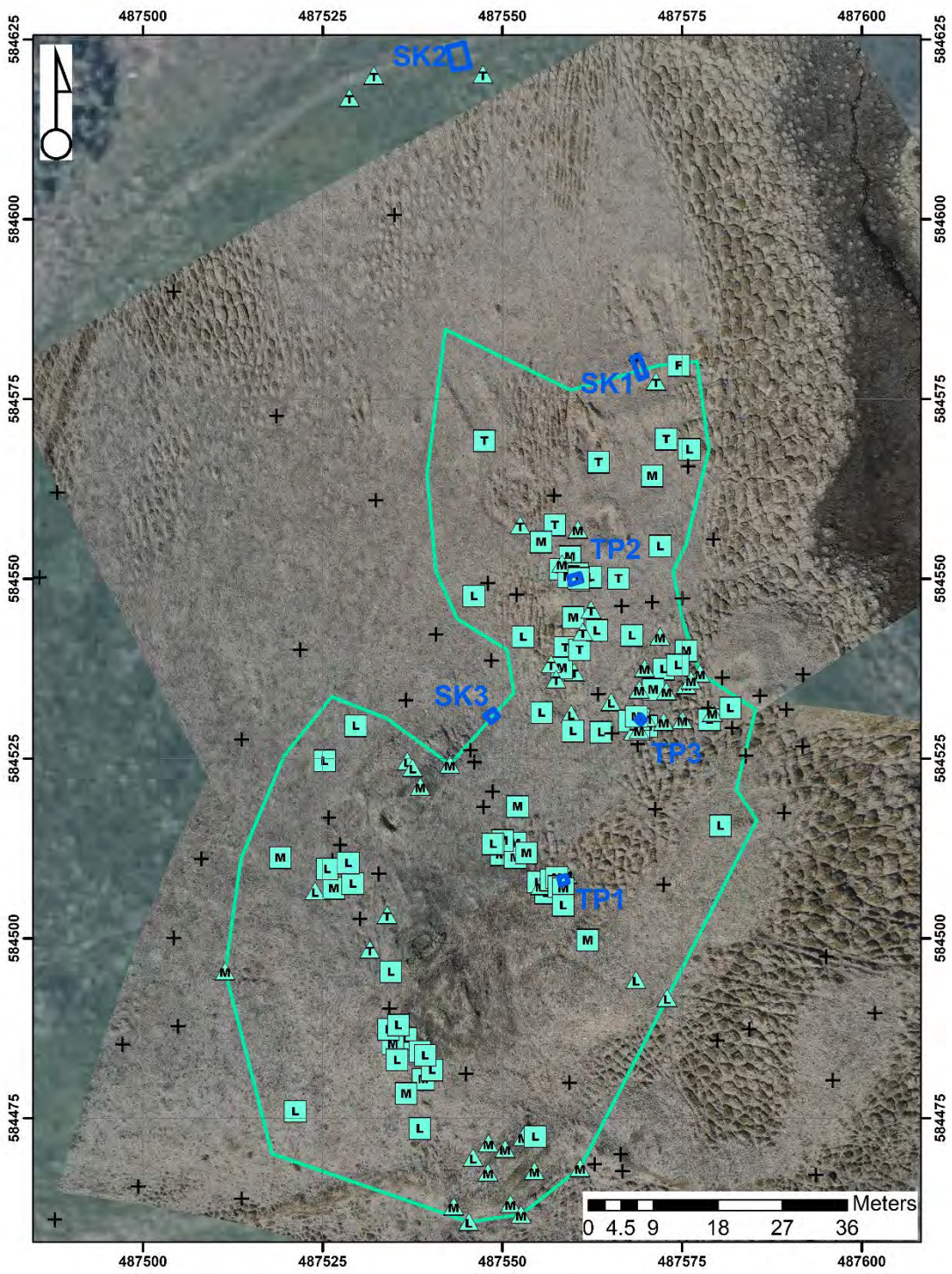


Figure 48. Map of Hólakot pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit locations are in blue and labeled TP. SK indicates trenches from Zoëga, et al. (2009). See Figure 88 for 2009 map of visible surface features.

Excavations

There were three excavations at Hólakot for the 2023 field season. Test Pit 1 (TP1) was placed in a concentration of cultural deposits near the center of the interpolated farm mound. The deposit was interpreted as midden and low-density cultural material dating from the Viking age into the medieval era. Test Pit 2 (TP2) was placed in a concentration of deposits

towards the northern end of the farm just north of the ruin of a Viking-Age longhouse. TP2 yielded structural remains, so excavation was terminated before reaching sterile soil. The material recovered from the test pit possibly relates to iron production and the presence of a smithy on the site before 1104. Test Pit 3 (TP3) was placed in another concentration of cultural deposits, this one being halfway between the first two units. The deposit was interpreted as an ash and charcoal midden that was in use pre-1104 and is probably associated with a ruin of a Viking-Age long house.

Test Pit 1

Test Pit 1 (TP1) was placed based on coring data. Cores in this area represented the only concentration of material at the site that could be dated using an in situ layer of H1300 tephra. These cores (231740, 231742, and 231743) also suggested the presence of midden extending through H1300 and H1104. When placing the pit, cores 231740, 231742, and 231731 were used to mark the boundaries of the pit wall.

The stratigraphic sequence (Figure 49) begins with a modern root mat [101] followed by a disturbed layer [171]. Below the disturbed layer was a low-density cultural layer [172]. This deposit was noticeably mixed, with the first few centimeters containing little cultural material. The layer transitions into being a well-defined midden deposit towards the bottom. Below context 172 was a consistent layer of H1300 tephra that sat on top of a dense layer of midden [174]. This midden deposit contained faunal remains and a bronze object that was recovered 17 centimeters below the surface of the midden. Below context 174 was a layer of H1104 tephra. The sequence continued with a thin layer of midden [176] which sat on top of a layer of Vj~1000 tephra (Figure 50). Below the Vj~1000 tephra were two distinct contexts: an aeolian layer [178] on the North side of the unit floor which contained faunal remains, and a low-density cultural layer [180] which concentrated towards the South side of the pit. The limit of excavation was determined by the presence of Landnám tephra at the bottom of the unit.

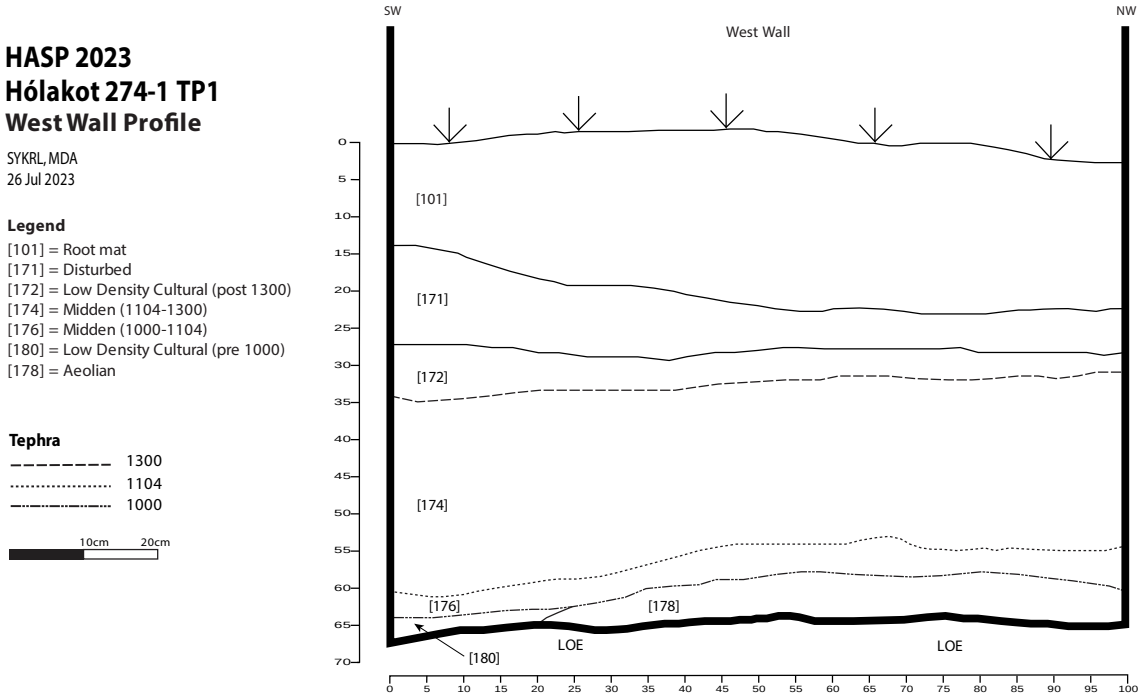


Figure 49. Profile of West wall at Hólakot test pit 1.

Interpretation: The sequence of TP1 suggests a pre-Vj~1000 settlement of the site, with occupation continuing through to post-1300. Midden accumulation is greatest from 1104-1300, suggesting an intensification of activity shortly after the establishment of the Hólar bishopric. Midden deposition continues until sometime after 1300. This substantial period of abandonment is evidenced by a disturbed strata with very limited cultural material [171] above the distinct post 1300 cultural deposits [172]. This basic abandonment sequence is also found in the 22 cores with cultural material and the H1300 tephra along with .

likely marking when the farm was finally abandoned or at least when this area was no longer part of a domestic occupation.

Figure 50. Image of Vj~1000 tephra [177] at Hólakot TP1.

Test Pit 2

Test pit 2 (TP2) was placed based on coring data just south of a ruin the potential skáli. Cores in this area suggested the presence of midden deposits below an in situ layer of H1104 tephra. Three of these cores (231590, 231748, and 231945) contained low density cultural material that appeared to have been deposited after H1104, but we could not find any definitive midden that occurred within a similar sequence. Three cores were used as reference when placing the pit. 231748 (corresponding with the northwest corner of the pit), 231747 (corresponding with the northeast corner), and 231945 (corresponding with the eastern pit wall) contained midden deposits that began around 30 cm bgs. All of these cores also contained H1104 tephra layers at around 24 cm bgs. There was no profile drawn for TP2.

The stratigraphic sequence begins with a modern root mat [101] followed by a layer of disturbed earth [191]. Below this disturbed layer was a disturbed low density cultural deposit [192]. At approximately 24-25 cm bgs, excavators uncovered a patchy layer of H1104 tephra [193] that was largely absent from the northeast corner of the pit. Disturbed low density cultural material continued below this tephra layer and was labeled as context 194. Below this LDC layer was a midden deposit [195]. This midden deposit was variable in composition, with the southeast corner containing what appeared to be turf. A thick charcoal layer stretched along the extent of the northern wall (Figure 51). This charcoal layer contained large chunks of charcoal and what appeared to be residue from iron production. Two nails were recovered from this context and samples of slag and charcoal were also taken. The pit wall was extended 50 cm to the east to avoid further disturbance of the charcoal layer. Below this midden layer was a burnt turf deposit [196]. Suspecting this was the foundation of a structure, excavation was terminated.

Figure 51. Image of charcoal midden layer [195] at Hólakot TP2 where two nails were recovered.

Interpretation: The sequence of material recovered from TP2 suggests a pre-1104 occupation. The charcoal pit and artifacts recovered from context 195 are likely associated with iron production, indicating the presence of a smithy at Hólakot before 1104. The turf deposits recovered from contexts 195 and 196 may have come from the wall of the Viking-Age skáli as the smithy deposit seems to be on top of or just north of the north end of the skáli. While we were unable to access any possible cultural layers below the charcoal pit, the discovery of a smithy does speak to the level of activity that occurred at this site after it was settled. This activity likely decreases before 1104 and comes to an end shortly after.

Test Pit 3

Test Pit 3 (TP3) was placed based on coring data. It was decided that the area directly east of the long house ruins be surveyed following the excavation of TP2. This was an area of thufur (hummocks) that began at the hypothesized rear entrance of the long house and continued into the bog marking the easternmost boundary of the site. Cores in this area suggested the presence of midden deposits below an in situ H1104 tephra layer. Two cores were used as reference when placing the pit: 232029 corresponded with the north wall of the pit and 232025 corresponded with the northwest corner of the pit. Both cores suggested the presence of midden beginning at roughly 30 cm bgs. The pit itself was placed 5 meters east of the long house ruins.

The stratigraphic sequence (Figure 52) began with a layer of root mat [101] which sat on top of a disturbed layer of soil [201]. Below this context was a layer of H1104 tephra on top of a layer of low-density cultural material [203]. Below context 203 was a charcoal midden [204] that contained faunal remains (Figure 53). Below context 204 was an ash midden [205]. The ash was more noticeable on the northern side of the unit, with the rest of

the context containing more aeolian soil. The limit of excavation was determined by the presence of sterile soil below context 205.

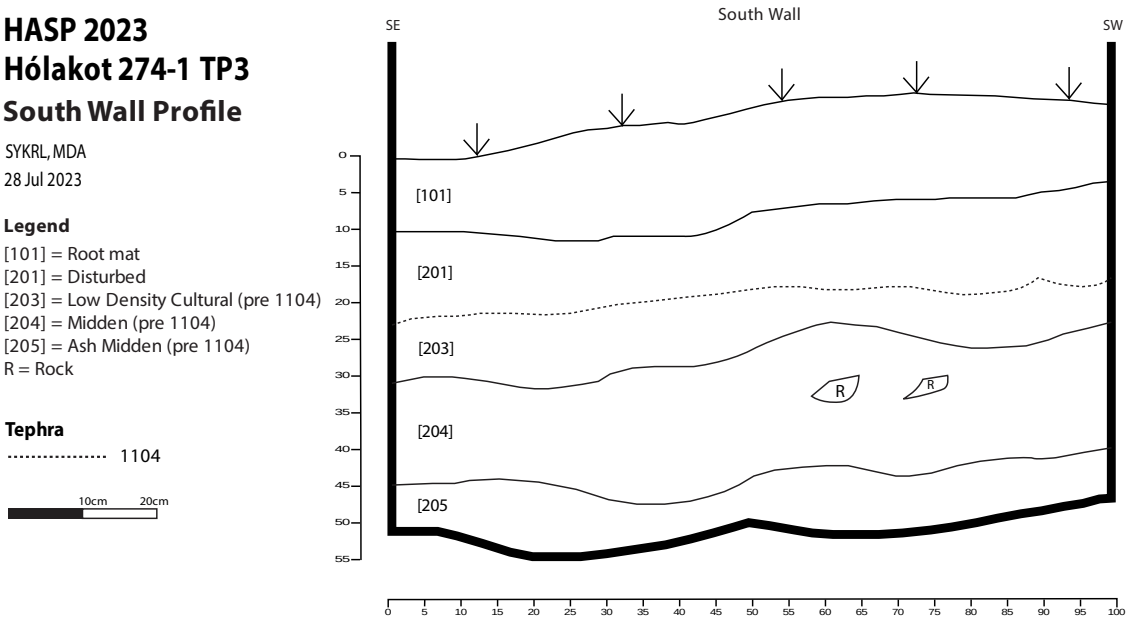


Figure 52. Profile of South wall at Hólakot test pit 3.

Interpretation: The sequence in TP3 indicated pre-1104 deposition with no other temporal control. The sequence starts suddenly with the substantial deposition of ash midden on top of sterile soil that did not have any identifiable tephra layers. The density of cultural material in TP3 decreases as it approaches the H1104 tephra layer, with the cultural material ending at or shortly after the deposition of H1104. This cultural deposit seems to be associated with the visible potential skáli.

While the intensity of midden deposition observed in TP3 decreases with time, there is intensification of midden accumulation in TP1 at the same time. This suggests that the main occupational area shifted to the south where the farm stood until its last incarnation in the 20th century.

The sequences recovered from TP1, TP2, and TP3 all have good evidence for pre-1104 cultural material, making these deposits potentially broadly contemporaneous. While test pit 1 had the least pre-1104 material, it did have ephemeral evidence for pre-Vj~1000 cultural deposits. Test pit 1 was located at the eastern edge of the farm-mound about 20m southwest of TP3 and the southern end of the associated skáli. The deposits in TP1 may, therefore, have been associated with a short-lived earlier occupation that now lies underneath the farm mound. The more substantial pre-1104 cultural material in TP-2 and TP-3 indicates that the main pre-1104 occupation was in the northern part of the area. This is supported by the abandoned early farm ruins surrounding the visible potential skáli. It is likely that the skáli structure located between TP3 and TP2, is associated with the pre-1104 cultural midden deposits in TP3, since the pit was located only 6m east of the southeast door of the structure..

So, while it is conceivable that the skáli, and associated buildings, predate the deposits in TP1, neither TP3 nor TP2 have the Vj~1000 for comparison.

Figure 53. Image of pre-1104 charcoal midden [204] at Hólakot TP3.

Viðvík

Viðvík, in Viðvíkursveit, is approximately 1.5km southwest of the farm Neðri-Ás and 950m northwest of Hólakot. It is approximately 750m south of the Hjaltadalsá river and on the north side of the main road to Hólar. There are many buildings, including a historic church and graveyard, modern farmhouse, and multiple barns. The farm mound is believed to extend from under the church and graveyard to 80m northwest of the church. The southern edge of the interpolated farm mound extends south and southeast of the graveyard, with the closest barn complex 20m southwest and the modern farmhouse 60m south.

Summary

During the 2022 field season, the area around Viðvík in Viðvíkursveit was intensively cored and a single test pit excavated. These investigations suggest a significant pre-1104 occupation right after the Landnám tephra fell, mainly in the area immediately NW of the standing church. This occupation continued until the present. There was also a second area of cultural deposits approximately 750m to the SW of the standing church, next to the modern road, that was used mainly from 1104-1300 and after 1300. The size of the farm mound appears to decrease over time (Table 12), but this is partially because the paved driveway prevented

extensive coring to the south of the standing church, resulting in this area only being included in the pre-1104 farm mound extent (Figure 54).

History and Previous Work

Viðvík was a wealthy chieftain's farm, first mentioned in the *Book of Settlements* (Íslenzk fornrit I). According to the *Book of Settlements* a settler named Öndóttur bought the land and built a farm there. The land extended through the area of Viðvíkursveit and a part of Hjaltadalur. In the 11th century the *Saga of Grettir the Strong* mentions the chieftain Þorbjörn öngull Þórðarson living tehre (Íslenzk fornrit VII). By 1388 Viðvík was owned by Hólar (DI III). In the oldest known tax value from 1686 (Lárusson, 1967), Viðvík was estimated at 80 hundreds, but in the1714 registry (Magnússon and Vídalín, 1930), it was 60 hundreds. At an auction of Hólar owned farms in 1802, the farm was valued at 80 hundreds, including the abandoned farm Hólakot. This may indicate Hólakot was already owned by Viðvík in the 17th century, even if it is registered as an independent farm. In 1861, the value had been reduced to 38,5 hundreds (1861). Viðvík was, and still is, a church farm. The first mention of a church is in Sturlunga saga II, 1946;197). In 1569 the church functioned as a parish church but in the 18th century it was served by the church at Ríp. At least five possible ancient subsidiary farms are known within the farm boundary (Pálsson, 2010;342-343).

Coring

During the 2023 field season, 212 cores were taken around Viðvík in an area over 18.8 ha. The survey area of Viðvík was restricted to the periphery of the old farm mound location and the surrounding agricultural fields. The farm mound was bulldozed and replaced with a gravel parking lot at some point in the second half of the 20th century, making the ground surface very difficult to penetrate with hand cores. The survey limits were also restricted to avoid disturbing the still-standing church and cemetery that occupied the eastern half of the farm mound. Even with these restrictions, coring at Viðvík enabled the recovery cultural deposits dating from pre-H1104 to post-H1300. The largest concentration of cultural material is centered on the site of the old farm mound, beginning in the field to the west of Viðvík's church and extending southeast past the cemetery. Rather than treating the cultural deposits on either side of the parking lot and cemetery as two separate entities, we decided to include them within the boundaries of one large, interpolated pre-1104 farm mound.

Viðvík's outer fields contained additional areas of cultural deposition. Two concentrations of turf deposits were found northwest of the farm mound, one 100 meters out and another approximately 250 meters away (Figure 54). Both are likely the remains of farm outbuildings that were constructed sometime after the Viking age, and possibly even after the medieval period. A string of turf deposits 200 meters to the southwest of the farm mound are likely associated with one of the farmstead's turf walls. An H1300 tephra in turf found in core 232512 suggests that this wall was constructed sometime in or after the late medieval period. A pre-1104 midden deposit was discovered in a field approximately 130 meters northeast of the farm mound. The deposit itself was faint and further coring within the vicinity could not replicate its sequence. Several cores taken in the same field contained

layers of low-density cultural deposits, yet these were widely dispersed and did not reflect the presence of another substantial farmstead midden.

A second farm mound entity was identified approximately 700 meters south of the first, just to the north of the Hólavegur road. This entity is probably Kvígidishóll (Örnefnastofnun Íslands 2021) and is described in detail by Pálsson, 2010: 343). About 37 cores were taken there during the 2023 season. The cultural material recovered at this site hints at some form of early human activity, but the three cores with pre-1104 activity (one turf, one LDC, and one cultural layer) could not be duplicated with additional cores. Thus, it appears that Kvígidishóll did not become a true farm mound until after 1104. The site was abandoned at some point in the modern era. The Kvígidishóll farm mound areas are outlined in Figure 85 and Figure 86.

Tephra preservation was fair in the cores containing cultural material that were taken at Viðvík. H1104 was represented in 29% of the cores, while H1300 was found in only 11%. Tephra depths varied across the site, with H1104 found at depths ranging from 0.11-1.19 m and H1300 from 0.13-0.60. This could possibly be explained by the presence of turf layers obfuscating the average depth of in-situ tephra layers. However, this could also relate to the differential deposition of cultural material at this site, which is largely concentrated within the boundaries of the interpolated farm mound. Only two cores (232569, 232632) contained an H1104-H1300 tephra sequence.

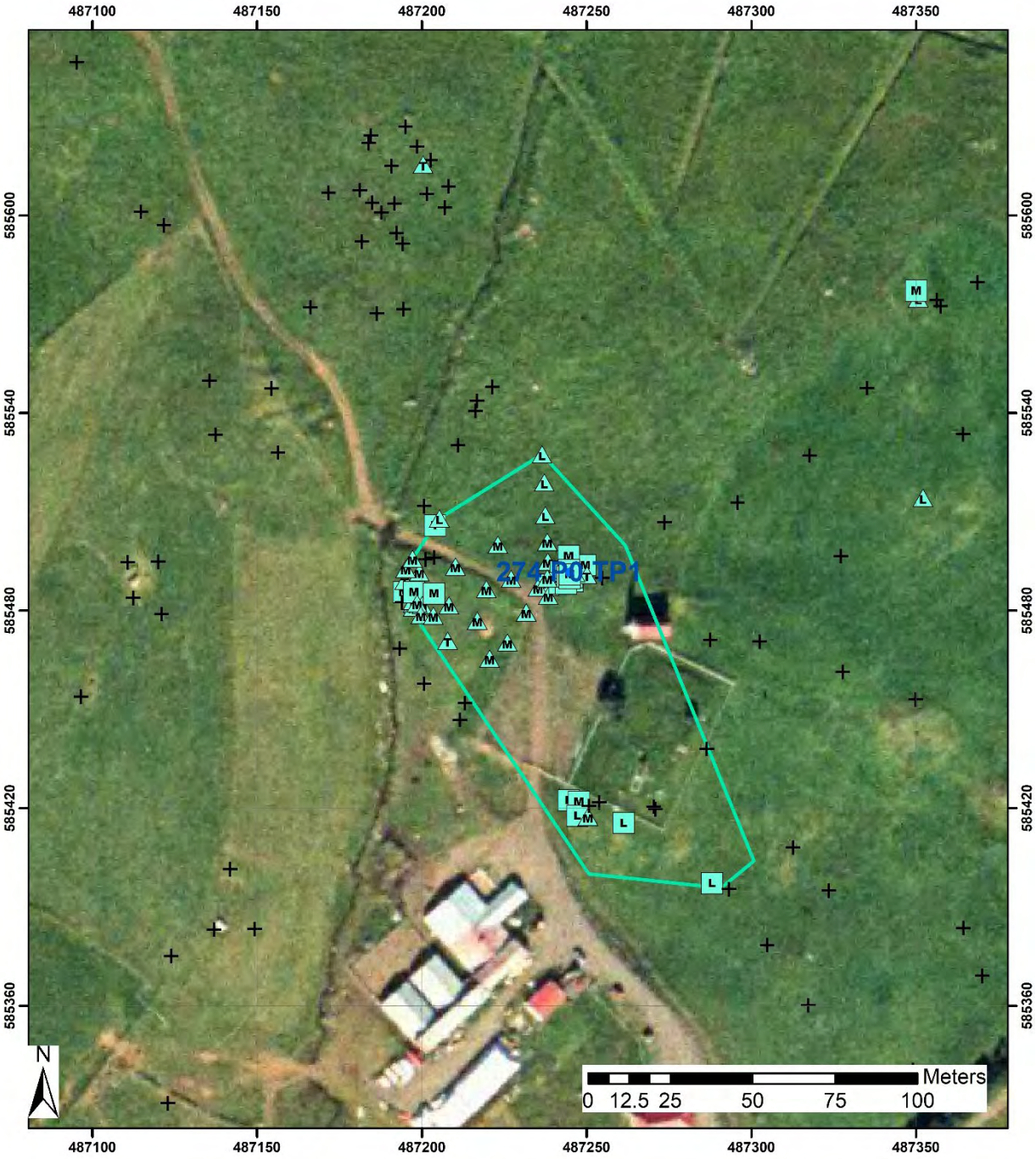


Figure 54. Map of Viðvík pre-1104 coring results. Interpolated pre-1104 farmstead size is also presented. Test pit location is in blue.

Excavations

There was one excavation at Viðvík for the 2023 field season. Test pit 1 (TP1) was placed in a concentration of midden deposit that was located on the northeast side of the first interpolated farm mound, 20 meters northwest of the entrance to the farm's church. This

deposit contained primarily midden and turf deposits dating from the early Viking age into the modern era.

Test Pit 1

TP1 was placed based on coring data. Cores in this area suggested the presence of midden extending through Vj~1000 and H1104 tephra layers, with a significant portion of the midden being pre-1104. Seeing this as an opportunity to recover settlement-era cultural material, the pit was placed in the highest concentration of this deposit. The data from three cores was utilized to justify the placement of the pit. 232620, which corresponded to the southeast corner of the pit, contained midden extending through a layer of H1104 tephra at 56 cm and a layer of Vj~1000 tephra at 75 cm. 232628, which corresponded to the south wall of the pit, contained a similar sequence. 232625, which corresponded to the north wall of the pit, contained a midden deposit that extended through a layer of H1104 tephra at 37 cm and a low density cultural (LDC) deposit that terminated at the depth of a Landnám tephra layer.

The stratigraphic sequence (Figure 55) is a modern root mat [101] followed by a disturbed layer [281] with modern glass and ceramics. The interface between the disturbed layer and the following midden layer [282] was mixed, but the midden became relatively undisturbed with no evidence of modern artifact deposition. Following this sequence was a turf layer [283] with some additional midden deposit by the Northeast corner of the pit, which contained charcoal and animal bone inclusions. Directly below this context was a consistent layer of H1104 tephra, which itself was above another layer of turf [285]. Context 285 also contained additional charcoal and bone inclusions. Below this turf layer was a compact midden deposit [286a] which contained significant amounts of faunal remains, in particular fish bone. The same midden continued into 286b, which was differentiated because of much more turf mixed with the midden. Below [286b] was a semi-continuous layer of Vj~1000 tephra. The tephra layer concentrated in the Southwest corner of the pit, but also continued on the eastern portion of the South wall. Below this tephra was a layer of turf [288], which also contained animal bones. Patches of midden were visible by the north wall, however the rest of the context was a consistent layer of turf. Below this turf was a layer of midden [289] which contained a significant amount of animal bones and charcoal inclusions. Also present in the Southeast corner of the wall were articulated vertebrae as well as several long bones and a scapula. Cuts [291] had been made into the following turf layer [290] which were then filled with the midden from context 289. Below context 290 were visible layers of H3 tephra and Landnám tephra. The Landnám tephra was only visible in a small section of the profile. The same is true for the layers of H3 tephra that were visible in the southwest corner of the pit. Shovel cut marks penetrating the Landnám layer were clearly visible in the test pit floor. The limit of excavation was determined based upon the presence of H3 and Landnám tephra on the western side of the pit floor and sterile soil on the eastern side.

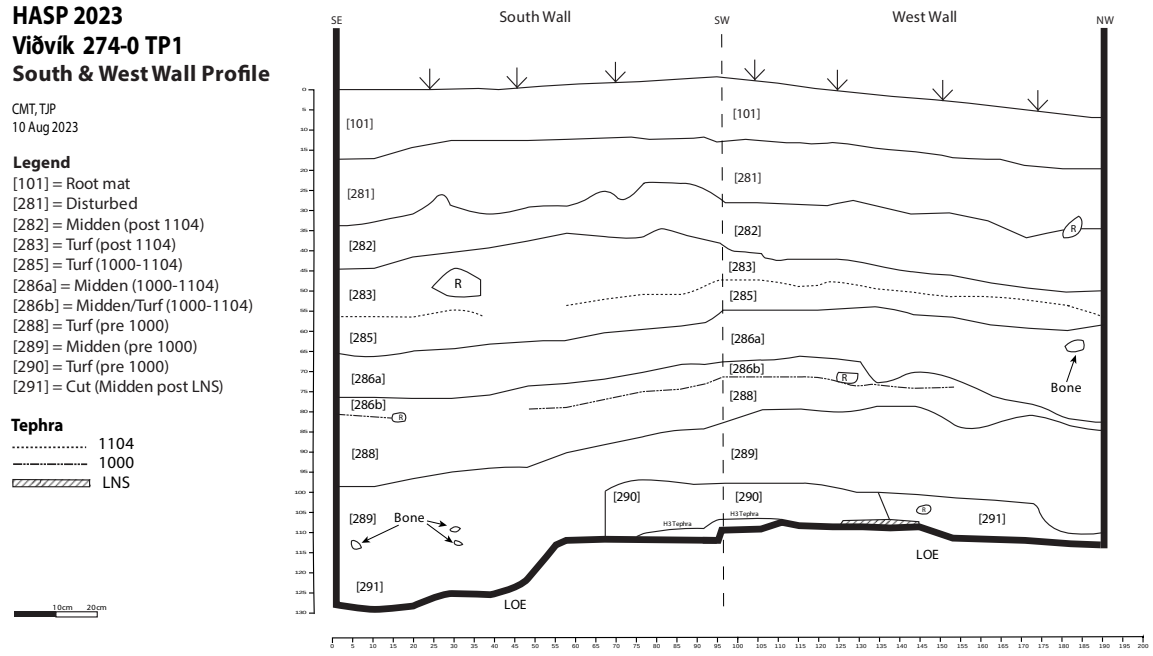


Figure 55. Profile of South and West walls from Viðvík test pit 1

Interpretation: The disturbed layer at the top of the unit was likely influenced by modern agricultural activities on the farm property, with the cultural materials excavated from this layer representing the modern occupation. Alternating layers of turf and midden deposits representing multiple periods of habitation throughout the Viking age and medieval era continued throughout the entire pit. Settlement likely occurred shortly after the deposition of the Landnám tephra and well before deposition of Vj~1000. The clear evidence of shovel cut marks extending through the Landnám layer suggests early human activity on this site, and it is possible that the turf layer [290]—which may be a coherent upcast from shovel cuts—may be part of an early pit house. The interplay of the turf [290], cut [291], and later midden fill [289] hints that this may be structural and that the [289] midden might be a floor. The articulated bones recovered from context [289] are unusual but could be associated with that potential structure. The farm at Viðvík was likely settled very early on and may be one of the earliest sites in Hjaltadalur. Consistent midden accumulation throughout the Viking age and medieval era suggests a relatively stable settlement, with domestic activities going largely uninterrupted up through the modern era.

Figure 56. Image of in situ Landnám tephra with shovel cuts through it filled with midden [290] at Viðvík.

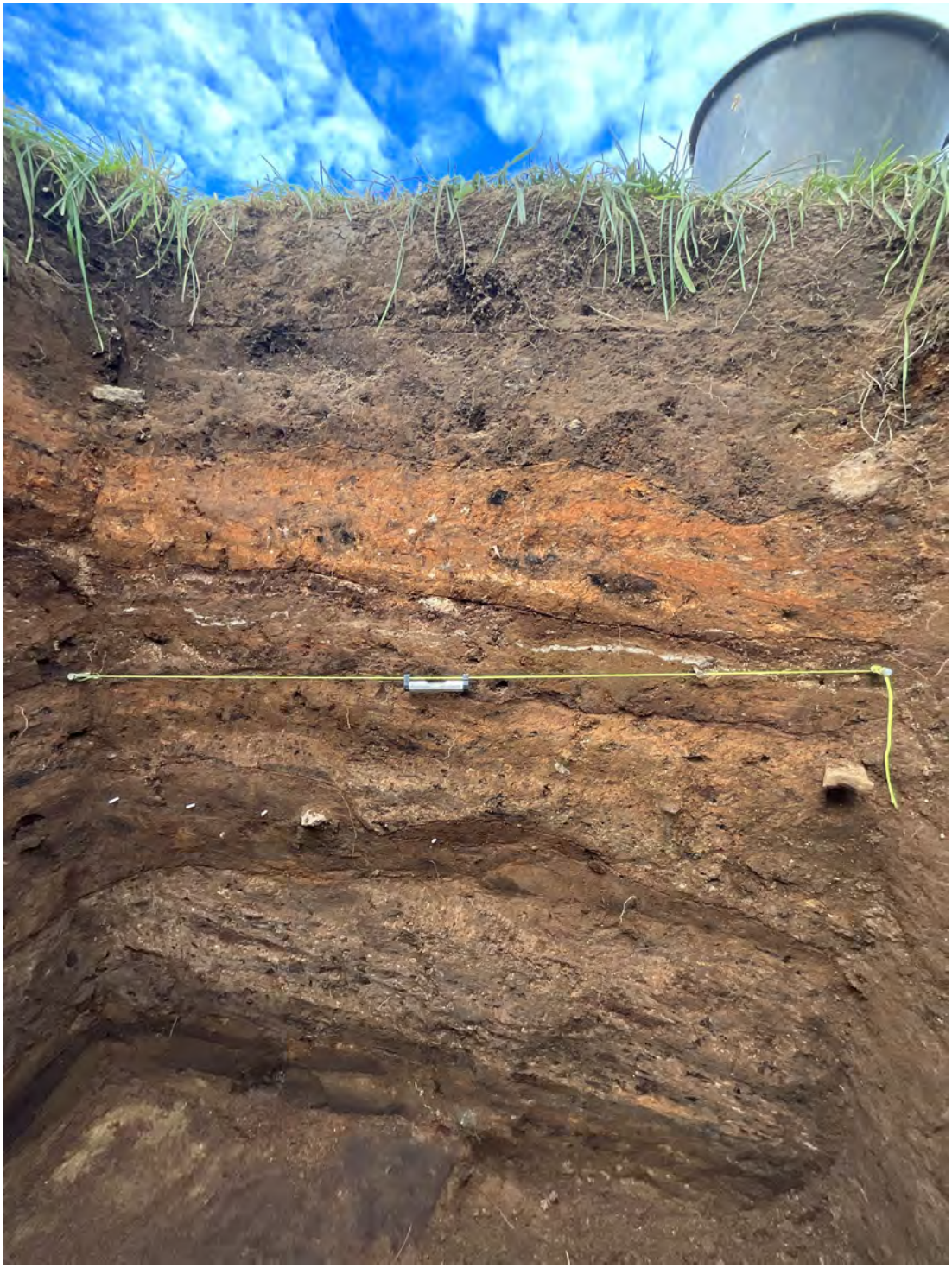


Figure 57. Photo of Viðvík TP1 showing west wall after exposing the in situ the Landnám tephra (excavation floor on left) below the turf layer [290] with substantial amounts of LNS and midden layer in the left profile [291] that filled the shovel cuts.

Conclusion

This report covered the HASP 2023 work at Skúfsstaðir, Efri-Ás, Hólakot, Garðakot, Kálfsstaðir, Kjarvalsstaðir, Nautabú, Hringver, Ingveldarstaðir, Viðvík, Laufskálaholt, Brekkukot and Grafarkot in Hjaltadalur. All twelve of the farms investigated in 2023 seem to have been established before the Hekla 1104 (H1104) tephra fell. The cultural material at

every farm except for Laufskálaholt and Brekkukot had continuous sequences indicating long-term stability. Laufskálaholt was the only farm clearly abandoned after 1104. Brekkukot was technically occupied during all three time periods, but was used less intensely from 1104-1300 and there is a serious lacuna in the post-1300 period before 1766. The Kálfsstaðir churchyard was investigated through a test trench that was able to confirm the pre-1104 establishment of the churchyard and assess burial preservation. A probable cemetery wall was identified at Skúfsstaðir during CMD survey; but the presence of a church and burials is unknown. Skúfsstaðir, Efri-Ás, Hólakot, Garðakot, and Viðvík have evidence of shifting occupation areas over time; Skúfsstaðir and Viðvík contract while Garðakot and Efri-Ás expand and Hólakot seems to shift multiple times within the main farm area. There is not any clear environmental damage such as landslides associated with these changes. Combined with results from previous years, it seems that the establishment of Hólar did not cause major change in the size or status of farms initially, as most of the farms in the valley predate the establishment of the bishopric establishment and remain relatively stable from 1104-1300.

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

Coring designations

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 – 2023 Coring Data) list and the class column in the context list (Table 3).

The first step in determining a “yes,” “no,” or “maybe” was to check if there were any in situ primary tephra layers (H1766, H1300, or H1104) 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-H1104 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 H1104 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 H1104 layer. A deposit was listed as “maybe” if H1104 was missing but the deposit was determined in association with another tephra, such as H1766, or H1300. The absence of the H1104 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 H1104. A “maybe” was also given if H1104 was missing and a deposit ended at the exact depth of a tephra layer below H1104 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 H1104 layer or the H1300 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 H1104 or H1300, 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 H1104 tephra, or none extending through or existing between an in situ H1300 and H1104. A deposit was listed as “maybe” if it existed above an in situ H1 with no H1300 present, or if there was no H1104 present, but the deposit was determined in association with another tephra layer. A “maybe” was also given if there was no H1300 layer and a cultural deposit ended at the exact depth of an in situ H1104 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 H1300 tephra layer, started and ended above it, or extended through a later tephra, such as H1766. 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 H1300 layer. A deposit was listed as “maybe” if there was no in situ H1300 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 an H1300 tephra layer is assigned a “yes” for the post-1300 time period if there are no other farmstead deposits above H1300 that would take priority. All other time periods are assigned according to the rules for in-situ tephra outlined above. If turf with H1104 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 H1104 in it as the only farmstead deposit, but there is also an in situ H1300 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 H1104 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 H1104). 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.

Record Keeping and Numbering System

Farmsteads are numbered based on their sequence in *Jarðatal á Íslandi* (Johnsen, 1847). Sub farms are given an arbitrary place number (often from the order listed in the *Jarðatal*), so that Viðvík is 247-0 and Hólakot, which is on the property of Viðvík, is 247-1. Excavations are designated with a letter and number combination (e.g., TP1, for test pit one). Excavation sequences can span sub farms or continue the numbering sequence. Excavation contexts are designated with a 3 -digit number and usually surrounded with brackets ([ ]) to donate that they are contexts.

Appendix B – 2023 Excavation Data

All land-survey data were collected based on the ISN93 coordinate system. Test pit locations were usually determined by the results of coring. With the deepest and best tephra layers targeted for excavation. Once placed, excavation corners and elevations were recorded with a Topcon HiPer SR DGPS using the IceCORS network, primarily using the local RTK from Akureyri University (AKUR) which yields about 1 cm horizontal accuracy and 2 cm vertical accuracy.

Table 2. Excavation units

Place	Farm Number	Place Number	Ex	Date Opened	NWE	NWN	NEE	NEN	SEE	SWE	SWE	SWN	SWZ	NWZ	NEZ	SEZ
Brekkukot	263	0	TP1	Tuesday, August 8, 2023	492186.89	584124.52	492187.89	584125.14	492188.39	584124.27	492187.60	584123.73	134.12	134.25	134.43	134.28
Efri-Ás	264	0	TP1	Monday, July 17, 2023	490179.45	584892.12	490179.32	584890.52	490178.33	584890.71	490178.56	584892.23	126.64	126.73	126.44	126.58
Efri-Ás	264	0	TP2		490139.35	584896.58	490140.08	584896.02	490139.58	584895.20	490138.79	584895.67	123.91	124.17	124.17	123.91
Garðakot	252	0	TP1		488626.91	583747.95	488627.88	583748.06	488628.01	583747.09	488627.04	583746.99	159.37	159.27	159.24	159.39
Hólakot	274	1	TP1	Tuesday, July 25, 2023	487557.84	584508.52	487558.83	584508.75	487559.13	584507.84	487558.07	584507.44	143.48	143.49	143.29	143.36
Hólakot	274	1	TP2		487559.21	584550.27	487560.76	584550.71	487561.03	584549.72	487559.46	584549.23	142.81	142.83	142.84	142.75
Hólakot	274	1	TP3	Friday, June 30, 2023	487569.24	584531.07	487569.87	584530.44	487569.25	584529.79	487568.57	584530.43	142.28	142.20	142.13	142.25
Hríngver	290	0	TP1	Tuesday, August 1, 2023	488066.80	583679.17	488067.75	583679.58	488068.23	583678.52	488067.28	583678.09	178.85	178.83	178.74	178.83
Ingveldarstaðir	254	0	TP1		490061.33	583018.48	490062.24	583018.03	490061.82	583017.14	490060.90	583017.56	147.12	147.03	147.04	147.11
Kálfsstaðir	257	0	TT2	Monday, July 31, 2023	492403.75	582311.92	492404.74	582311.51	492403.85	582309.06	492402.85	582309.40	159.22	158.74	158.72	159.11
Kjarvalsstaðir	256	0	TP1	Monday, July 31, 2023	491296.14	582983.52	491296.96	582984.02	491297.44	582983.19	491296.64	582982.65	142.98	142.93	142.85	142.86
Laufskálaholt	264	2	TP3	Monday, August 7, 2023	490984.45	584370.98	490985.54	584371.30	490985.83	584370.46	490984.86	584370.20	120.94	120.96	120.90	120.97
Nautabú	255	0	TP1		490549.42	582499.23	490550.33	582499.72	490550.90	582498.85	490549.91	582498.25	172.92	172.77	172.81	172.92
Skúfsstaðir	253	0	TP1	Monday, July 10, 2023	490027.75	583276.20	490028.60	583276.77	490029.17	583275.89	490028.58	583275.33	138.19	138.15	138.06	138.20
Skúfsstaðir	253	0	TP2	Monday, July 10, 2023	489863.33	583157.22	489864.30	583157.46	489864.63	583156.58	489863.63	583156.38	145.52	145.46	145.42	145.46
Viðvík	274	0	TP1	Monday, August 7, 2023	487244.17	585492.07	487245.03	585492.34	487245.38	585491.41	487244.44	585491.02	101.32	101.15	101.03	101.32

Table 3. Context list

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Brekkukot	0	263	TP1	101	Root Mat	Root map		200								
Brekkukot	0	263	TP1	201	Turf	Turf	1766	202								
Brekkukot	0	263	TP1	202	Aeolian Deposit	Aeolian deposit	201	203	51	55	47	48				
Brekkukot	0	263	TP1	200	Turf	Turf under root mat	101	1766								
Brekkukot	0	263	TP1	203	Midden	Midden on top of 1104	202	205	61	62	55	54				
Brekkukot	0	263	TP1	204	Tephra	H1 tephra	203	205	59	64	56	58				
Brekkukot	0	263	TP1	205	Low Density Cultural Deposit	Ldc under1104	204	206								
Brekkukot	0	263	TP1	206	Low Density Cultural Deposit	LDC under H1	205	207	67	68	64	61				
Brekkukot	0	263	TP1	207	Midden	Lower midden	206	208	76	79	74	71				
Brekkukot	0	263	TP1	208	Low Density Cultural Deposit	LDC	207	209	86	99	91	92				
Brekkukot	0	263	TP1	209	Upcast	Upcast	208	210	107	114	105	101				
Brekkukot	0	263	TP1	210	Tephra	H3	209	LOE								
Brekkukot	0	263	TP1	211	Pit	Pit with charcoal	200	1766		65				83		
Efri-Ás	0	264	TP1	101	Root Mat	Root mat		131								
Efri-Ás	0	264	TP1	131	Disturbed	Disturbed	101	133								
Efri-Ás	0	264	TP1	132	Pit	Pit	101	133		28				80		
Efri-Ás	0	264	TP1	133	Midden	Midden	132	134	62	80	61	61	80	81	82	80
Efri-Ás	0	264	TP1	134	Turf	Turf	133	135	80	81	82	80	84	85	86	85
Efri-Ás	0	264	TP1	135	Midden	Midden	134	136	84	85	86	85	111	111	109	113

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Efri-Ás	0	264	TP1	136	Tephra	1300	135	137	111	111	109	113	113	113	111	115
Efri-Ás	0	264	TP1	137	Turf	Turf	136	138	113	113	111	115	123	121	120	130
Efri-Ás	0	264	TP1	138	Low Density Cultural Deposit	LDC	137	139	123	121	120	130	132	132	129	135
Efri-Ás	0	264	TP1	139	Low Density Cultural Deposit	LDC	138	140	132	132	129	135	159	142	144	161
Efri-Ás	0	264	TP1	140	Aeolian Deposit	Aolean	139	LOE	159	142	144	161	159	142	144	161
Efri-Ás	0	264	TP2	101	Root Mat	Root mat		151								
Efri-Ás	0	264	TP2	151	Disturbed	Disturbed	101	160								
Efri-Ás	0	264	TP2	152	Midden	Midden	160	153								
Efri-Ás	0	264	TP2	153	Tephra	1104	152	154	83	85	78	71	84	86	79	72
Efri-Ás	0	264	TP2	154	Midden	Midden	153	159	84	86	79	72	96	102	93	86
Efri-Ás	0	264	TP2	155	Midden	LDC	?	?	96	102	93	86	102	113	102	90
Efri-Ás	0	264	TP2	156	Midden	Midden	161	157	102	113	102	90	124	130	115	114
Efri-Ás	0	264	TP2	157	Tephra	LNL	156	158	124	130	115	114	125	132	117	122
Efri-Ás	0	264	TP2	158	Aeolian Deposit	Aeolian	157	LOE	125	132	117	122	125	132	117	122
Efri-Ás	0	264	TP2	159	Tephra	1000	154	161		110				110		
Efri-Ás	0	264	TP2	160	Low Density Cultural Deposit	LDC under 1300	1300	152								
Efri-Ás	0	264	TP2	1300	Tephra	Tephra	151	160								
Efri-Ás	0	264	TP2	161	Low Density Cultural Deposit	LDC below 1000--see 155	159	156								
Garðakot	0	252	TP1	101	Root Mat	Root mat		191								
Garðakot	0	252	TP1	191	Disturbed	Disturbed	101	192	13	17	20	19	16	18	25	25
Garðakot	0	252	TP1	192	Low Density Cultural Deposit	LDC	191	193	16	18	25	25	29	28	44	40
Garðakot	0	252	TP1	193	Midden	Midden	192	194	29	28	44	40	30	43	51	40
Garðakot	0	252	TP1	194	Tephra	Tephra	193	195	30	43	51	40	30	43	51	40

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Garðakot	0	252	TP1	195	Midden	Midden	194	196	30	43	51	40	40	51	57	51
Garðakot	0	252	TP1	196	Tephra	1300	195	197	40	51	57	51	41	52	58	52
Garðakot	0	252	TP1	197	Midden	LDC/Midden	196	198	41	52	58	52	75	89	94	87
Garðakot	0	252	TP1	198	Tephra	1104	197	200	75	89	94	87	75	91	97	89
Garðakot	0	252	TP1	199	Pit	Pit	197	200			86	86			104	104
Garðakot	0	252	TP1	200	Low Density Cultural Deposit	Ldc	198	201	75	91	97	89				
Garðakot	0	252	TP1	201	Midden	Midden	200	202		97	107			99	109	
Garðakot	0	252	TP1	202	Tephra	H3	201	LOE	87	95	109	106				
Hringver	0	290	TP1	101	Root Mat	Root mat		271								
Hringver	0	290	TP1	271	Disturbed	Disturbed	101	272								
Hringver	0	290	TP1	272	Midden	Midden above 1300	271	273								
Hringver	0	290	TP1	273	Tephra	1300 tephra	272	275	55		62	60				
Hringver	0	290	TP1	274	Pit	Pit through1300 in Northwest	272	275		55				60		
Hringver	0	290	TP1	275	Midden	Midden below 1300	273	276	57	61	63	63	81	80	85	86
Hringver	0	290	TP1	276	Tephra	1104	275	277	81	80	85	86	83	82	87	88
Hringver	0	290	TP1	277	Midden	Midden	276	278	83	82	87	88	93	90	96	103
Hringver	0	290	TP1	278	Tephra	Landnám	280	279	93	90	96	103				
Hringver	0	290	TP1	279	Tephra	H3	277	LOE								
Hringver	0	290	TP1	280	Aeolian Deposit	Aeolian	281	278								
Hringver	0	290	TP1													
Hringver	0	290	TP1													
Hringver	0	290	TP1	281	Tephra	1000	277	280								
Ingveldarstaðir	0	254	TP1	101	Root Mat	Root mat		102								

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Ingveldarstaðir	0	254	TP1	102	Low Density Cultural Deposit	LDC	101	104	17	16	18	19	23	21	21	20
Ingveldarstaðir	0	254	TP1	103	Tephra	1300--not found in profile			23	21	21	20	23	21	21	20
Ingveldarstaðir	0	254	TP1	104	Midden	Midden/LDC	102	106	23	21	21	20	25	24	24	41
Ingveldarstaðir	0	254	TP1	105	Tephra	1104--determined in turf			25	24	24	41	27	26	25	42
Ingveldarstaðir	0	254	TP1	106	Mixed Turf	Turf containing midden and 1104	104	1000	27	26	25	26	35	37	36	42
Ingveldarstaðir	0	254	TP1	107	Aeolian Deposit	Natural	1000	Natural	35	37	36	42	46	47	60	53
Kálfsstaðir	0	257	TT2	101	Root Mat	Root mat		231	0	0	0	0	17	14	22	23
Kálfsstaðir	0	257	TT2	231	Disturbed	Mixed layer from field levelling	101	232	5	5	5	5	12	17	14	15
Kálfsstaðir	0	257	TT2	232	Mixed Turf	Fill layer above 1104	231	233			14	15			30	32
Kálfsstaðir	0	257	TT2				233	236	25	26	33	35				
Kálfsstaðir	0	257	TT2	238	Fill	Leveling layer	235	239			33	35				
Kálfsstaðir	0	257	TT2	233		Aeolian										
Kálfsstaðir	0	257	TT2	234		H1104	233	235								
Kálfsstaðir	0	257	TT2	235		Aeolian										
Kálfsstaðir	0	257	TT2	236	Grave	Gravefill	235	237								
Kálfsstaðir	0	257	TT2	237	Grave	Gravecut	235	238								
Kálfsstaðir	0	257	TT2													
Kálfsstaðir	0	257	TT2	239	Upcast	Disturbed	238	239								
Kálfsstaðir	0	257	TT2	240	Wall	Cemetery wall	231	239								
Kálfsstaðir	0	257	TT2	241	Floor	Floor	239	LOE								

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Kjarvalsstaðir	0	256	TP1	101	Root Mat	Root Mat		251	0	0	0	0	16	13	13	15
Kjarvalsstaðir	0	256	TP1	251	Disturbed	Disturbed	101	252	16	13	13	15	26	18	16	26
Kjarvalsstaðir	0	256	TP1	252	Midden	Midden above 1300	251	253	26	18	16	26	36	26	26	39
Kjarvalsstaðir	0	256	TP1	253	Midden	Midden above	252	254	36	26	26	39	52	43	41	52
Kjarvalsstaðir	0	256	TP1	254	Tephra	1300	253	255	52	43	41	52	54	56	46	56
Kjarvalsstaðir	0	256	TP1	255	Midden	Midden below 1300	254	256	54	44	46	52	78	65	67	75
Kjarvalsstaðir	0	256	TP1	256	Tephra	1104	255	257	78	65	67	75	81	70	67	81
Kjarvalsstaðir	0	256	TP1	257	Midden	Midden under 1104	256	LNS	81	70	67	81	90	71	72	85
Kjarvalsstaðir	0	256	TP1	258		End of Excavation	LNS	LOE	90	71	72	85	95	74	79	88
Kjarvalsstaðir	0	256	TP1	259	Tephra	1766	101	251	12			15				
Laufskálaholt	2	264	TP3	101	Root Mat	Root mat		291	0	0	0	0	17	10	15	12
Laufskálaholt	2	264	TP3	291	Disturbed	disturbed	101	292	17	12	15	10	22	18	13	20
Laufskálaholt	2	264	TP3	292	Aeolian Deposit	Aeolian	291	293	22	18	13	20	22	18	13	20
Laufskálaholt	2	264	TP3	293	Tephra	H1104	292	294	22	18	13	20	29	17	23	21
Laufskálaholt	2	264	TP3	294	Midden	Midden below 1104	291	295	29	17	23	21	31	19	25	23
Laufskálaholt	2	264	TP3	295	Turf	Turf	294	297	31	19	25	23				
Laufskálaholt	2	264	TP3	296	Tephra	H3	295	LNS								
Laufskálaholt	2	264	TP3	297	Floor	Floor	295	298								
Laufskálaholt	2	264	TP3	298	Aeolian Deposit	Disturbed, Aeolian	297	LOE								
Nautabú	0	255	TP1	101	Root Mat	Root Mat		141								
Nautabú	0	255	TP1	141	Disturbed	Disturbed	101	1300	11	12	16	16				

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Nautabú	0	255	TP1	142	Midden	Midden under 1300	1300	1104	17	22	23	24				
Nautabú	0	255	TP1	143	Midden	Midden below 1104	1104	144	51	54	55	57				
Nautabú	0	255	TP1	144	Turf	Burnt Turf	143	145	58	62	67	68				
Nautabú	0	255	TP1	145	Midden	Midden under burnt turf	144	146	75	80	89	82	85	94	98	92
Nautabú	0	255	TP1	146		Bottom midden. 110 cm bags from profile wall										
Nautabú	0	255	TP1													
Nautabú	0	255	TP1	147	Mixed Turf	Disturbed upcast with turf	145	LOE								
Skúfsstaðir	0	253	TP1	101	Root Mat	Root mat		102	0	0	0	0	14	8	10	10
Skúfsstaðir	0	253	TP1	102	Disturbed	Disturbed	101	103	14	8	10	10	20	18	26	30
Skúfsstaðir	0	253	TP1	103	Midden	Midden	102	104	20	18	27	30	36	35	41	40
Skúfsstaðir	0	253	TP2	101	Root Mat	Root Mat		111					15	12	14	14
Skúfsstaðir	0	253	TP2	111	Aeolian Deposit	Aeolian Deposit	101	112	15	12	14	14	19	16	20	21
Skúfsstaðir	0	253	TP2	112	Mixed Turf	Turf layer	111	113	19	16	20	21	25	27	26	37
Skúfsstaðir	0	253	TP1	104	Midden	Midden	103	105	36	35	41	40	41	36	42	48
Skúfsstaðir	0	253	TP1	105	Tephra	Unknown tephra	104	106	41	36	42	48	41	38	44	50
Skúfsstaðir	0	253	TP2	113	Midden	Charcoal midden	112	116	25	27	26	37	46	45	40	53
Skúfsstaðir	0	253	TP1	106	Midden	Midden	105	107	41	38	44	50	64	55	57	63
Skúfsstaðir	0	253	TP2	114	Aeolian Deposit	Aeolian deposit	113	LOE	46	45	40	53	56	54	55	60
Skúfsstaðir	0	253	TP1	107	Low Density Cultural Deposit	Low density cultural	106	108	64	55	57	63	64	55	66	69

Place Name	Place #	Farm #	Ex	Context	CLASS	Description	Strat above	Strat below	NW Open	NE Open	SE Open	SW Open	Nw Close	NE Close	SE Close	SW Close
Skúfsstaðir	0	253	TP1	108	Tephra	Mystery tephra--changed to 1300	107	109	64	55	66	69	64	55	67	70
Skúfsstaðir	0	253	TP1	109	Midden	Midden	108	110	64	55	67	70	70	60	74	77
Skúfsstaðir	0	253	TP1	110	Tephra	1104-determined to be in turf	109	111	70	60	74	77	71	61	75	78
Skúfsstaðir	0	253	TP1	111	Midden	Midden--changed to LDC	110	112	71	61	75	78	74	65	83	83
Skúfsstaðir	0	253	TP1	112	Tephra	1104	111	113	74	65	83	83	74	65	83	86
Skúfsstaðir	0	253	TP1	113	Low Density Cultural Deposit	LDC	112	114	74	65	83	86	75	67	86	82
Skúfsstaðir	0	253	TP1	114	Midden	Midden	113	115	75	67	83	86	88	83	89	95
Skúfsstaðir	0	253	TP1	115	Tephra	1000	114	116	88	83	89	95	90	83	90	96
Skúfsstaðir	0	253	TP1	116	Low Density Cultural Deposit	LDC	115	117	90	83	90	96	93	84	91	97
Skúfsstaðir	0	253	TP1	117	Midden	Midden	116	119	93	84	91	97	96			
Skúfsstaðir	0	253	TP1	118	Cut	Cut	116	117								
Skúfsstaðir	0	253	TP1	119	Turf	Turf	117	120	97				110			
Skúfsstaðir	0	253	TP1	120		Below Turf-combined with 119	119	121	110							
Skúfsstaðir	0	253	TP1	121	Hearth	Fire Pit	120	LOE	110							
Skúfsstaðir	0	253	TP2	115	Aeolian Deposit	Aeolian pre-1104	112	113								
Skúfsstaðir	0	253	TP2	116	Aeolian Deposit	Aeolian post LNS	113	LNS								

Table 4. Sample list.

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Skúfsstaðir	253	0	TP2	112	1	Flotation	Sample of possible mixed turf layer.	Mixed Turf	1104-1766	9.5
Skúfsstaðir	253	0	TP2	113	2	Flotation	Top of charcoal midden	Midden	870-1104	10
Skúfsstaðir	253	0	TP2	113	3	Bone, Animal	Bones from throughout charcoal midden	Midden	870-1104	
Skúfsstaðir	253	0	TP2	113	4	Flotation	Bottom of charcoal midden	Midden	870-1104	9.5
Skúfsstaðir	253	0	TP1	106	8	Bone, Animal	Animal bones found in the midden	Mid den	1104-1766	
Skúfsstaðir	253	0	TP2	114	5	Flotation	Top of context 114	Aeolian Deposit		10.5
Skúfsstaðir	253	0	TP2	114	6	Bone, Animal	Bones from ctx 114	Aeolian Deposit		
Skúfsstaðir	253	0	TP1	109	12	Flotation		Midden	1104-1766	8
Skúfsstaðir	253	0	TP1	108	11	Flotation		Tephra	1104-1766	1.5
Skúfsstaðir	253	0	TP1	109	15	Bone, Animal		Midden	1104-1766	
Skúfsstaðir	253	0	TP2	101	7	Tephra	Mystery tephra from profile (west wall)	Root Mat	1766-Present	
Skúfsstaðir	253	0	TP1	111	17	Flotation		Midden	1104-1766	11.5

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Skúfsstaðir	253	0	TP1	112	18	Tephra		Tephra	1104-1766	4
Skúfsstaðir	253	0	TP1	113	19	Flotation	Top of context 113	Low Density Cultural Deposit	870-1104	6
Skúfsstaðir	253	0	TP1	111	20	Bone, Animal		Midden	1104-1766	
Skúfsstaðir	253	0	TP1	114	21	Flotation		Midden	870-1104	6
Skúfsstaðir	253	0	TP1	114	23	Flotation		Midden	870-1104	8
Skúfsstaðir	253	0	TP1	114	24	Rocks		Midden	870-1104	
Skúfsstaðir	253	0	TP1	115	25	Flotation		Tephra	870-1104	5
Skúfsstaðir	253	0	TP1	116	26	Bone, Animal		Low Density Cultural Deposit	870-1104	
Skúfsstaðir	253	0	TP1	116	27	Rocks	Changed to Find #2	Low Density Cultural Deposit	870-1104	
Skúfsstaðir	253	0	TP1	117	29	Bone, Animal		Midden	870-1104	
Skúfsstaðir	253	0	TP1	117	28	Flotation		Midden	870-1104	9
Skúfsstaðir	253	0	TP1	118	30	Flotation		Cut	870-1104	4
Skúfsstaðir	253	0	TP1	118	31	Bone, Animal		Cut	870-1104	

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Skúfsstaðir	253	0	TP1	119	32	Flotation	Mixed turf and some cultural soil	Turf	870-1104	4
Skúfsstaðir	253	0	TP1	120	33	Bone, Animal				
Skúfsstaðir	253	0	TP1	121	35	Flotation		Hearth	870-1104	7
Skúfsstaðir	253	0	TP1	121	36	Bone, Animal		Hearth	870-1104	
Skúfsstaðir	253	0	TP1	121	37	Tephra	Should be 1300	Hearth	870-1104	
Skúfsstaðir	253	0	TP1	121	38	Tephra	Should be 1000	Hearth	870-1104	
Efri-Ás	264	0	TP1	135	2	Flotation		Midden	1104-1766	10
Efri-Ás	264	0	TP1	135	3	Flotation		Midden	1104-1766	10
Efri-Ás	264	0	TP1	135	6	Flotation		Midden	1104-1766	10
Efri-Ás	264	0	TP1	136	8	Tephra		Tephra	1104-1766	
Efri-Ás	264	0	TP1	137	9	Flotation		Turf	1104-1766	10.5
Efri-Ás	264	0	TP1	138	10	Flotation		Low Density Cultural Deposit	1104-1766	10
Efri-Ás	264	0	TP1	138	11	Bone, Animal	Burnt bone	Low Density Cultural Deposit	1104-1766	

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Efri-Ás	264	0	TP1	139	12	Flotation		Low Density Cultural Deposit	1104-1766	10
Efri-Ás	264	0	TP1	139	13	Flotation		Low Density Cultural Deposit	1104-1766	10
Efri-Ás	264	0	TP1	139	14	Bone, Animal	Calcined	Low Density Cultural Deposit	1104-1766	
Nautabú	255	0	TP1	142	1	Flotation	Float sample for top of context 142	Midden	1104-1766	11
Nautabú	255	0	TP1	142	2	Bone, Animal	Animal bone from context 142	Midden	1104-1766	
Nautabú	255	0	TP1	142	3	Flotation	Float sample for middle on ctx 142	Midden	1104-1766	11
Nautabú	255	0	TP1	142	4	Flotation	Float sample for Of ctx 142	Midden	1104-1766	9.5
Efri-Ás	264	0	TP2	152				Midden	1104-1766	
Efri-Ás	264	0	TP2	153	1	Flotation		Tephra	1104-1766	8.5
Efri-Ás	264	0	TP2	154	2	Flotation		Midden	870-1104	10
Nautabú	255	0	TP1	143	5	Bone, Animal	Animal bone from 143	Midden	870-1104	
Nautabú	255	0	TP1	144	6	Flotation	Top of ctx 144	Turf	870-1104	7.5
Efri-Ás	264	0	TP2	154	3	Bone, Animal		Midden	870-1104	

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Efri-Ás	264	0	TP2	154	4	Flotation	CMT Sep 13 2023: added 161 to sequence (LDC below 1000). This sample is probably from that.	Midden	870-1104	10
Nautabú	255	0	TP1	144	7	Flotation	Burnt turf at the bottom of 144	Turf	870-1104	7.5
Efri-Ás	264	0	TP2	155	5	Flotation		Midden		10
Efri-Ás	264	0	TP2	155	6	Flotation		Midden		5
Nautabú	255	0	TP1	145	8	Flotation	Midden under burnt turf	Midden	870-1104	10.5
Efri-Ás	264	0	TP2	155	7	Bone, Animal		Midden		
Efri-Ás	264	0	TP2	156	11	Flotation		Midden	870-1104	10
Efri-Ás	264	0	TP2	155	8	Bone, Animal		Midden		
Efri-Ás	264	0	TP2	155	9	Rocks	Changed to Find	Midden		
Efri-Ás	264	0	TP2	155	10		Seashell	Midden		
Efri-Ás	264	0	TP2	156	12	Flotation		Midden	870-1104	9.5
Efri-Ás	264	0	TP2	156	13	Bone, Animal		Midden	870-1104	
Ingveldarstaðir	254	0	TP1	102	1	Flotation		Low Density Cultural Deposit	1104-1766	7.5
Efri-Ás	264	0	TP2	156	14	Flotation		Midden	870-1104	8
Efri-Ás	264	0	TP2	157	15	Flotation		Tephra	870-1104	10

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Efri-Ás	264	0	TP2	156				Midden	870-1104	
Ingveldar-staðir	254	0	TP1	103	2	Flotation	Sample of 1300 tephra and midden below	Tephra		2.5
Ingveldar-staðir	254	0	TP1	104				Midden	1104-1766	
Ingveldar-staðir	254	0	TP1	105	3	Flotation	1104 layer	Tephra	1104-1766	2.5
Ingveldar-staðir	254	0	TP1	106	4	Flotation	Midden below 1104	Mixed Turf	1104-1766	8.5
Garðakot	252	0	TP1	194	1	Flotation		Tephra	1104-1766	2
Garðakot	252	0	TP1	195	2	Flotation		Midden	1104-1766	5
Garðakot	252	0	TP1	195	4	Metal	Changed to Find #3	Midden	1104-1766	
Garðakot	252	0	TP1	196	5	Flotation		Tephra	1104-1766	7
Garðakot	252	0	TP1	197	6	Flotation		Midden	1104-1766	6
Garðakot	252	0	TP1	197	7	Flotation	Middle of 197	Midden	1104-1766	6.5
Garðakot	252	0	TP1	197	9	Bone, Animal		Midden	1104-1766	
Garðakot	252	0	TP1	197	10	Slag		Midden	1104-1766	
Garðakot	252	0	TP1	197	11	Flotation		Midden	1104-1766	5.5

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Garðakot	252	0	TP1	197				Midden	1104-1766	
Garðakot	252	0	TP1	198	12	Flotation		Tephra	1104-1766	3
Garðakot	252	0	TP1	199	13	Flotation	From inside the pit under the stones	Pit	1104-1766	2
Garðakot	252	0	TP1	199	14	Bone, Animal		Pit	1104-1766	
Kjarvalsstaðir	256	0	TP1	254	1	Flotation	1300 tephra	Tephra	1104-1766	6
Kjarvalsstaðir	256	0	TP1	255	2	Flotation	Top of ctx 255 (top of midden below 1300)	Midden	1104-1766	6
Kjarvalsstaðir	256	0	TP1	255	3	Flotation	Middle of ctx 255 (midden below 1300)	Midden	1104-1766	6
Kjarvalsstaðir	256	0	TP1	255	4	Bone, Animal	Faunal from ctx 255	Midden	1104-1766	
Kjarvalsstaðir	256	0	TP1	256	5	Flotation	1104 tephra	Tephra	1104-1766	4
Kjarvalsstaðir	256	0	TP1	257	6	Flotation	Top of ctx 257 (midden below 1104)	Midden	870-1104	6
Kjarvalsstaðir	256	0	TP1	257	7	Bone, Animal	Animal bone from ctx 257	Midden	870-1104	
Hringver	290	0	TP1	273	1	Flotation	Tephra	Tephra	1104-1766	7
Hringver	290	0	TP1	273	2	Bone, Animal		Tephra	1104-1766	
Hringver	290	0	TP1	275	3	Flotation	Top of sample	Midden	1104-1766	7

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Hringver	290	0	TP1	275	4	Bone, Animal		Midden	1104-1766	
Hringver	290	0	TP1	275	5	Flotation	Mid context - 70 cm	Midden	1104-1766	6
Kjarvalsstaðir	256	0	TP1	258						
Hringver	290	0	TP1	276	6	Flotation		Tephra	1104-1766	5
Hringver	290	0	TP1	276				Tephra	1104-1766	
Hringver	290	0	TP1	277	7	Bone, Animal		Midden	870-1104	
Hringver	290	0	TP1	277	8	Flotation	Top of context	Midden	870-1104	7
Hringver	290	0	TP1	277	9	Flotation	Middle of context; about 5-7 below 1104	Midden	870-1104	7
Hringver	290	0	TP1	278	10	Flotation		Tephra	870-1104	3
Garðakot	252	0	TP1	200	15	Flotation	LDC below 1104	Low Density Cultural Deposit	870-1104	7.5
Garðakot	252	0	TP1	201	17	Flotation	Midden unden1104	Midden	870-1104	2
Laufskálaholt	264	2	TP3	293	1	Flotation		Tephra	1104-1766	6
Laufskálaholt	264	2	TP3	294	2	Flotation		Midden	870-1104	8
Brekkukot	263	0	TP1	202	1	Flotation	Top of aeolian	Aeolian Deposit	1104-1766	8

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Brekkukot	263	0	TP1	204	3	Flotation		Tephra	1104-1766	8
Brekkukot	263	0	TP1	205	4	Bone, Animal	Screen recovery	Low Density Cultural Deposit	870-1104	
Brekkukot	263	0	TP1	203	2	Flotation		Midden	1104-1766	8
Brekkukot	263	0	TP1	206	5	Flotation		Low Density Cultural Deposit	870-1104	8
Brekkukot	263	0	TP1	206	6	Bone, Animal		Low Density Cultural Deposit	870-1104	
Brekkukot	263	0	TP1	207	7	Flotation	Top of context	Midden	870-1104	7.5
Brekkukot	263	0	TP1	207	8	Bone, Animal		Midden	870-1104	
Brekkukot	263	0	TP1	207	9	Flotation	Mid context	Midden	870-1104	7
Brekkukot	263	0	TP1	207	10	Flotation	Charcoal deposit in NE	Midden	870-1104	6
Brekkukot	263	0	TP1	207	11	Flotation	Bottom of context	Midden	870-1104	6
Brekkukot	263	0	TP1	208	12	Flotation	Top of LDC under 1104	Low Density Cultural Deposit	870-1104	8
Brekkukot	263	0	TP1	208	13	Bone, Animal	Bones from context 208	Low Density Cultural Deposit	870-1104	

Place Name	Farm #	Place #	Excavation	Context	Sample	Type	Description	Deposit Class	Date Range	Volume (L)
Laufskálaholt	264	2	TP3	294	3	Bone, Animal		Midden	870-1104	
Laufskálaholt	264	2	TP3	294	4	Flotation		Midden	870-1104	6
Laufskálaholt	264	2	TP3	294	5	Bone, Animal		Midden	870-1104	
Laufskálaholt	264	2	TP3	294	6	Flotation		Midden	870-1104	8
Brekkukot	263	0	TP1	208	14	Flotation	Bottom of LDC under 1104	Low Density Cultural Deposit	870-1104	8
Brekkukot	263	0	TP1	209	15	Flotation		Upcast	870-1104	6
Brekkukot	263	0	TP1	209	16	Bone, Animal	Animal bones from context 209	Upcast	870-1104	
Efri-Ás	264	0	TP2	156	15	Slag		Midden	870-1104	
Nautabú	255	0	TP1	146	9	Flotation	Pulled from 110 NE wall (profile			2

Table 5. Find list

National Register Number	Place	Farm	Excavation	Context	Find	Retrieval	Material Type	Material Subtype	Object type	Description	ÞJMS Artifact Number
2023-47-487	Laufskálaholt	Efri-Ás	TP3	294	1	Screen	Stone		Spindal whorl	Holabilta stone	487
2023-47-486	Efri-Ás	Efri-Ás	TP2	155	2	Screen	Stone			Maybe part of a bowl	486
2023-47-485	Efri-Ás	Efri-Ás	TP1	131	1	Point	Bone			Awl	485
2023-47-484	Brekkukot	Brekkukot	TP1	201	2	Hand	Clay		Pipe	Pipestem	484
2023-47-483	Brekkukot	Brekkukot	TP1	201	1	Hand	Glass			Bottle lip w string rim, possibly datable	483
2023-47-482	Kálfsstaðir	Kálfsstaðir	TT2	236	2	Hand	Iron		Point		482
2023-47-481	Kálfsstaðir	Kálfsstaðir	TT2	232	1	Hand	Bone			Whalebone	481
2023-47-480	Ingveldarstaðir	Ingveldarstaðir	TP1	103	1	Hand	Stone			Jasper	480
2023-47-479	Ingveldarstaðir	Ingveldarstaðir	TP1	104	2	Screen	Iron		Hook		479

National Register Number	Place	Farm	Excavation	Context	Find	Retrieval	Material Type	Material Subtype	Object type	Description	ÞJMS Artifact Number
2023-47-478	Skúfsstaðir	Skúfsstaðir	TP1	116	2	Screen	Stone			Smooth stone	478
2023-47-477	Skúfsstaðir	Skúfsstaðir	TP1	114	1	Screen	Stone	Flint		Strike a light	477
2023-47-476	Garðakot	Garðakot	TP1	195	3	Screen	Iron		Rivet	Rivit	476
2023-47-475	Garðakot	Garðakot	TP1	197	2	Screen	Stone			Burned cracked polished stone	475
2023-47-474	Garðakot	Garðakot	TP1	197	1	Screen	Stone		loom weight	Burned broken loom weight	474

Appendix C – 2023 Excavation Harris Matrices

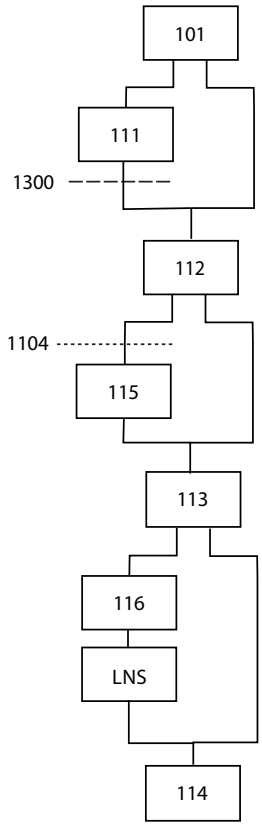

Figure 60. Harris Matrix of Skúfsstaðir Test Pit 2.

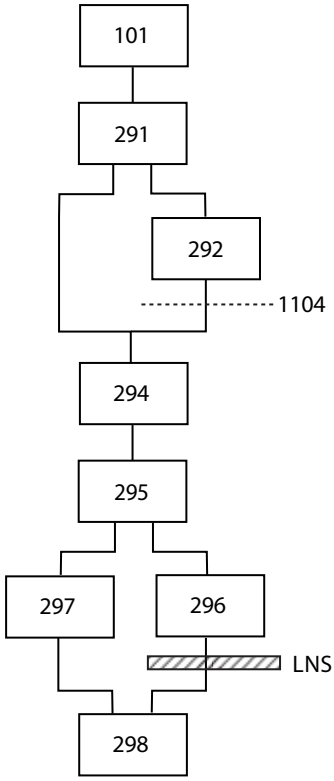

Figure 58. Harris Matrix of Laufskálaholt (Efri-Ás Place 2) Test Pit 3.

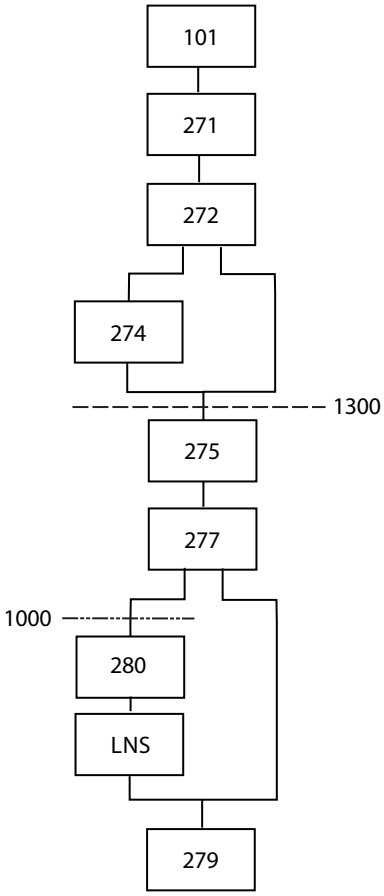

Figure 59. Harris Matrix of Hringver Test Pit 1.

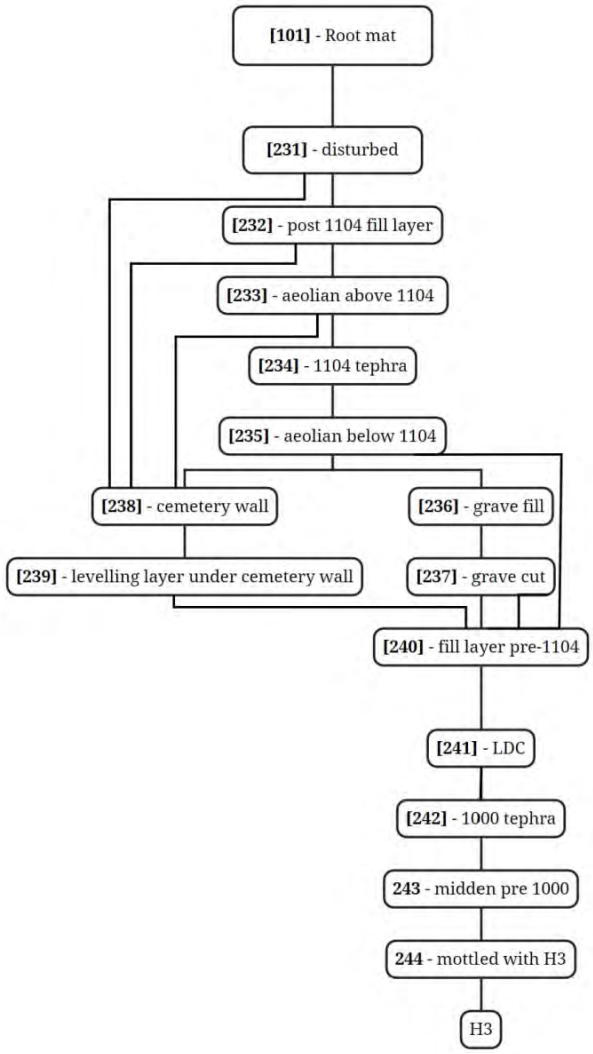

Figure 61. Harris Matrix of Kálfsstaðir test trench 2.

Appendix E – 2023 Coring Data

The coring data used in this report is permanently archived and publicly available from http://www.fiskecenter.umb.edu/HASP/HASP_2023_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.

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.

Place_Name: Most detailed name of the farm or subfarm the core is from.

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_Collected: 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

Core: Sequential core 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

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

Core: Sequential core 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

General Coring Results

Broad trends in the general coring results suggest that deposits without cultural materials are much shallower (Table 9). For non-farm mound cores, the average depths of tephras recovered are sequential; for farm mound cores, they are sequential except for H3/H4 and the LNL, which have higher depth averages than Vj~1000, but this is probably a function of farm mound accumulation. At Hólakot, which has quite shallow deposits, H3/H4 is at an average depth of 51cm, while at Brekkukot it was found on average at 91cm bgs. In general, the difference of tephra depths between farm mound and non-farm mound cores increases with the age of the tephra, so the difference in end depths is 10.5cm for H1300 and 24cm for H1104. The exception is Vj~1000, which has a greater depth difference than the LNL and H3/H4 (Table 9).

For cores with cultural material (designated as farm mound cores), the H1766 appears very infrequently (only 2% of the time) at an average depth of 25cm bgs. The H1300 tephra is found in 21% of cores at an average depth of 43cm bgs, while the H1104 is the most commonly found tephra (in 39% of cores) at an average depth of 39cm bgs. For the H1104 tephra, the difference in recovery between cores with cultural materials (39% recovery) and non-cultural cores (14% recovery) was larger than any other tephra (Table 9). Vj~1000 was found in 6% of farm mound cores at an average depth of 76cm, the LNL in 13% at a depth of 72cm, and H3/H4 in 29% of cores at an average depth of 71cm.

For cores without cultural material (designated as non-farm mound cores), tephra retrieval was lower for every individual tephra, but most dramatically for the LNL, Vj~1000, H1104, and H1300. The H1766 appears in 2% of cores at an average depth of 10cm. H1300 appears in 6% of cores at an average depth of 29cm, while H1104 is in 15% of cores at an average depth of 53cm; for cores without cultural deposits, H1104 was no longer the most frequently found tephra (Table 9). Vj~1000 was found in 1% of cores at an average depth of 34cm, the LNL in 7% at a depth of 38cm, and H3/H4 in 26% of cores at an average depth of 400cm. For non-farm mound cores, H3/H4 was the most commonly found; this was also the case for farms surveyed in 2022.

Compared with farms surveyed in past years, tephras from farm mound cores appear deeper on average for farms surveyed in 2023, indicating greater cultural accumulation for the surveyed area (Zoëga and Steinberg, 2023). For non-cultural cores, tephra depths are broadly comparable with 2022 data, with 2022 farms being slightly deeper; this indicates soil deposition across the valley was broadly comparable.

Average soil deposition rates for 2023 farms were calculated based on non-farm mound cores because they are more likely to represent deposition without interference from cultural materials. However, since tephra preservation was much worse for non-farm mound cores, the averages are a bit less robust; deposition was only calculated between major tephras that were most commonly recovered (H3/H4, H1104, H1300, and H1766). The depth of H3/H4 was taken as a proxy for soil depth at Landnám because the LNL is so rarely recovered; since there was likely some prehistoric erosion, this number should be treated as the maximum possible amount of deposition. The estimated deposition for 1766-present is also likely an overestimate because it includes root mat and other organic material. Averages were also generated for farms surveyed in 2022, using the same protocol, to have a basis for comparison.

For farms surveyed in 2023, all periods except 1104-1300 had quite similar average soil deposition, ranging from 3.71 to 4.06 cm/100 years (Table 6). In contrast, the average soil deposition from 1104-1300 is dramatically lower, at .2cm/100 years. This number is so small because of cases like Brekkukot and Laufskálaholt, where H1300 was only recorded once and was at a much lower depth than H1104; the resulting negative deposition rate, which is likely only a function of tephra retrieval, makes the amount of average deposition across all farms much lower. With Brekkukot and Laufskálaholt removed, the average deposition from 1104-1300 becomes 1.79cm/100 years (Table 7). This number is still lower than other time periods but is more in line with the average from 2022 farms (Table 8).

Table 6. Average Soil Deposition for farms surveyed in 2023.

Time Period	Number of years	Difference between average depths of associated tephras (cm)	Deposition rate (cm/100 years)
877-1104	277	10.6	3.83
1104-1300	196	0.4	0.20
1300-1766	476	19.3	4.06
1766-2023	257	9.5	3.71

Table 7. Average Soil Deposition for 2023 farms excluding Brekkukot and Laufskálaholt.

Time Period	Number of years	Difference between average depths of associated tephras (cm)	Deposition rate (cm/100 years)
877-1104	277	10.3	3.73
1104-1300	196	3.5	1.79
1300-1766	476	17.0	3.56
1766-2023	257	10.3	4.00

Table 8. Average Soil Deposition for farms surveyed in 2022.

Time Period	Number of years	Difference between average depths of associated tephras (cm)	Deposition rate (cm/100 years)
877-1104	277	12.0	4.33
1104-1300	196	4.7	2.40
1300-1766	476	12.0	2.52
1766-2022	256	13.0	5.08

For both 2023 and 2022 farms, it appears that soil deposition is lowest from 1104-1300, and is lower than the preceding and succeeding period. This warrants further investigation to see if the lower value is mostly influenced by tephra retrieval rates or an indication of a real difference.

Table 9. Tephra identification counts, depths, and percentages in non-farm mound contexts, farm mound contexts, and the differences between the two for farms surveyed in 2023. Average depths for all sites are weighted by count and all depths are in cm.

Non-farm mound cores

			H3/H4			LNL			1000			1104			1300			1766		
Place Name	Count	Average End Depth	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%
Brekkukot	48	37.0	24	36.8	50.0%	6	50.3	12.5%	0		0.0%	3	24.0	6.3%	1	37.0	2.1%	0		0.0%
Efri-Ás	135	33.6	33	38.0	24.4%	3	36.5	2.2%	3	29.3	2.2%	26	27.6	19.3%	6	30.7	4.4%	1	11.3	0.7%
Garðakot	95	34.4	24	40.3	25.3%	4	40.8	4.2%	0		0.0%	6	40.8	6.3%	4	38.0	4.2%	0		0.0%
Hringver	137	35.1	45	36.9	32.8%	10	39.3	7.3%	2	29.5	1.5%	30	29.5	21.9%	17	25.8	12.4%	3	11.0	2.2%
Hólakot	74	35.9	29	37.8	39.2%	8	33.4	10.8%	1	30.0	1.4%	33	25.4	44.6%	4	22.3	5.4%	0		0.0%
Kjarvalsstaðir	143	31.5	33	43.3	23.1%	11	50.6	7.7%	1	51.0	0.7%	15	37.9	10.5%	4	31.5	2.8%	0		0.0%
Kálfsstaðir	57	58.0	18	58.8	31.6%	7	42.3	12.3%	0		0.0%	9	32.4	15.8%	1	30.0	1.8%	0		0.0%
Laufskálaholt	136	38.6	22	30.8	57.9%	10	27.0	26.3%	1	30.0	2.6%	6	19.7	15.8%	1	37.0	2.6%	1	5.0	2.6%
Nautabú	95	37.0	15	40.9	15.8%	4	24.5	4.2%	1	27.0	1.1%	9	34.6	9.5%	5	25.8	5.3%	2	15.5	2.1%
Skúfsstaðir	130	32.1	28	40.6	21.5%	8	42.6	6.2%	3	40.7	2.3%	15	25.0	11.5%	7	28.9	5.4%	12	10.5	9.2%
Viðvík	109	29.3	37	37.0	33.9%	10	35.6	9.2%	2	35.5	1.8%	20	26.6	18.3%	10	24.2	9.2%	1	6.0	0.9%
Ingveldarstaðir	123	45.4	23	37.1	18.7%	6	31.2	4.9%	0		0.0%	14	27.5	11.4%	13	15.3	10.6%	3	7.3	2.4%
Average/Total		*37.3*	*331*	*39.9*		*87*	*37.8*		*14*	*34.1*		*186*	*29.3*		*73*	*28.9*		*23*	*9.5*	

Farm mound cores

			H3/H4			LNL			1000			1104			1300			1766		
Place Name	Count	Average End Depth	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%	Count	Mean Depth	%
Brekkukot	42	79.9	12	91.4	28.6%	4	86.3	9.5%	1	79.0	2.4%	7	69.6	16.7%	1	41.0	2.4%	0		0.0%
Efri-Ás	82	91.4	17	70.8	20.7%	10	73.9	12.2%	7	102.0	8.5%	39	60.4	47.6%	6	45.3	7.3%	1	39.0	1.2%
Garðakot	55	68.8	15	78.1	27.3%	6	86.3	10.9%	1	100.0	1.8%	12	64.5	21.8%	13	55.4	23.6%	3	13.0	5.5%
Hringver	64	69.4	29	68.7	45.3%	7	83.1	10.9%	2	51.0	3.1%	34	60.9	53.1%	25	47.7	39.1%	0		0.0%
Hólakot	134	52.6	56	51.1	41.8%	28	50.9	20.9%	6	59.7	4.5%	79	31.5	59.0%	22	31.9	16.4%	0		0.0%
Kjarvalsstaðir	73	71.2	29	74.3	39.7%	20	67.1	27.4%	5	70.0	6.8%	30	57.0	41.1%	25	45.2	34.2%	2	38.5	2.7%
Kálfsstaðir	87	96.1	16	81.8	18.4%	7	81.4	8.0%	1	133.0	1.1%	43	64.9	49.4%	30	51.4	34.5%	2	22.0	2.3%
Laufskálaholt	23	65.2	10	56.4	43.5%	4	56.7	17.4%	0		0.0%	1	38.0	4.3%	0		0.0%	0		0.0%
Nautabú	84	95.0	8	85.9	9.5%	10	113.3	11.9%	10	68.4	11.9%	22	64.7	26.2%	23	49.4	27.4%	0		0.0%
Skúfsstaðir	107	72.0	21	60.2	19.6%	7	59.1	6.5%	13	53.8	12.1%	32	41.1	29.9%	12	38.6	11.2%	6	10.4	5.6%
Viðvík	103	82.3	20	66.4	19.4%	7	55.7	6.8%	8	70.3	7.8%	30	45.3	29.1%	12	39.3	11.7%	0		0.0%
Ingveldarstaðir	61	69.2	34	61.7	55.7%	11	50.2	18.0%	2	51.5	3.3%	25	40.9	41.0%	19	26.6	31.1%	0		0.0%
Average/Total			*267*	*70.6*		*121*	*72.0*		*56*	*76.2*		*354*	*53.2*		*188*	*42.9*		*14*	*24.6*	

Difference between farm mound and non-farm mound cores

			H3/H4			LNL			1000			1104			1300			1766		
Place Name	Total Cores	End 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
Brekkukot	90	43.0	36	54.7	-21.4%	10	35.9	-3.0%	1	79.0	2.4%	10	45.6	10.4%	2	4.0	0.3%	0	0.0	0.0%
Efri-Ás	217	57.8	50	32.7	-3.7%	13	37.4	10.0%	10	72.7	6.3%	65	32.8	28.3%	12	14.6	2.9%	2	27.7	0.5%
Garðakot	150	34.4	39	37.7	2.0%	10	45.6	6.7%	1	100.0	1.8%	18	23.7	15.5%	17	17.4	19.4%	3	13.0	5.5%
Hringver	201	34.2	74	31.8	12.5%	17	43.8	3.6%	4	21.5	1.7%	64	31.4	31.2%	42	21.9	26.7%	3	-11.0	-2.2%
Hólakot	208	16.7	85	13.2	2.6%	36	17.6	10.1%	7	29.7	3.1%	112	6.0	14.4%	26	9.7	11.0%	0	0.0	0.0%
Kjarvalsstaðir	216	39.7	62	31.0	16.6%	31	16.5	19.7%	6	19.0	6.2%	45	19.0	30.6%	29	13.7	31.4%	2	38.5	2.7%
Kálfsstaðir	144	38.1	34	22.9	-13.2%	14	39.1	-4.2%	1	133.0	1.1%	52	32.4	33.6%	31	21.4	32.7%	2	22.0	2.3%
Laufskálaholt	159	26.6	32	25.7	-14.4%	14	29.7	-8.9%	1	-30.0	-2.6%	7	18.3	-11.4%	1	-37.0	-2.6%	1	-5.0	-2.6%
Nautabú	179	58.0	23	45.0	-6.3%	14	88.8	7.7%	11	41.4	10.9%	31	30.2	16.7%	28	23.6	22.1%	2	-15.5	-2.1%
Skúfsstaðir	237	39.9	49	19.7	-1.9%	15	16.5	0.4%	16	13.1	9.8%	47	16.1	18.4%	19	9.7	5.8%	18	-0.1	-3.6%
Viðvík	212	53.0	57	29.4	-14.5%	17	20.1	-2.4%	10	34.8	5.9%	50	18.8	10.8%	22	15.1	2.5%	1	-6.0	-0.9%
Ingveldarstaðir	184	23.8	57	24.6	37.0%	17	19.0	13.2%	2	51.5	3.3%	39	13.4	29.6%	32	11.3	20.6%	3	-7.3	-2.4%
Average Difference		*38.8*		*30.7*			*34.2*			*47.1*			*24.0*			*10.5*			*4.7*	

Table 10. Coring deposit counts for cultural classes for the three time periods by place.

	Pre-1104			1104-1300			Post-1300		
Place	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes
Brekkukot	28	58	4	35	53	2	35	49	6
Efri-Ás	35	147	36	49	139	30	70	144	4
Garðakot	33	107	10	36	98	16	37	97	16
Hringver	26	149	25	32	138	30	35	142	23
Hólakot	54	78	76	58	102	48	82	114	12
Kjarvalsstaðir	37	158	21	40	148	28	43	145	28
Kálfsstaðir	42	63	39	46	57	41	55	61	28
Laufskálaholt	22	136	1	22	137		22	137	
Nautabú	52	103	24	49	99	31	57	103	19
Reykir	56	174	2	61	167	4	49	166	17
Skúfsstaðir	71	133	33	75	132	30	79	140	18
Viðvík	57	126	29	66	119	27	78	120	14
Ingveldarstaðir	31	134	19	29	130	25	37	127	20

Table 11. Coring deposit classes for pre-1104 “yes” or “maybe” cores with mean depth of deposit class by place.

	LDC		Midden		Turf		Floor	
Place	n	Mean Depth	n	Mean Depth	n	Mean Depth	n	Mean Depth
Brekkukot	5	87.00	13	88.08	13	53.69	1	113
Efri-Ás	15	66.80	42	102.81	11	69.91	1	111
Garðakot	11	63.27	18	83.17	14	42.07		
Hringver	16	53.38	28	69.79	7	33.43		
Hvammur	14	46.21	25	84.52	20	46.00		
Hólakot	46	40.96	59	50.22	24	44.54	1	40
Kjarvalsstaðir	16	66.13	27	69.19	13	42.00	1	94
Kálfsstaðir	7	40.29	47	89.00	16	75.44		
Laufskálaholt	1	35.00	3	22.67	19	47.63		
Nautabú	19	74.00	34	102.47	23	57.78		
Skúfsstaðir	29	36.17	50	66.98	24	58.71		
Viðvík	16	51.19	52	80.06	16	54.00	1	90
Ingveldarstaðir	33	42.45	13	66.77	4	36.33		

Figure 62. Key for interpreting core 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. Kálfsstaðir is not presented because it appears in Zoëga and Steinberg (2023).

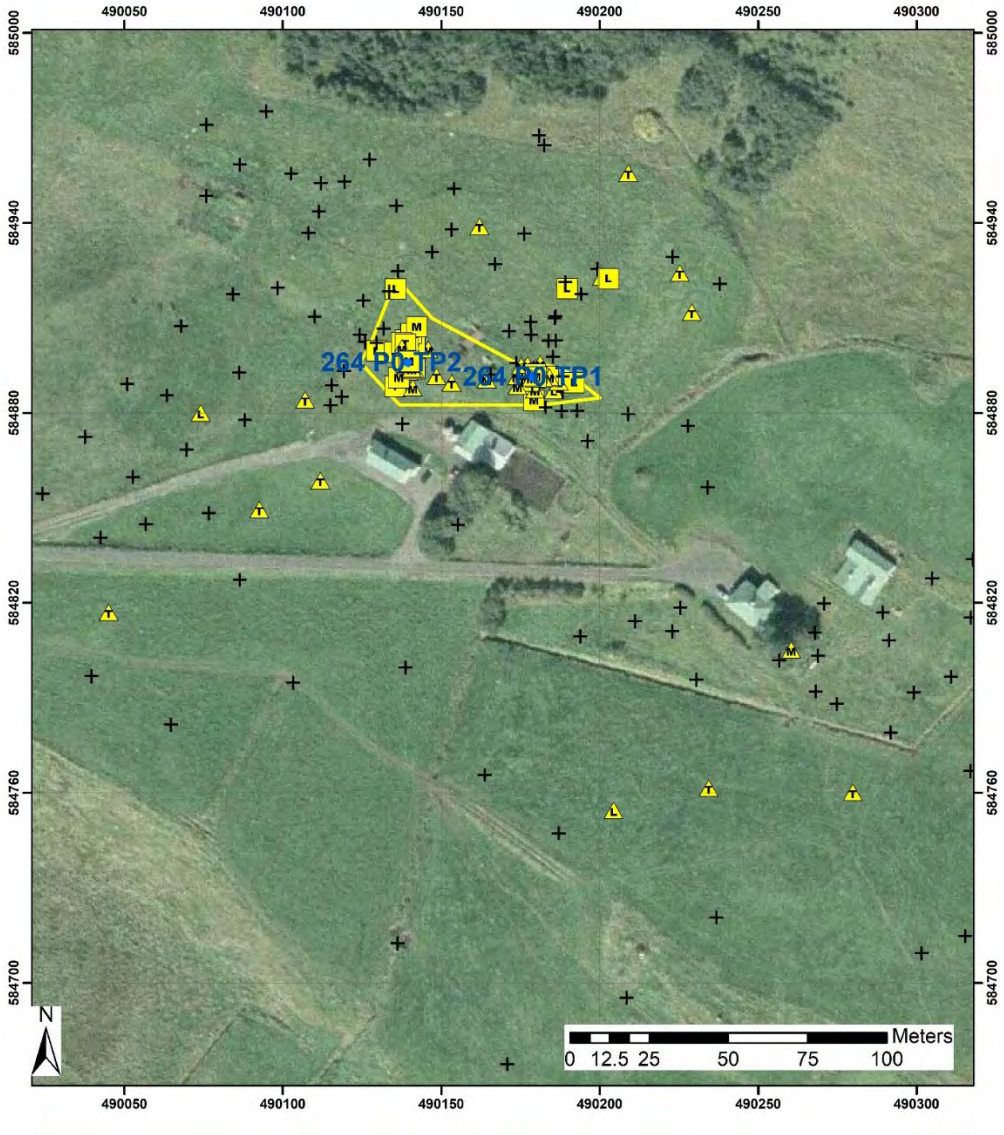

Figure 63. Map of Efri-Ás 1104-1300 coring results.

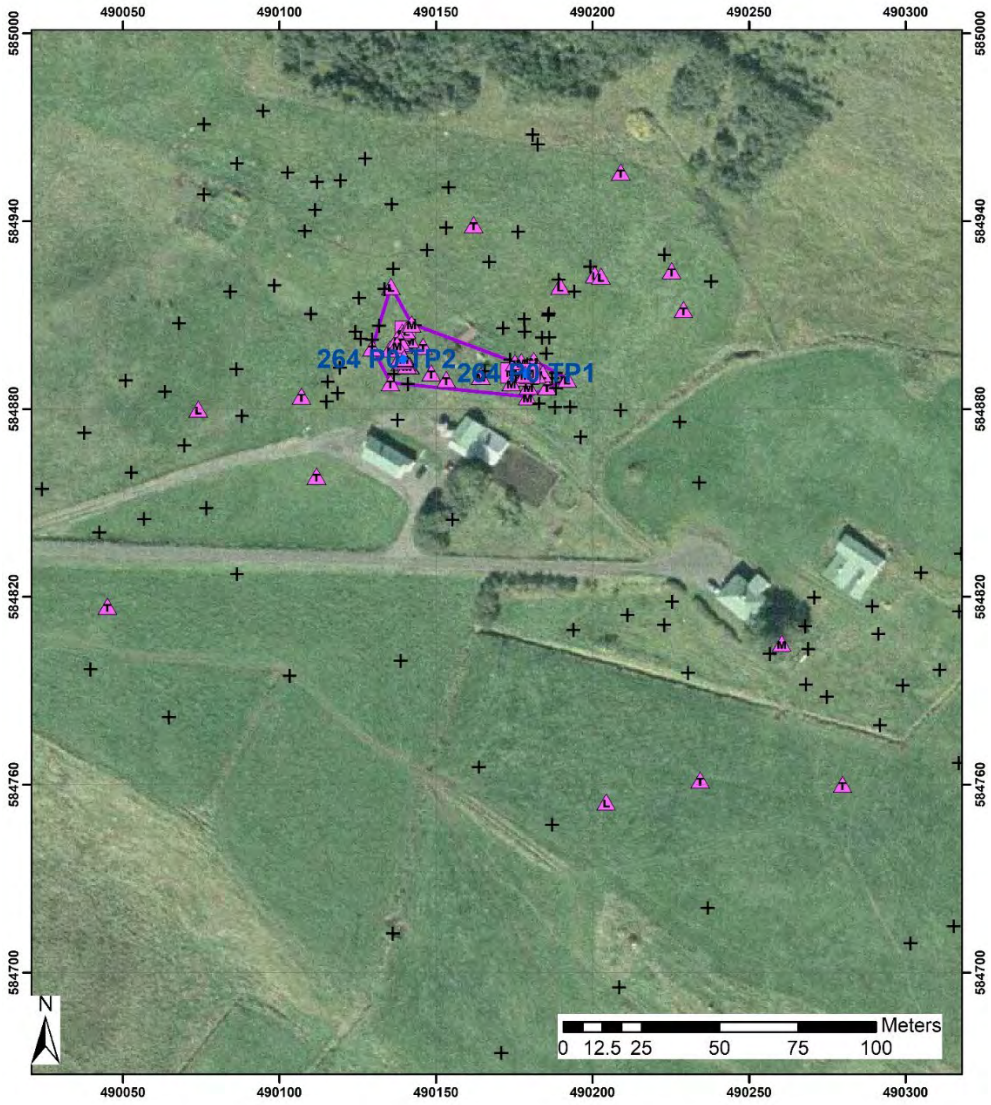

Figure 64. Map of Efri-Ás post-1300 coring results.

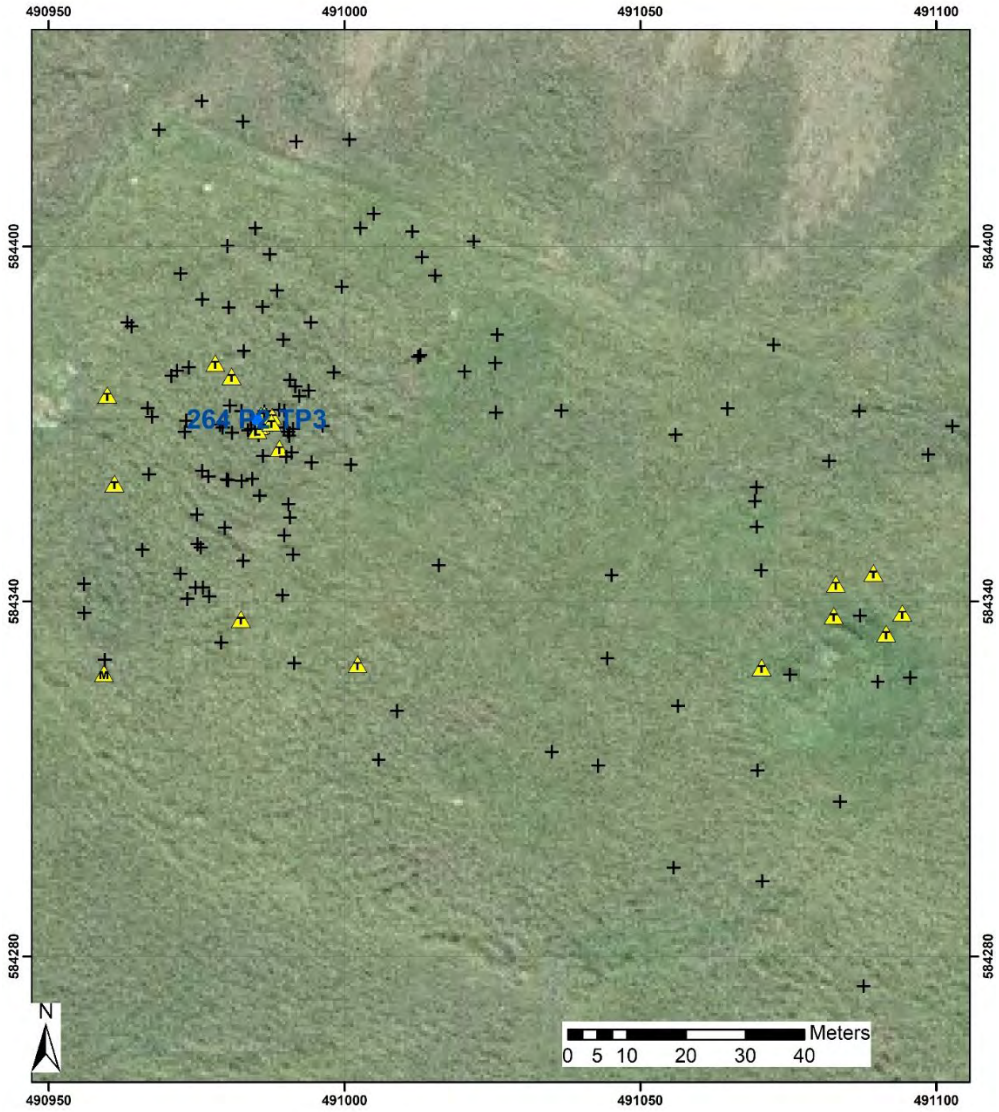

Figure 65. Map of Laufskálaholt 1104-1300 coring results.

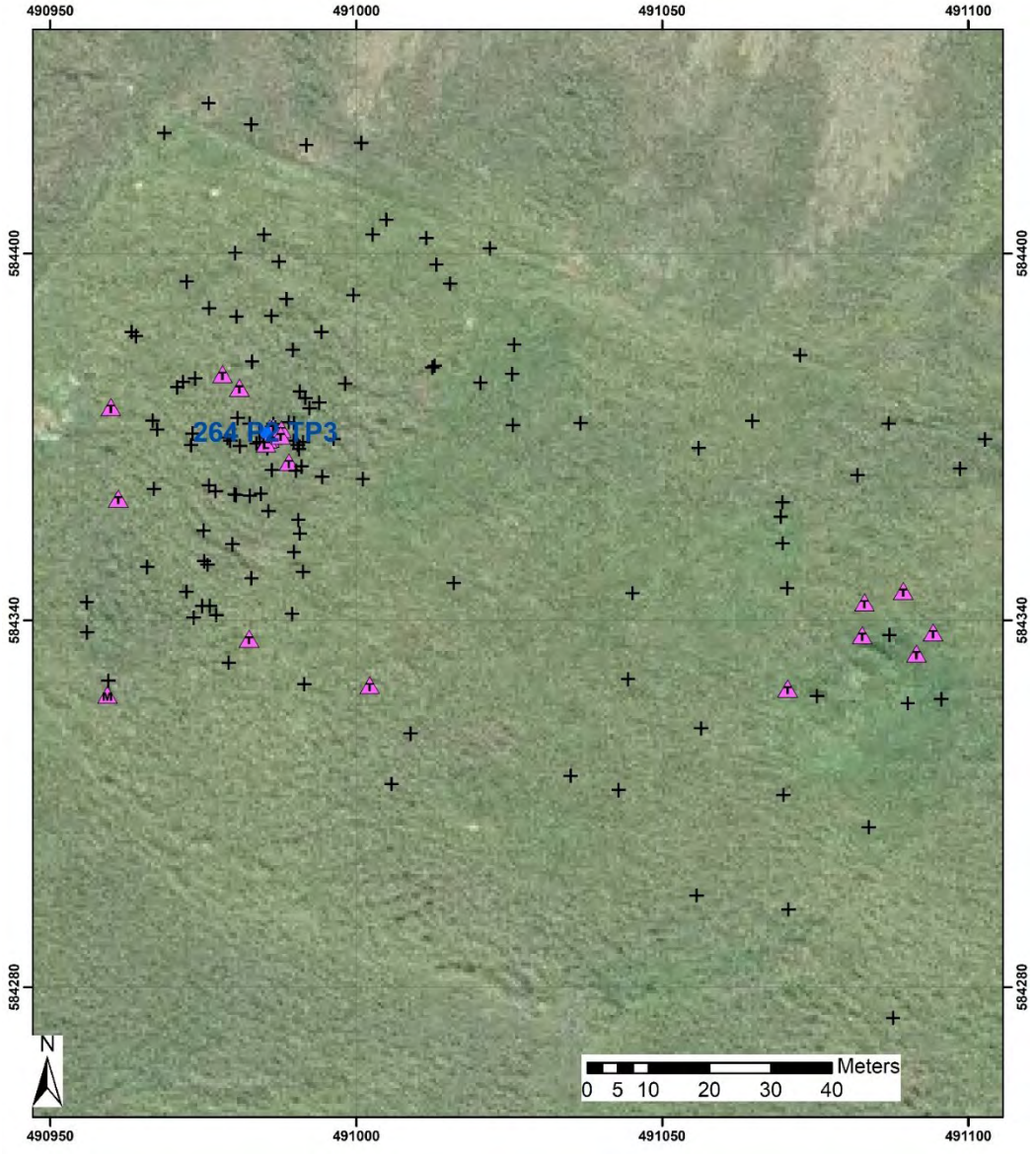

Figure 66. Map of Laufskálaholt post-1300 coring results.

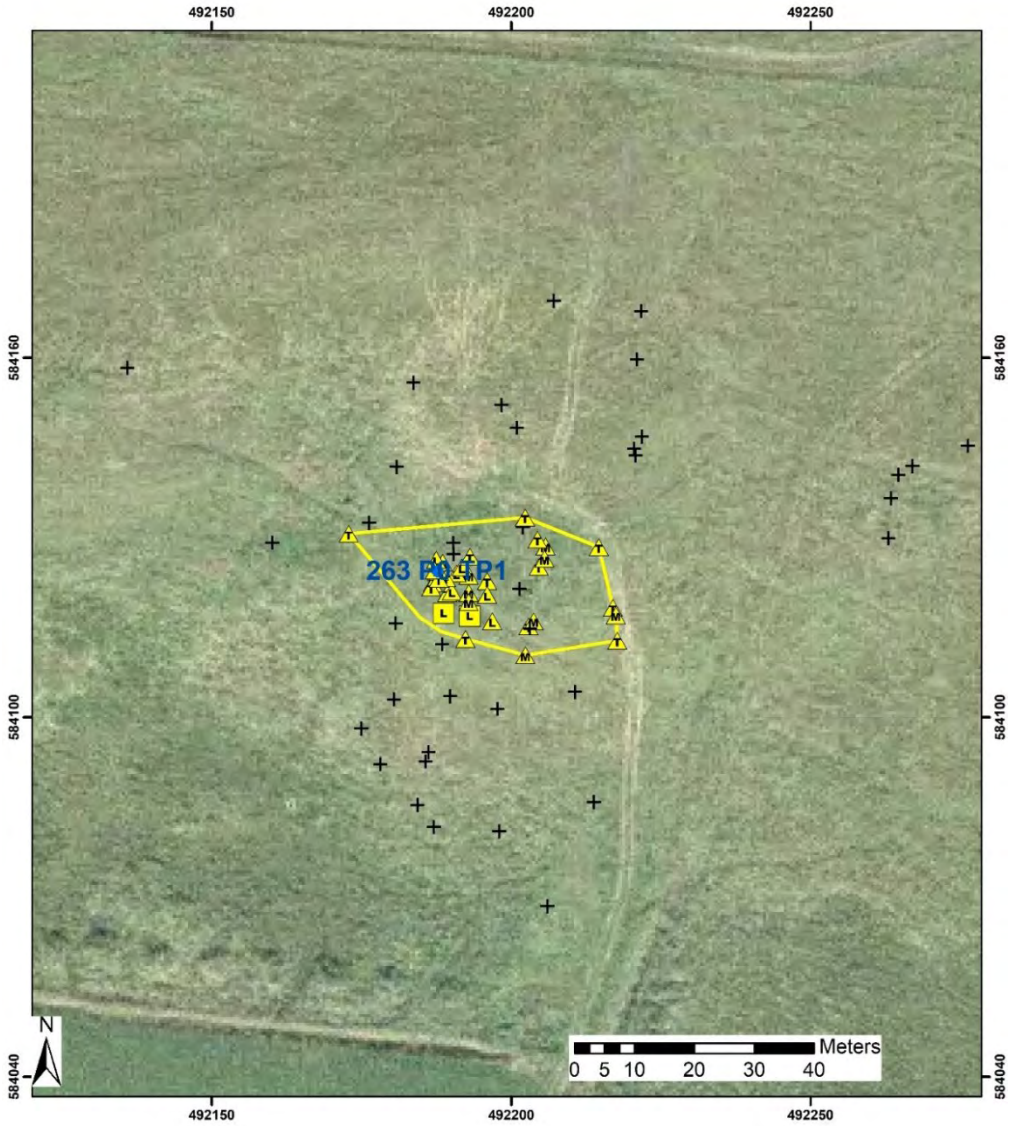

Figure 67. Map of Brekkukot 1104-1300 coring results.

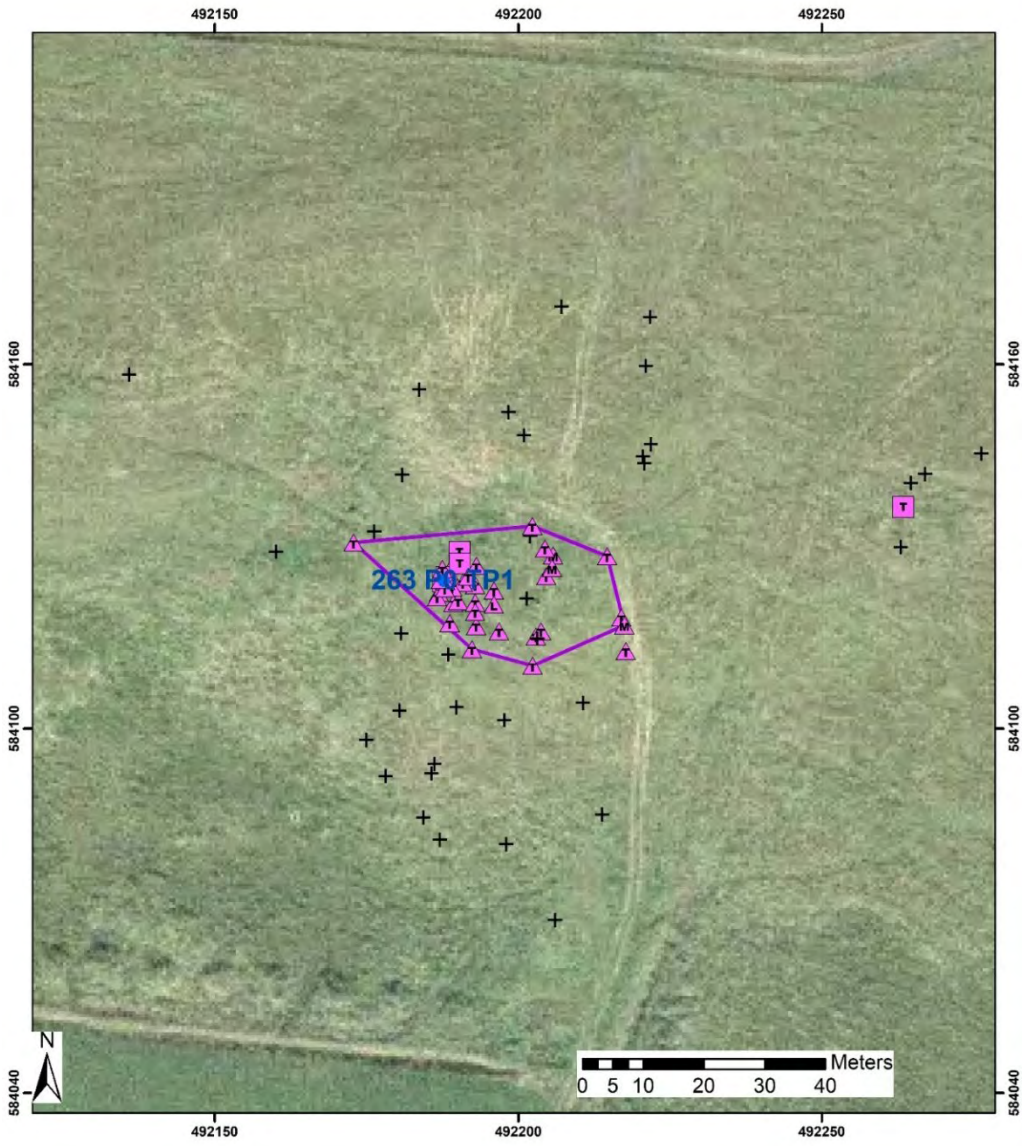

Figure 68. Map of Brekkukot post-1300 coring results.

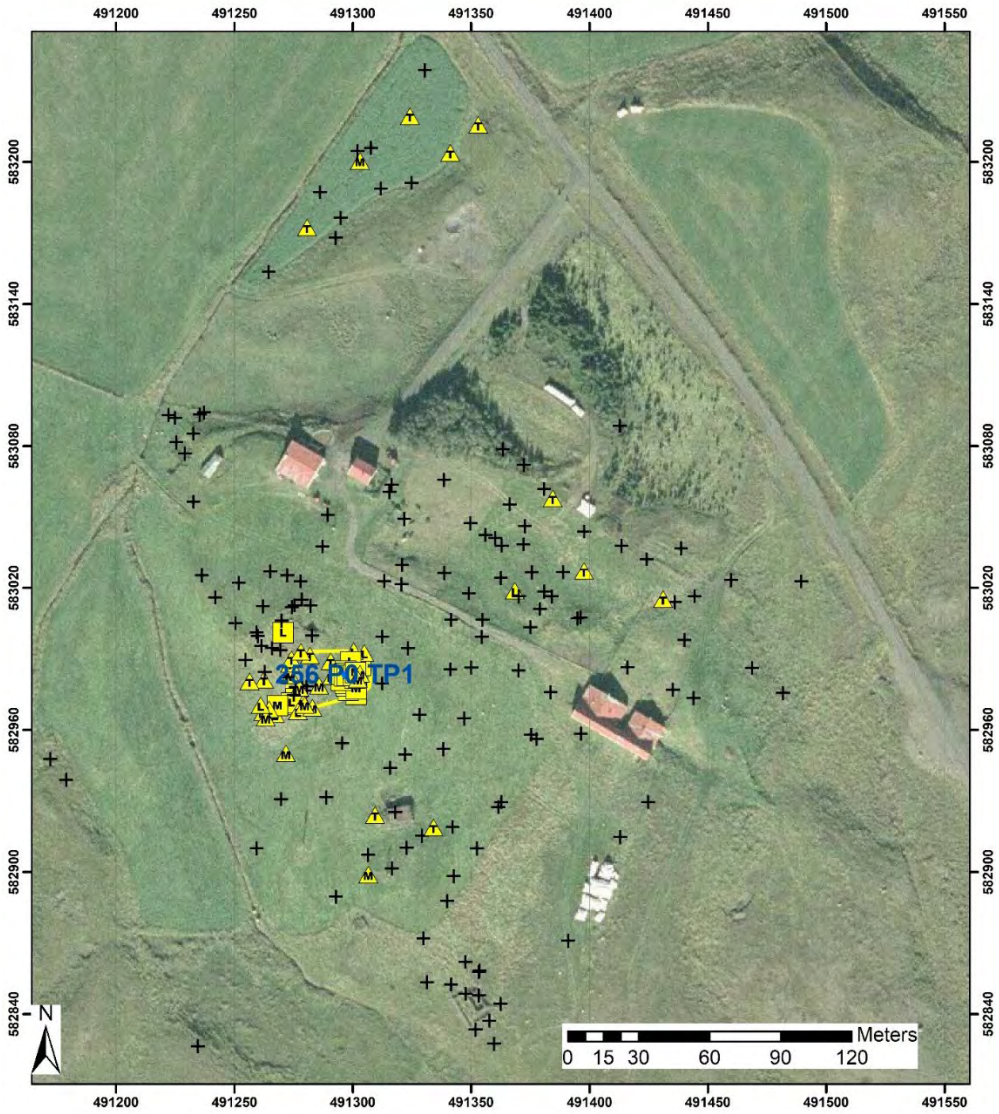

Figure 69. Map of Kjarvalsstaðir 1104-1300 coring results.

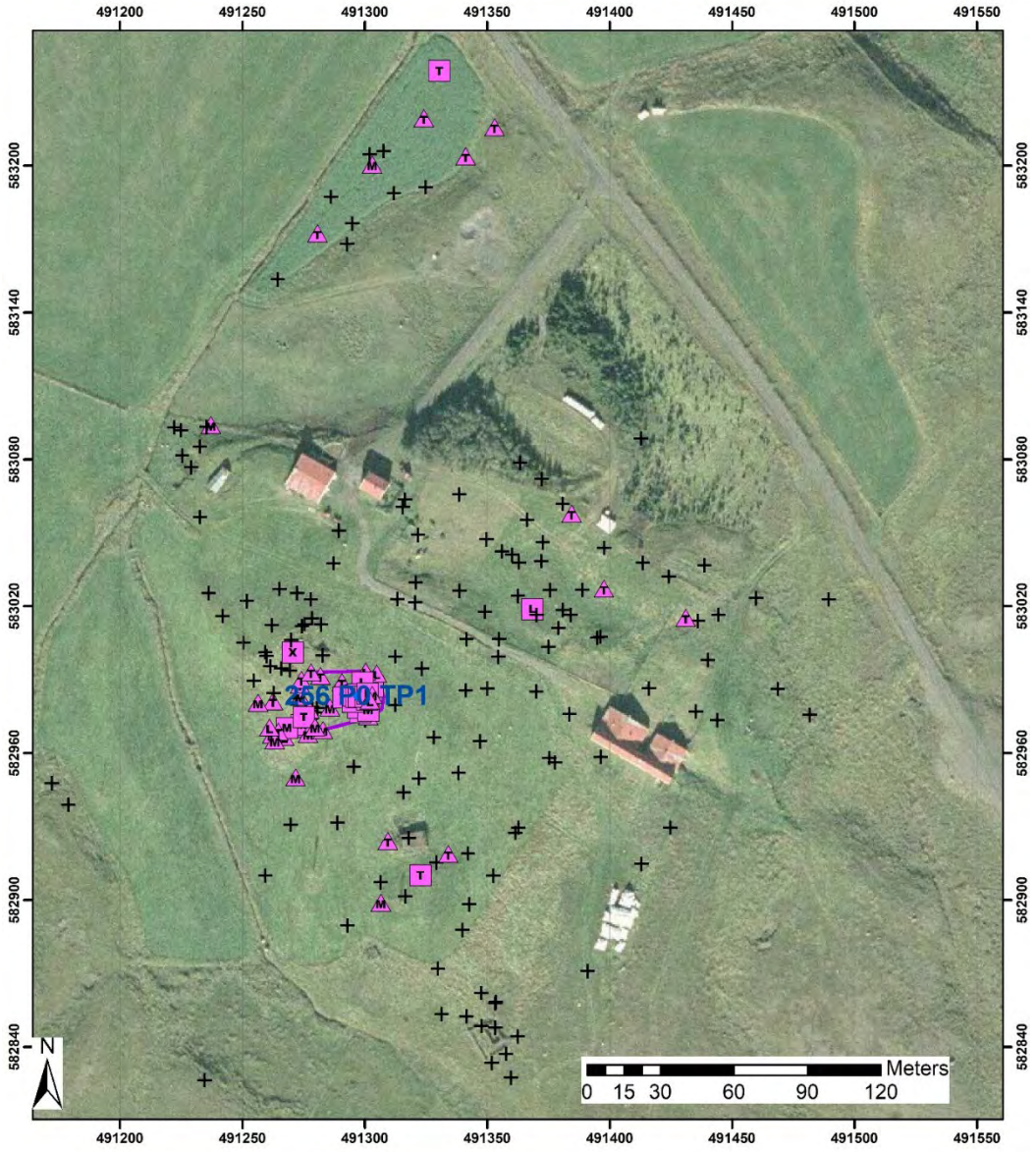

Figure 70. Map of Kjarvalsstaðir post-1300 coring results.

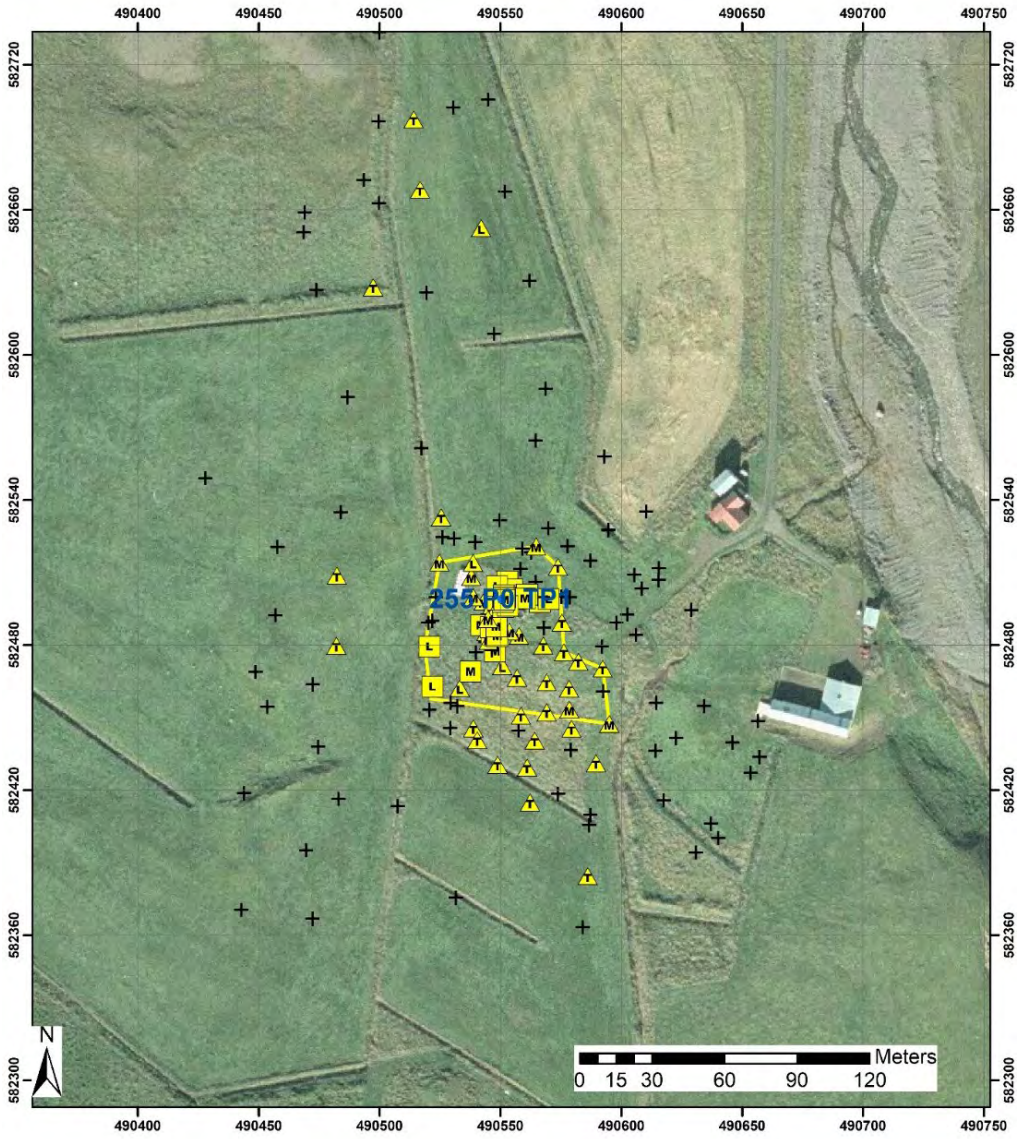

Figure 71. Map of Nautabú 1104-1300 coring results.

Figure 72. Map of Nautabú post-1300 coring results.

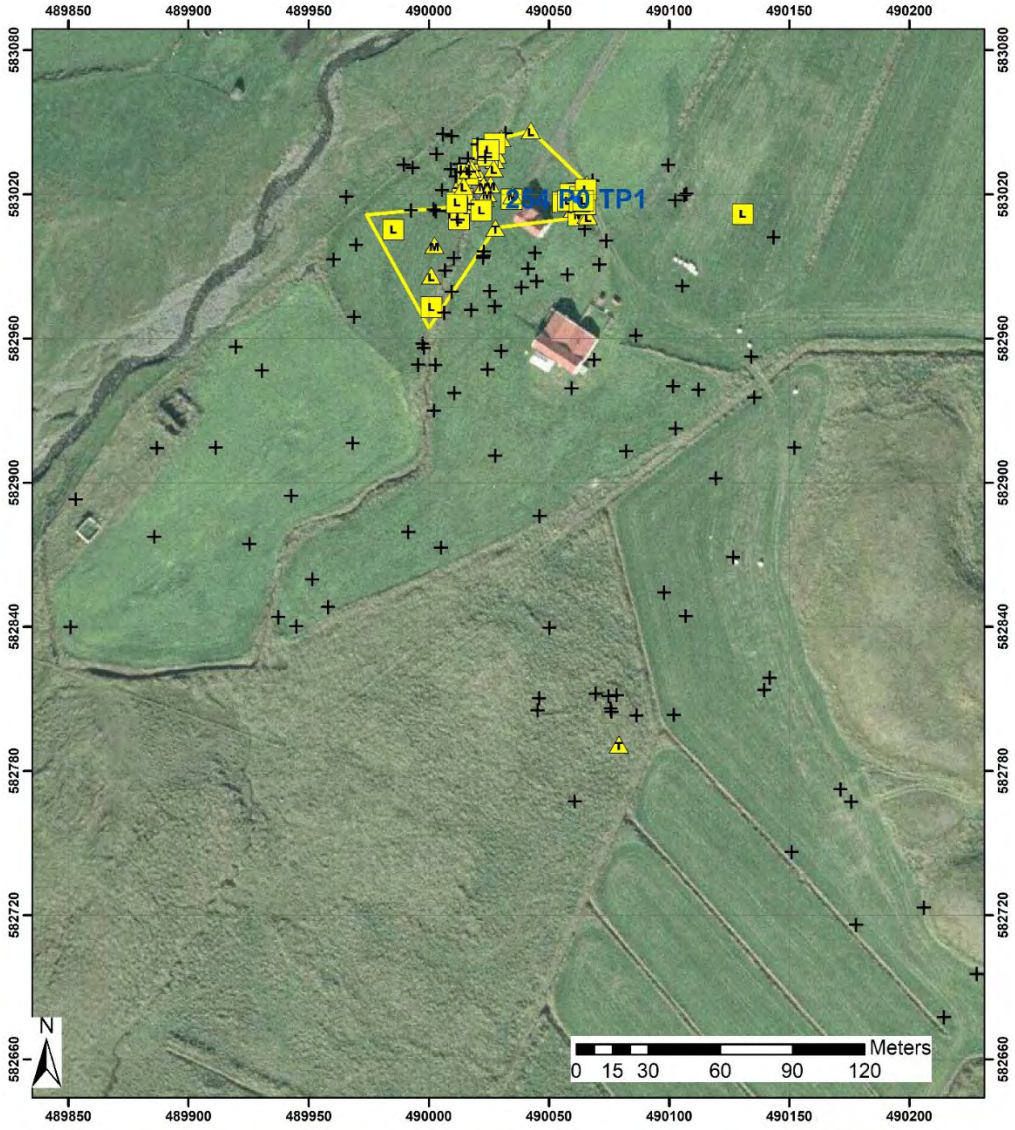

Figure 73. Map of Ingveldarstaðir 1104-1300 coring results.

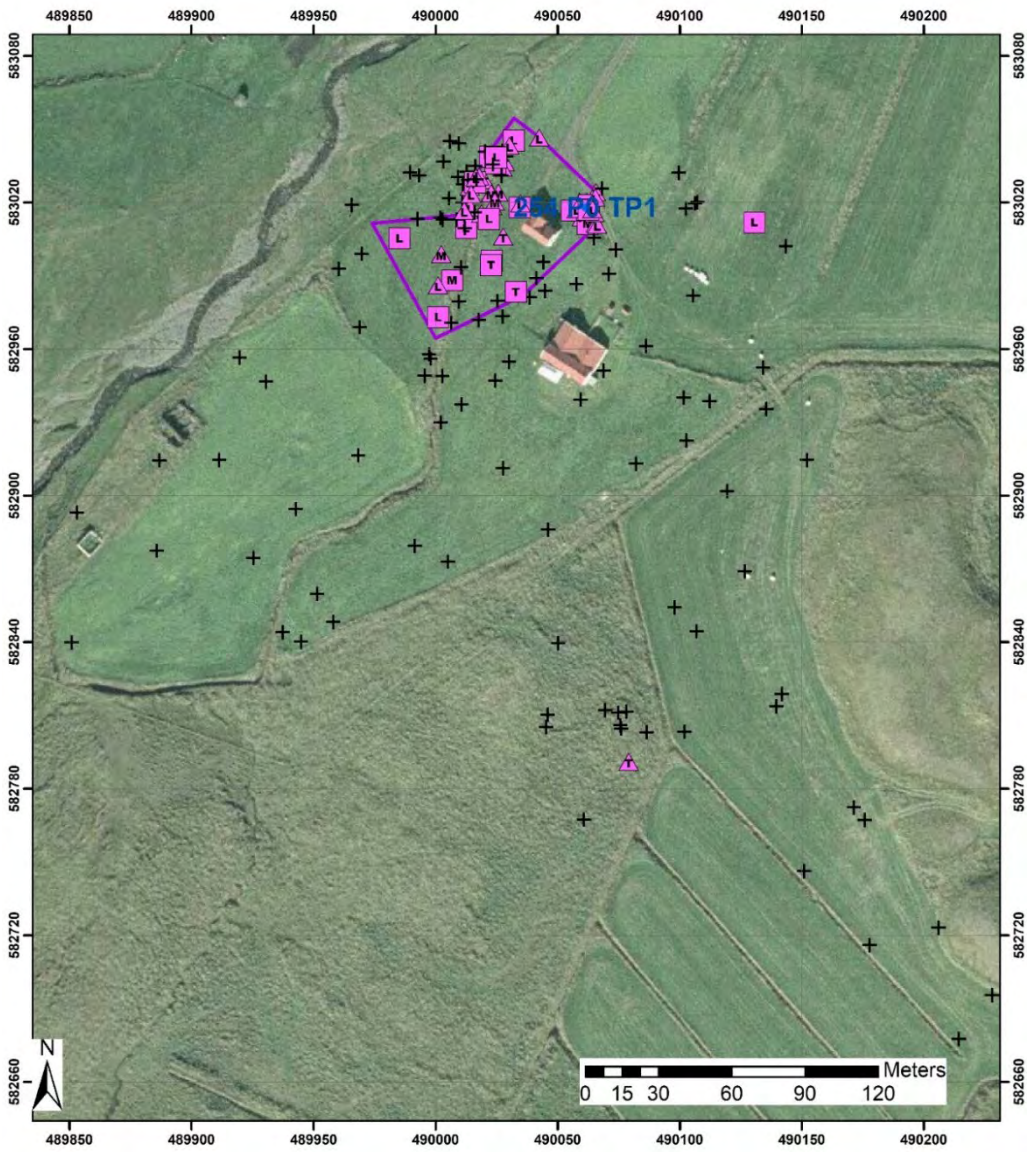

Figure 74. Map of Ingveldarstaðir post-1300 coring results.

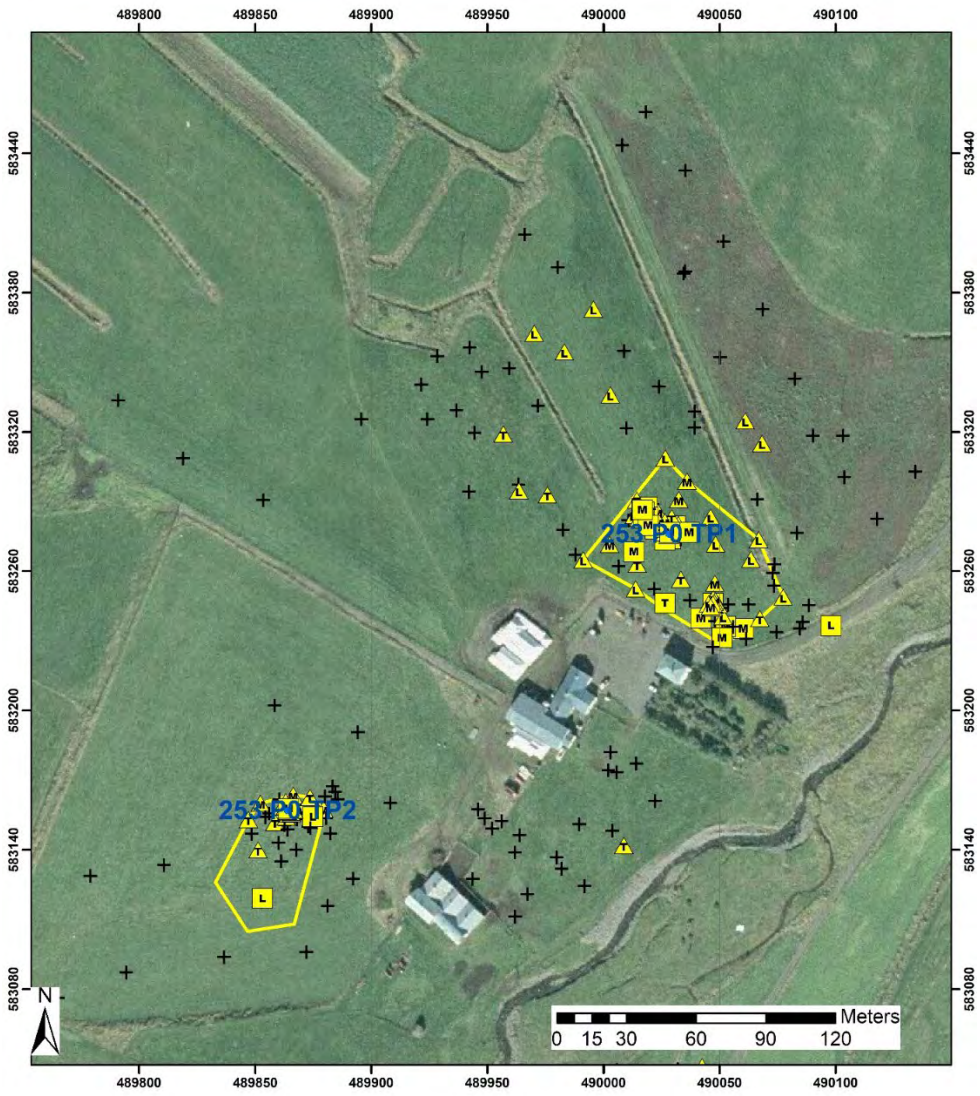

Figure 75. Map of Skúfsstaðir 1104-1300 coring results.

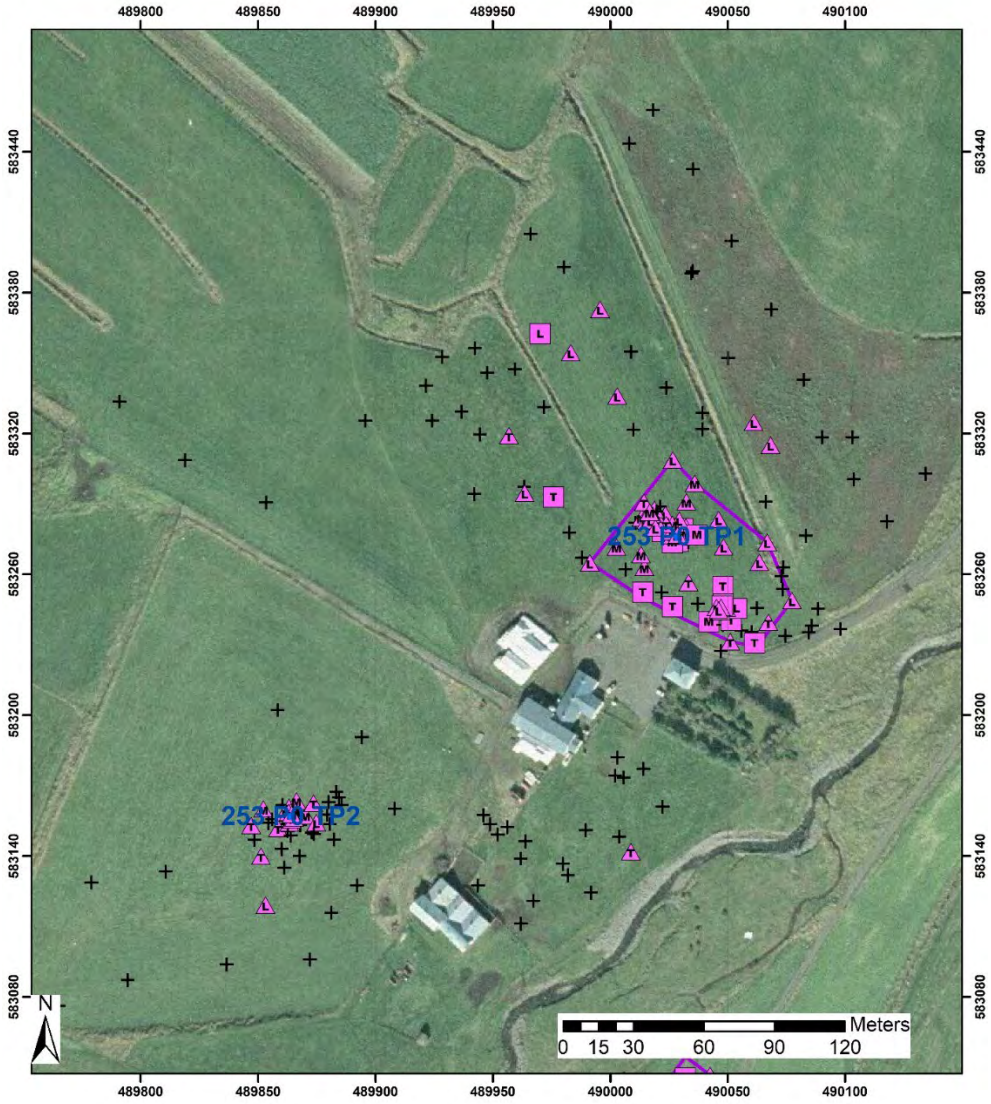

Figure 76. Map of Skúfsstaðir post-1300 coring results.

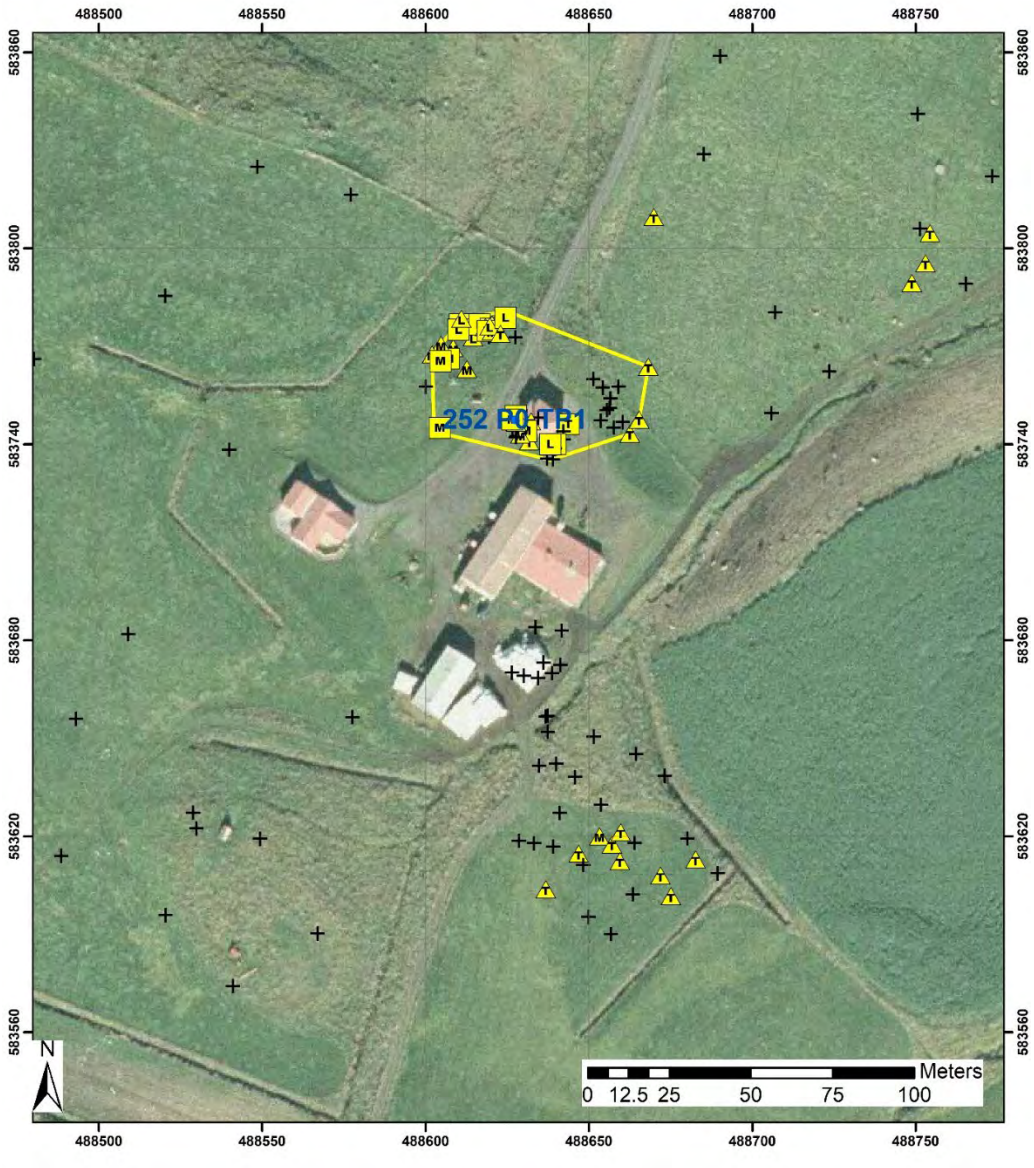

Figure 77. Map of Garðakot 1104-1300 coring results.

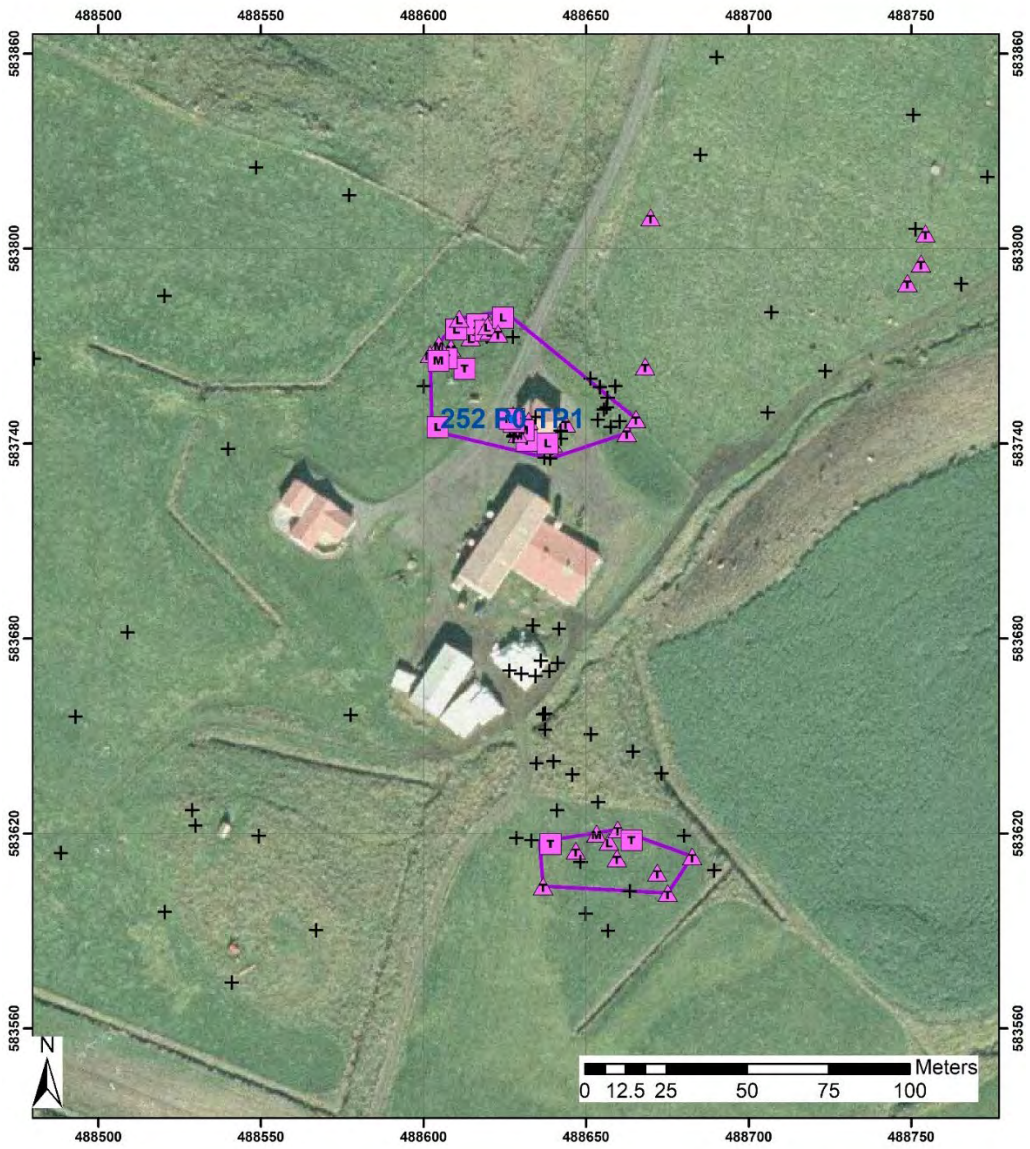

Figure 78. Map of Garðakot post-1300 coring results.

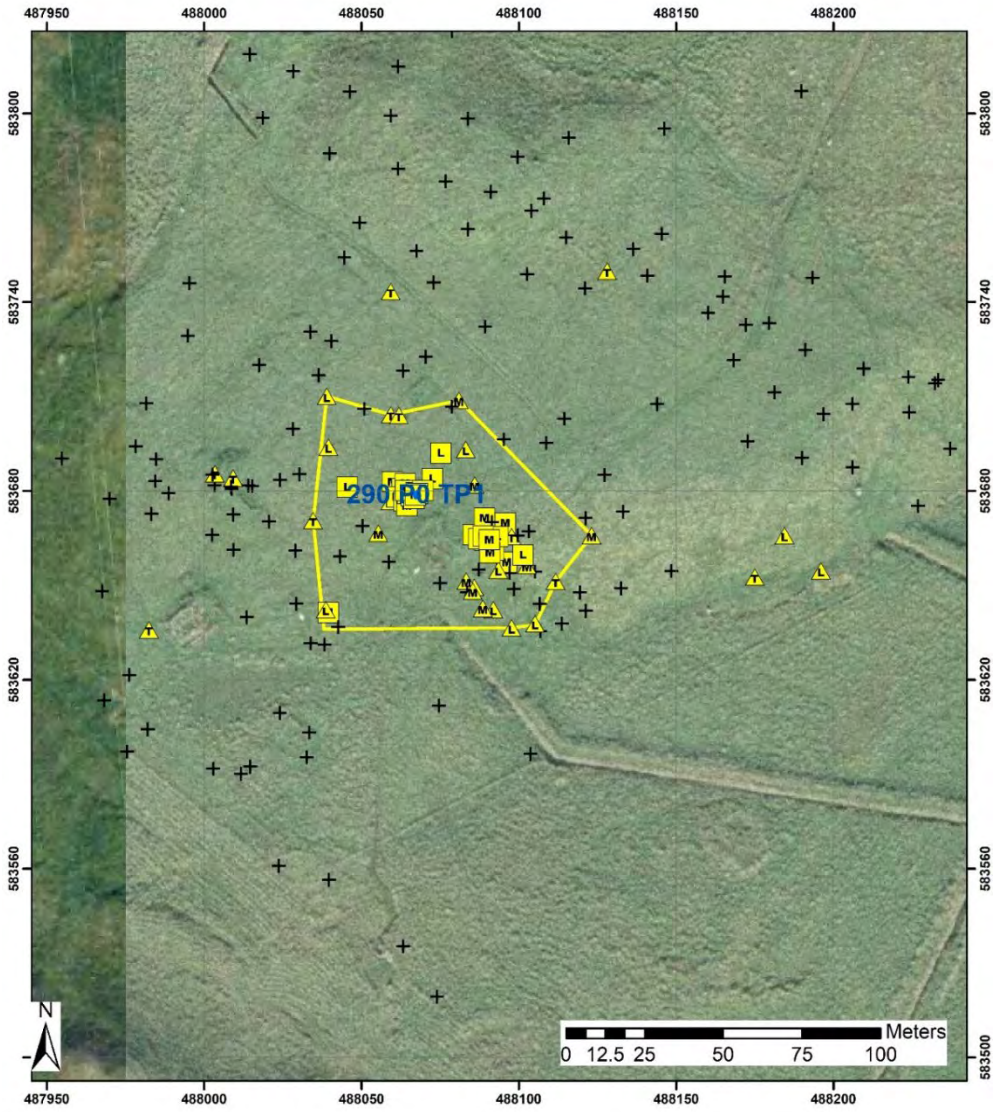

Figure 79. Map of Hringver 1104-1300 coring results.

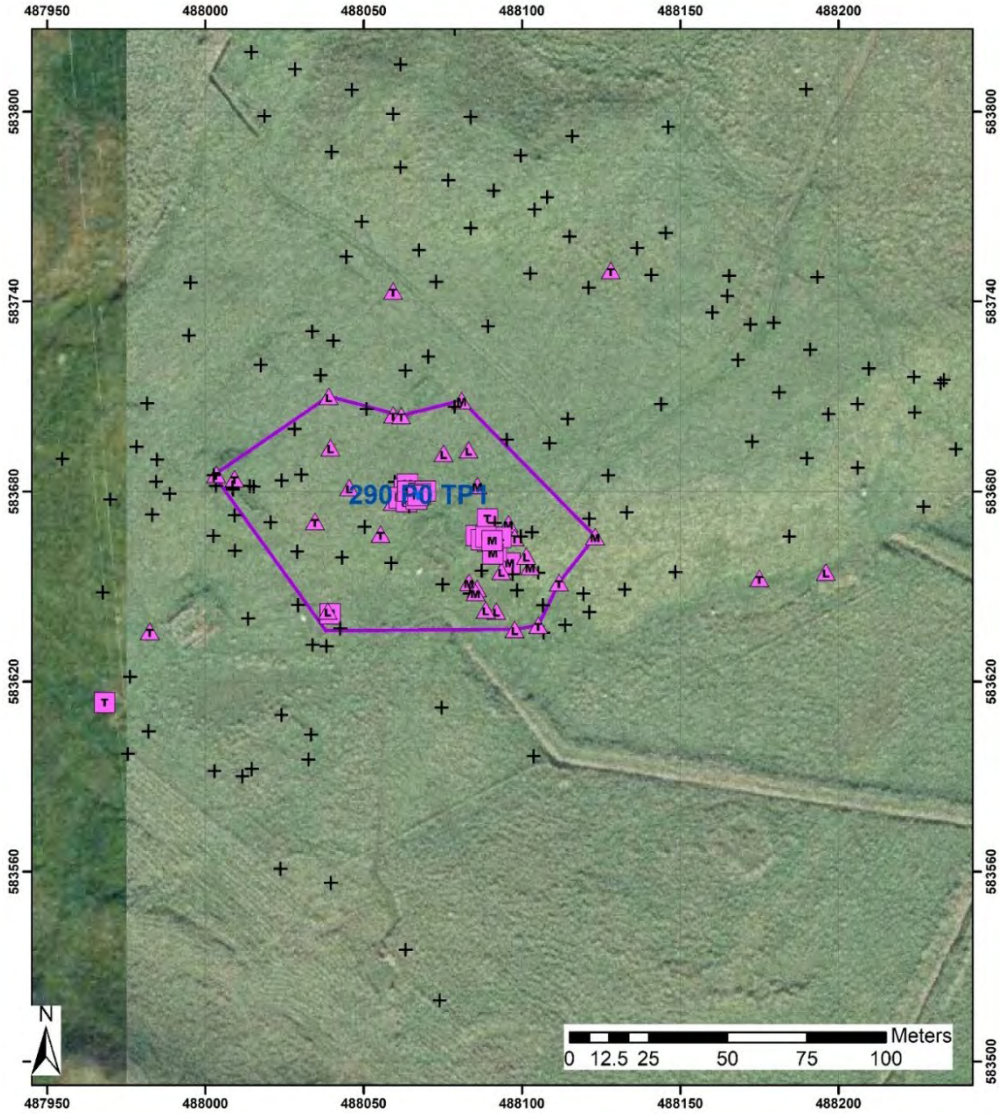

Figure 80. Map of Hringver post-1300 coring results.

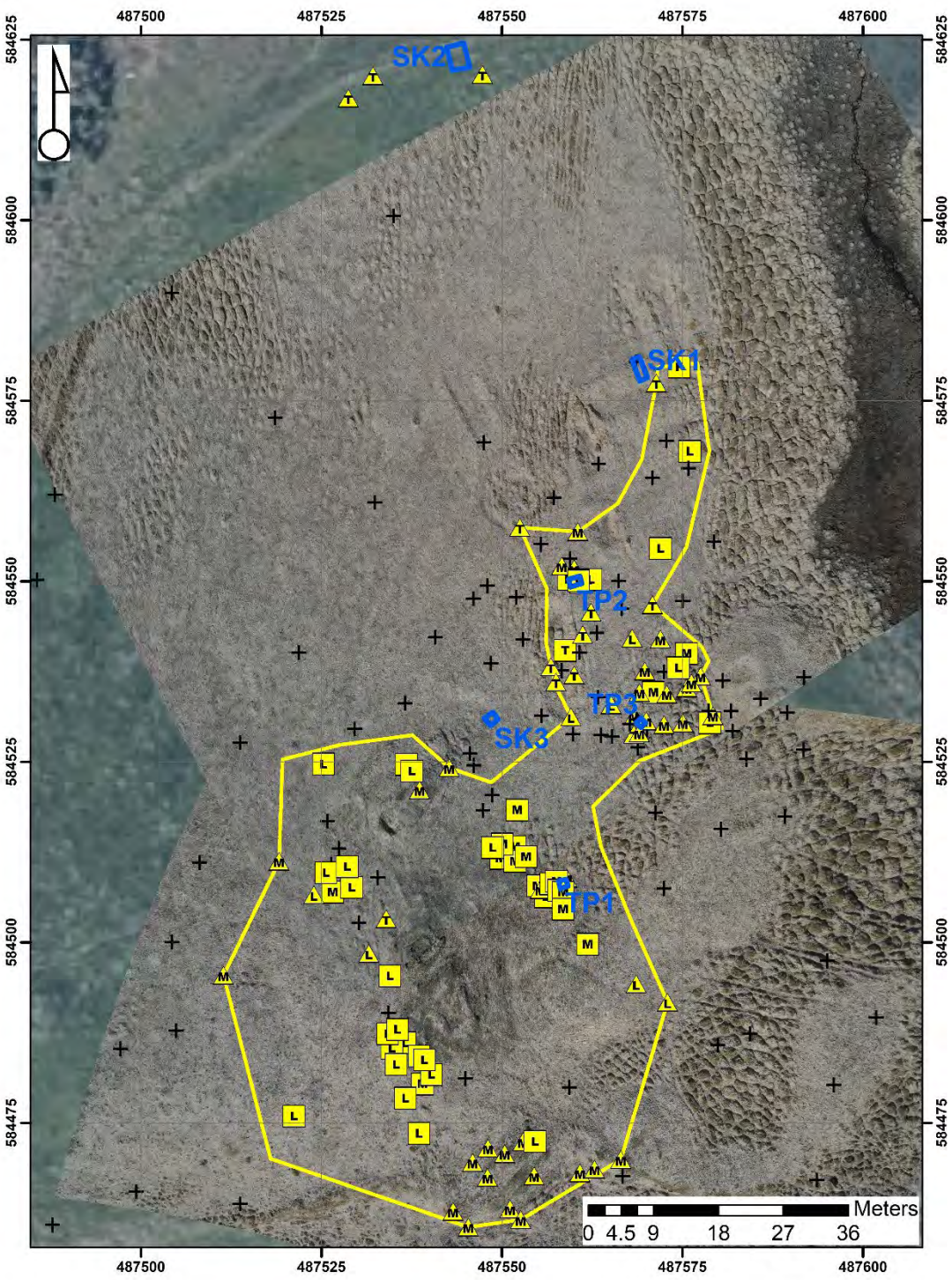

Figure 81. Map of Hólakot 1104-1300 coring results. SK indicates trenches from Zoëga, et al. (2009).

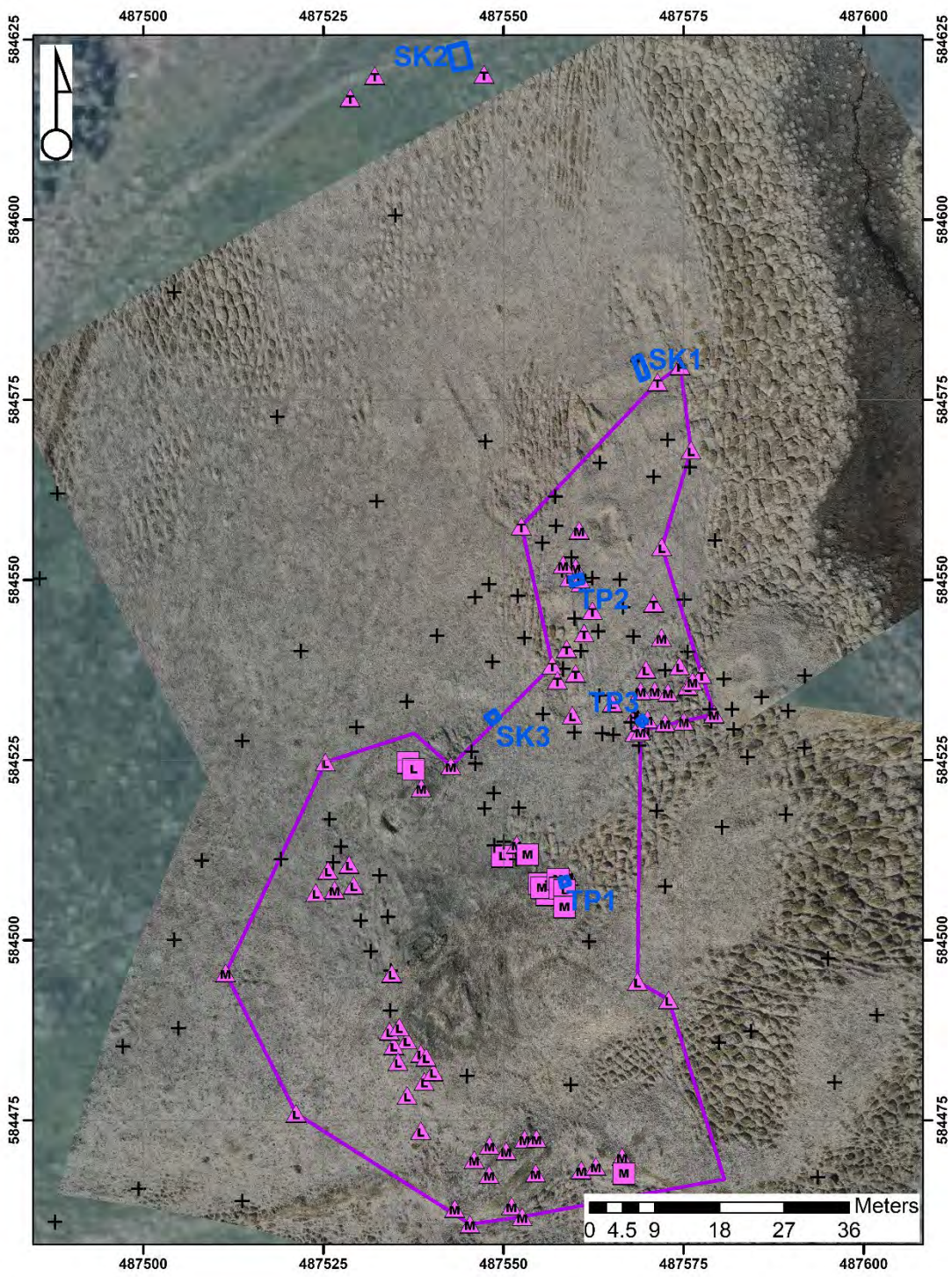

Figure 82. Map of Hólakot post-1300 coring results. SK indicates trenches from Zoëga, et al. (2009). d

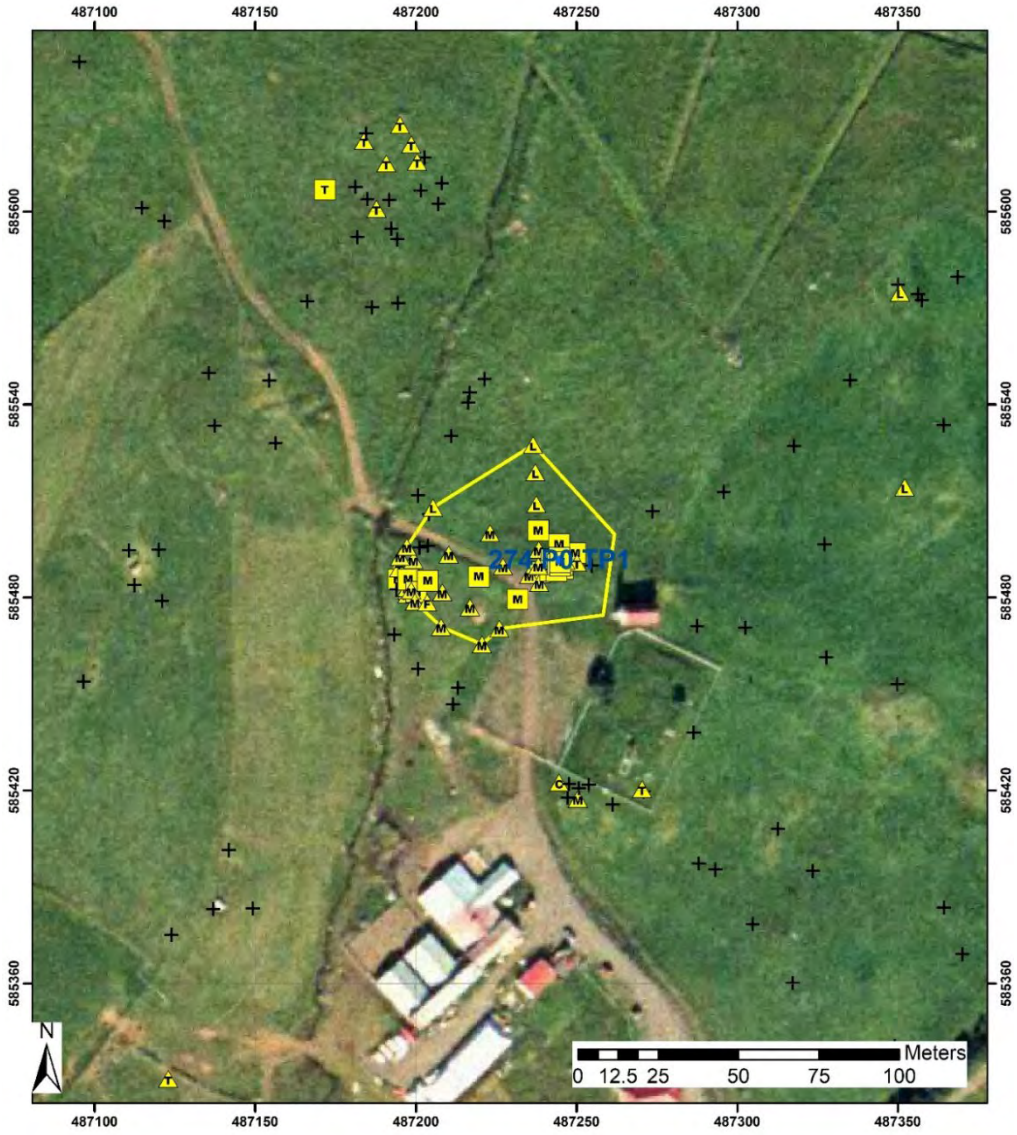

Figure 83. Map of Viðvík 1104-1300 coring results.

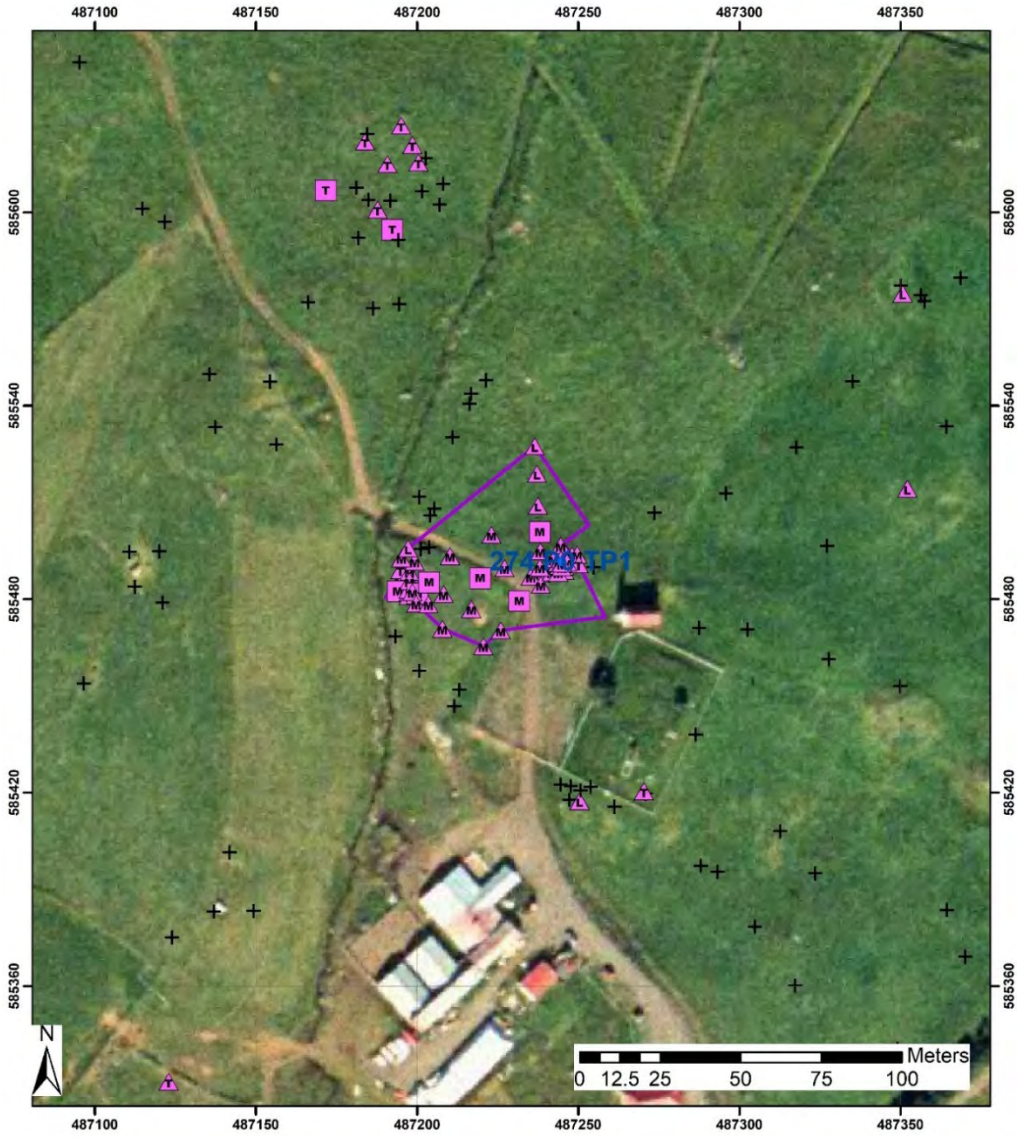

Figure 84. Map of Viðvík post-1300 coring results.

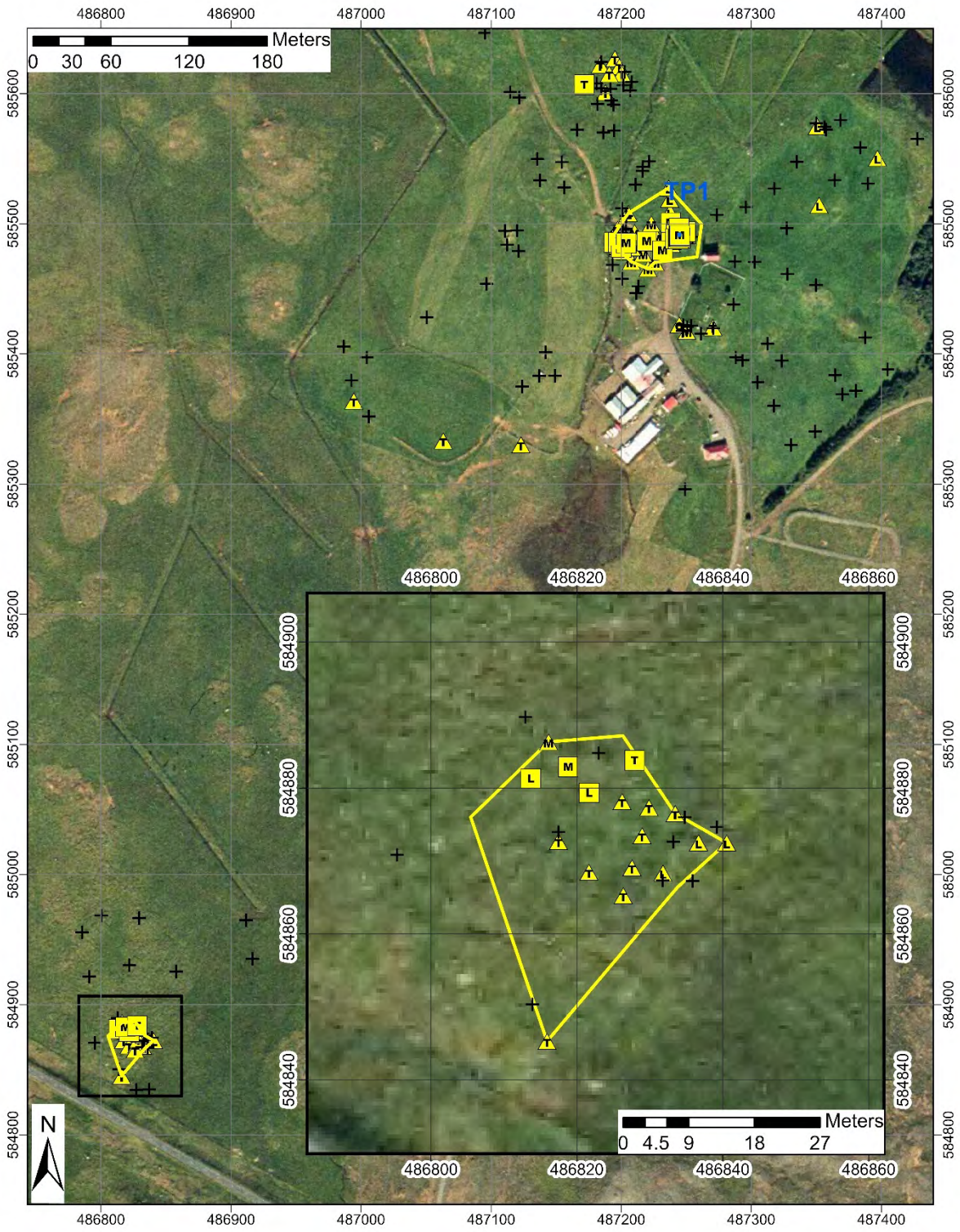

Figure 85. Map of Kvígidishóll 1104-1300 coring results, also showing Viðvík.

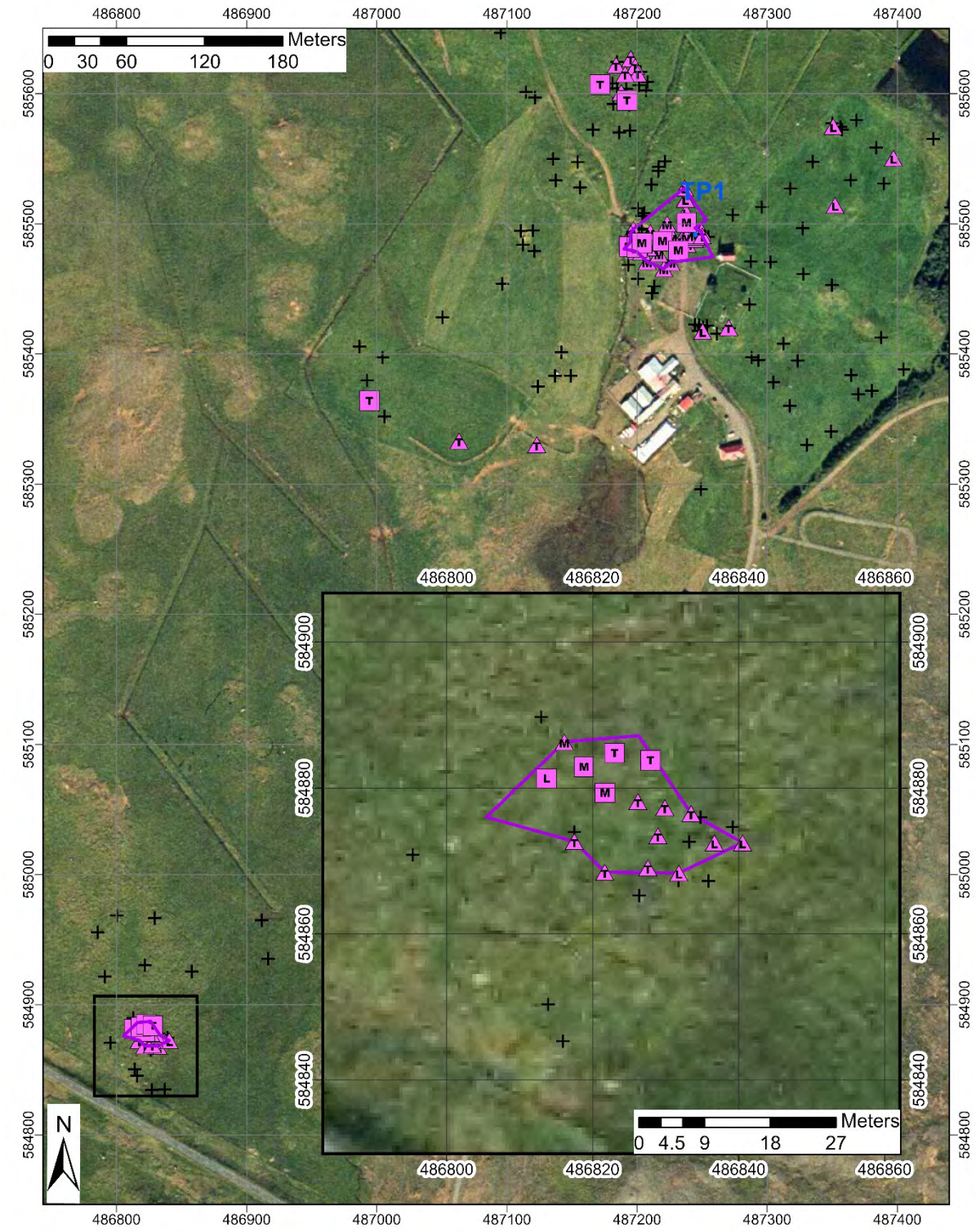

Figure 86. Map of Kvígidishóll post 1300 coring results, also showing Viðvík.

Carter's Previous Coring

Pre-1104 coring results from Carter (2010), Carter (2015) at Laufskálaholt and Hólakot and are presented below. Cores with pre-1104 material are identified.

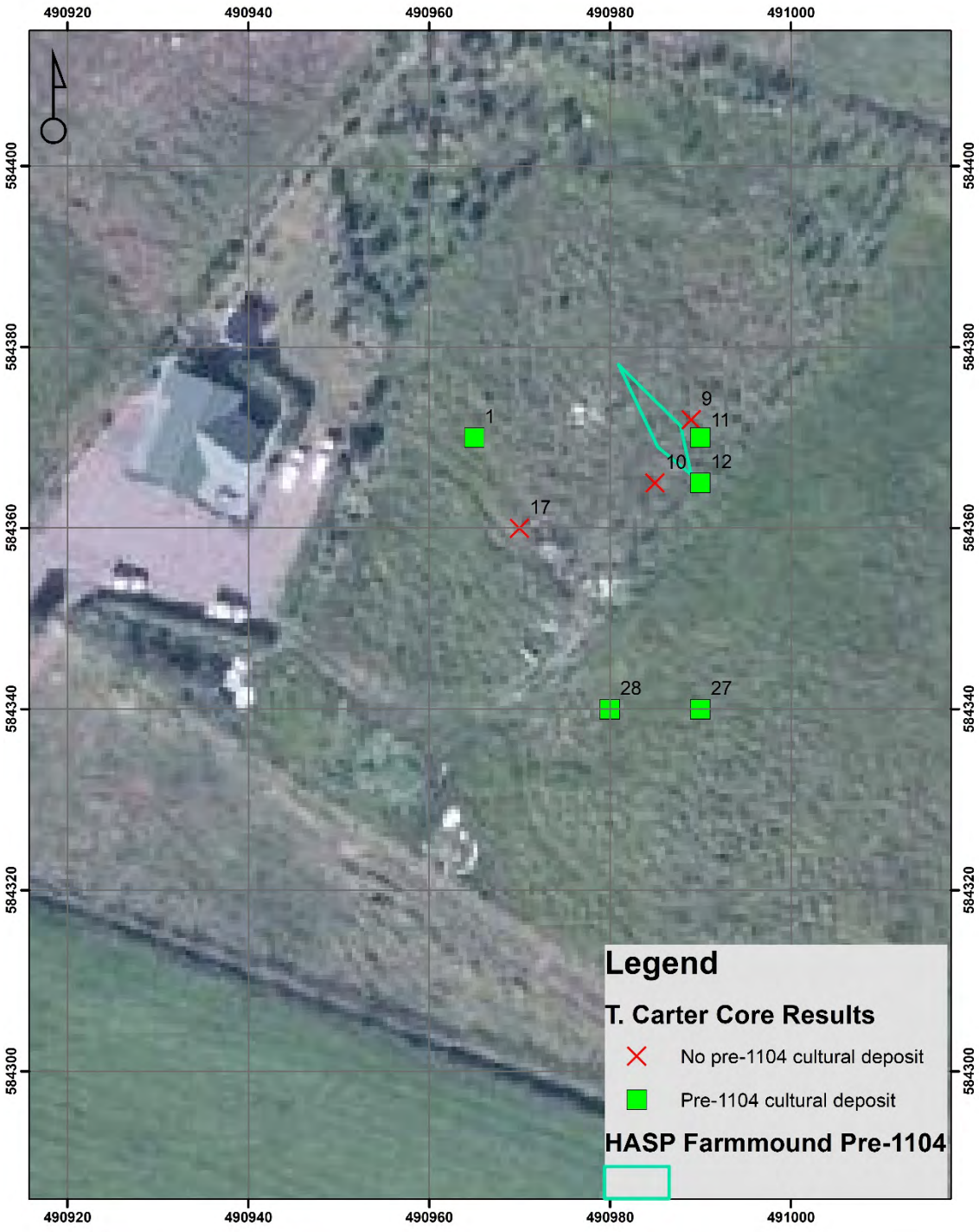

Figure 87. Tara D. Carter's coring results from Laufskálaholt with pre-1104 cultural material in cores shown with green boxes.

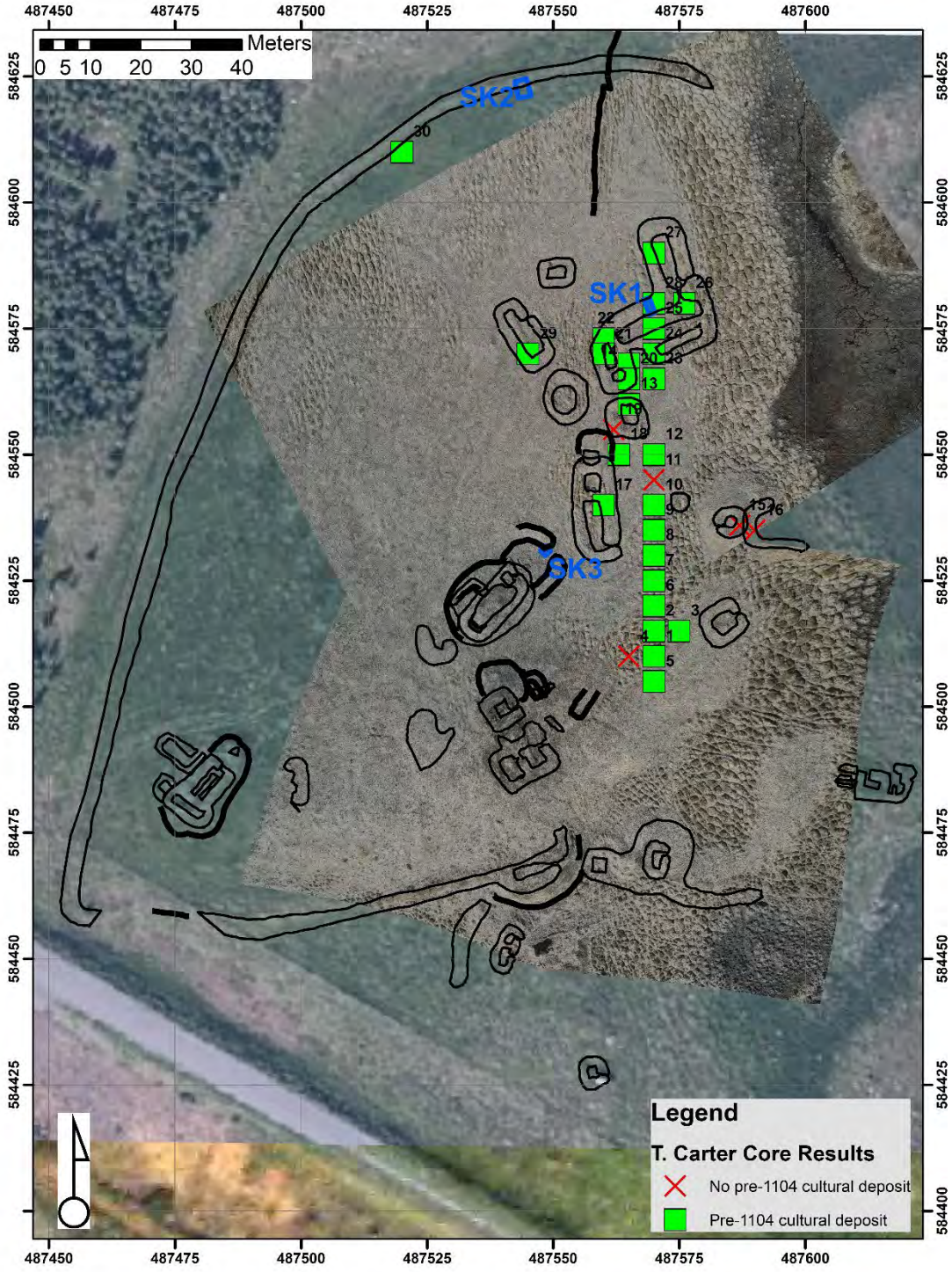

Figure 88. Tara D. Carter's coring results from Hólakot with pre-1104 cultural material in cores shown with green boxes. Results are superimposed on shape files from Zoëga, et al. (2009) showing visible surface remains and excavation trenches (SK 1-3).

Farm Mound Area

Table 12. Farmstead sizes measured by coring, including farms from previous years.

Place	Pre-1104 Area	1104-1300 Area	Post-1300 Area	1104 Change	1104 Change (%)	1300 Change	1300 Change (%)
Brekkukot	579	703	637	124	121%	-66	91%
Efri-Ás	635	1374	880	739	216%	-494	64%
Gardakot	2101	2209	2516	108	105%	307	114%
Grófarstekkur	457						
Hof	3080	684	532	-2396	22%	-152	78%
Hólar	1833	21357	19147	19524	1165%	-2210	90%
Hrafnhóll	1071	1444	1006	373	135%	-438	70%
Hrappstaðir	389	4480	4723	4091	1152%	242	105%
Hringver	3896	4983	6169	1087	128%	1185	124%
Hvammur	3370	4159	5106	789	123%	947	123%
Ingveldarstaðir	2460	2949	4041	489	120%	1092	137%
Kálfsstaðir	5082	5655	5905	573	111%	250	104%
Kjarvalsstaðir	354	710	710	356	201%	0	100%
Kvígindishóll		760	364			-396	48%
Laufskalaholt	25						
Nautabú	3236	3865	4156	629	119%	291	108%
Neðri-Ás	15023	12488	14085	-2535	83%	1596	113%
Reykir	7055	6829	1457	-226	97%	-5372	21%
Skúfsstaðir	5382	5351	3620	-31	99%	-1731	68%
Víðines	780	1521	3827	741	195%	2306	252%
Viðvík	7398	2725	2322	-4674	37%	-402	85%
Holakot	5558	3979	4221	-1579	72%	242	106%
			Mean Change		220%		100%
			Median Change		120%		102%

Appendix D – Geophysics

Establishment of Geophysical Grids

All land-survey data were collected based on the ISN93 coordinate system. The geophysical grid was initially established using a Topcon HiPer SR DGPS using the IceCORS network, primarly using the local connection at Akureyri University (AKUR) which yields about 1 cm horizontal accuracy and 2 cm vertical accuracy. The corner points of survey area and internal grids at intervals of 20 × 20 meters were flagged using the Hiper SR. Additional flags were laid out at intervals of 10 × 10 m using fiberglass measuring tapes that were stretched between the stations established by the DGPS. The eastern and western baselines of the grids were flagged at 1-m intervals using alternating colors. Additional lines of alternating flags running east to west were laid out 10 m apart to help guide the surveying.

Conductivity: Electromagnetic Principles

Conductivity or the frequency-domain electromagnetic (FDEM) method is an active non-destructive geophysical method that is used to obtain shallow subsurface information. In the EM method, a time-varying magnetic field is generated by driving an alternating current through a loop. Eddy currents flow within any conductive material beneath the area of investigation. The eddy currents generate their own magnetic fields such that at any point in space, the total magnetic field is the superposition of the primary field due to the source current and secondary fields due to the eddy currents. By discriminating between primary and secondary fields, variations in the EM properties of the ground can be discerned.

EM instruments measure both out-of-phase (quadrature or Con) and in-phase (IP) components of the induced magnetic fields. The former is a measure of the bulk apparent ground conductivity; the latter is related to magnetic susceptibility and is particularly sensitive to the presence of metallic objects. Bulk apparent ground conductivity reflects true conductivity when the subsurface is homogeneous and isotropic, which is rarely the case in practice. For heterogeneous conditions, it represents an integrated effect of the all the conductivity within the volume of ground being sensed. It does not, however, represent an average conductivity and in fact can be lower or higher than the lowest or highest subsurface conductivities, respectively. A lateral variation in the components is indicative of lateral changes in properties. The conductivity is particularly sensitive to fluid content and dissolved salts or ions. Accordingly, wet sands, clays and materials with high ion content generally have high bulk apparent ground conductivity; dry sands and crystalline rocks have low bulk apparent ground conductivity.

Ideally, EM surveys are conducted in archaeological investigations to find conductive targets in resistive environments such as middens and rammed-earthed walls. Although more subtle and difficult to detect, resistive targets such as buried stone walls and foundations can also be detected through EM surveying. The FDEM surveys were conducted using a GF Instruments' CMD Mini-Explorer. The CMD Mini, like the larger CMD explorer operates at 30 kHz over three separate dipole lengths. By increasing dipole length, a greater volume and depth of soil can be sensed. The CMD Mini Explorer has a single transmitter located at one end of the unit and three separate receivers located at dipole lengths of 0.32, 0.71 and 1.18 m

which provide depths of interrogation of approximately 0.5, 1.0 and 1.8 m, respectively, relative to the level of the sensors. For the 2023 CMD Mini survey, the unit was operated in the vertical dipole mode with the boom carried at foot level oriented parallel to the direction of the transects. Con3 and IP3 images correspond to the deepest level of integration.

Conductivity Profiles

To better visualize the way that the bulk conductivity values associated with the walls compared to the surrounding matrix, profiles were generated along two transects for the Skúfsstaðir grid 2 conductivity data (Figure 89). Note that North is to the right in each profile and South is to the left; to read N-S, read the profile right to left

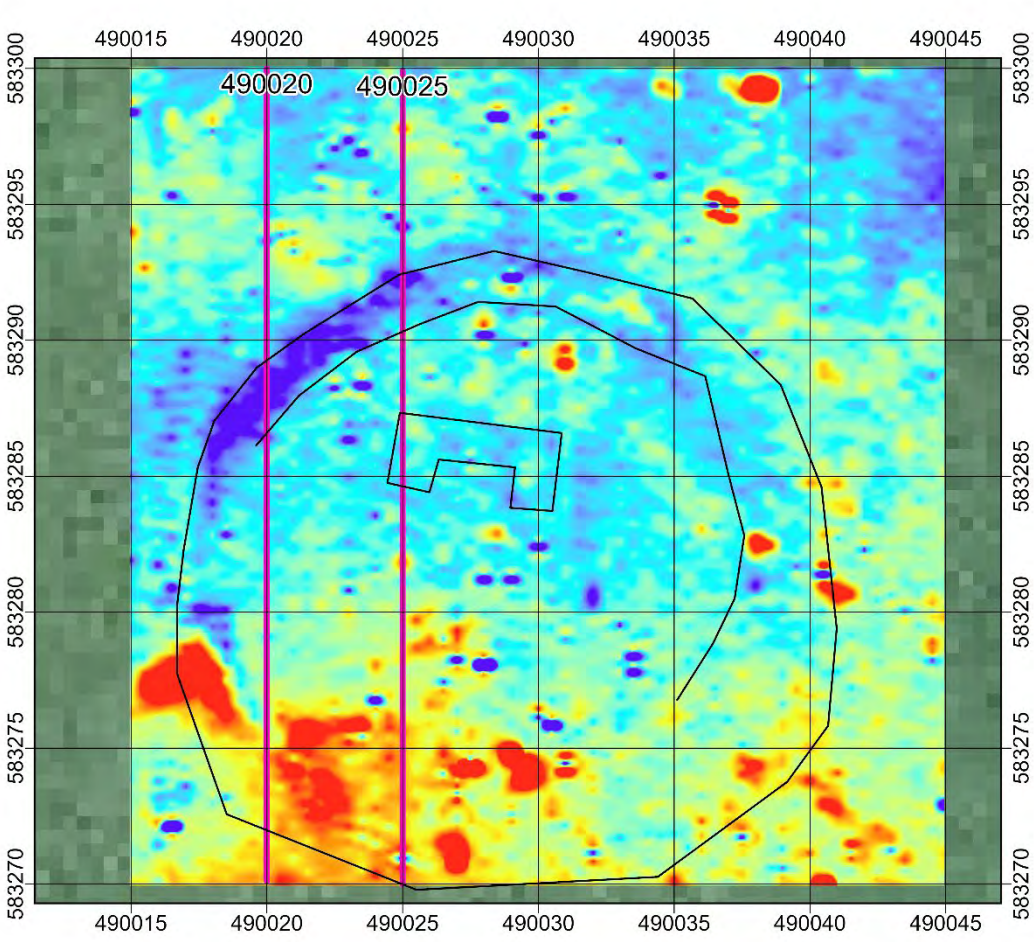

Figure 89. Transects 020 and 025 at Skúfsstaðir grid 2 superimposed over Con1 and the church outline from Kálfsstaðir at Skúfsstaðir taken from (Zoëga and Steinberg 2022, 2023).

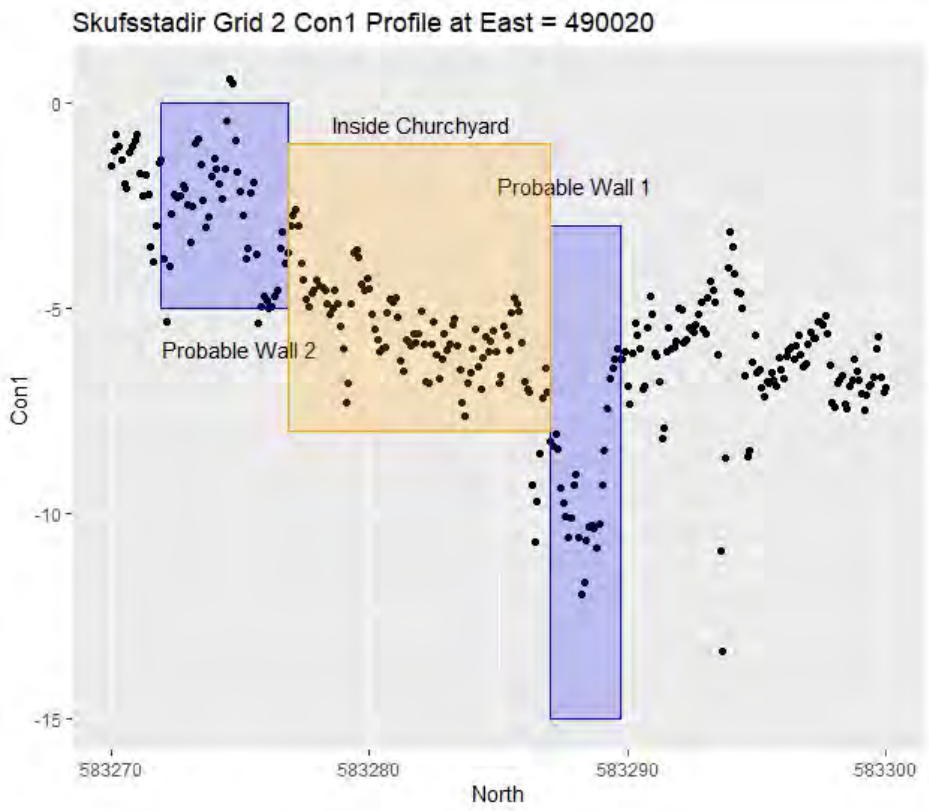

Figure 90. Transect 020 Con1 profile.

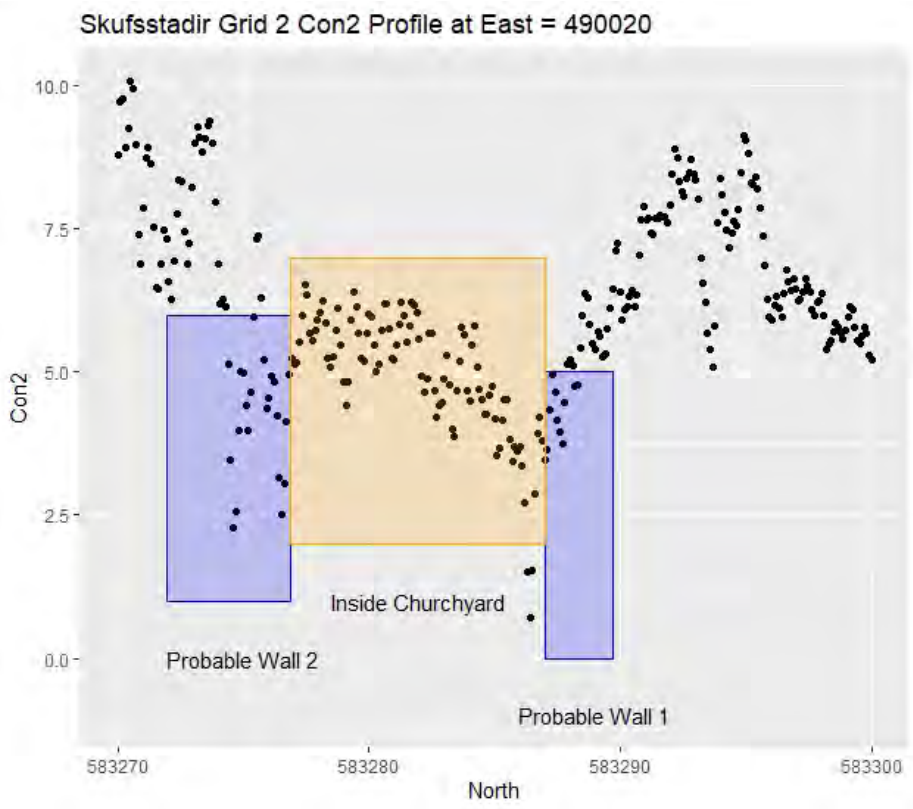

Figure 92. Transect 020 Con2 profile.

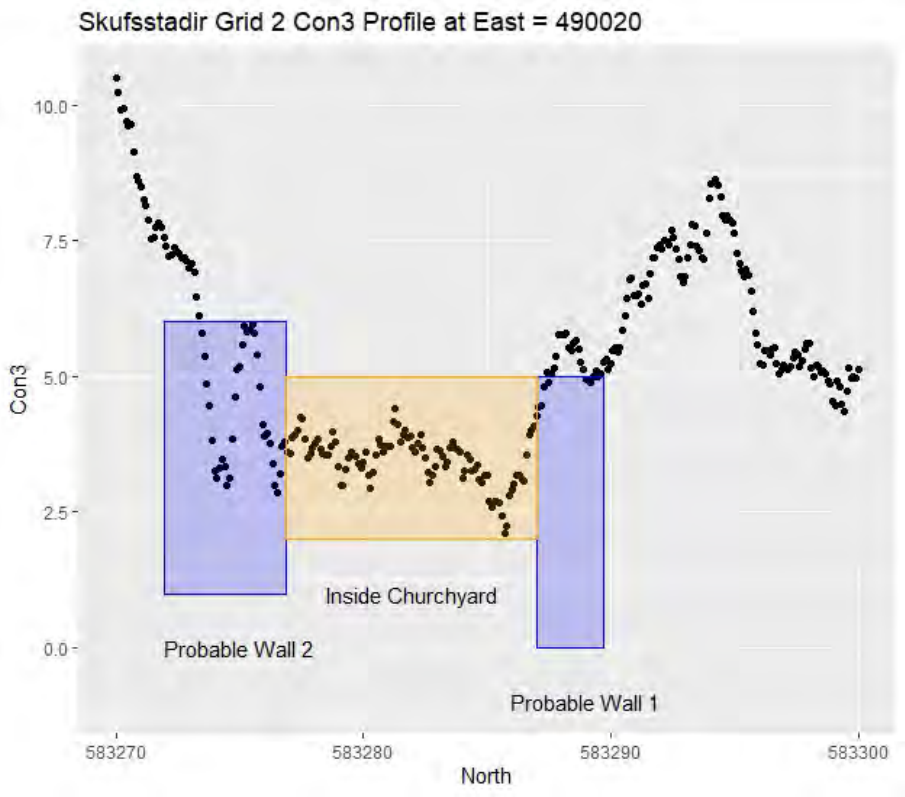

Figure 93. Transect 020 Con3 profile.

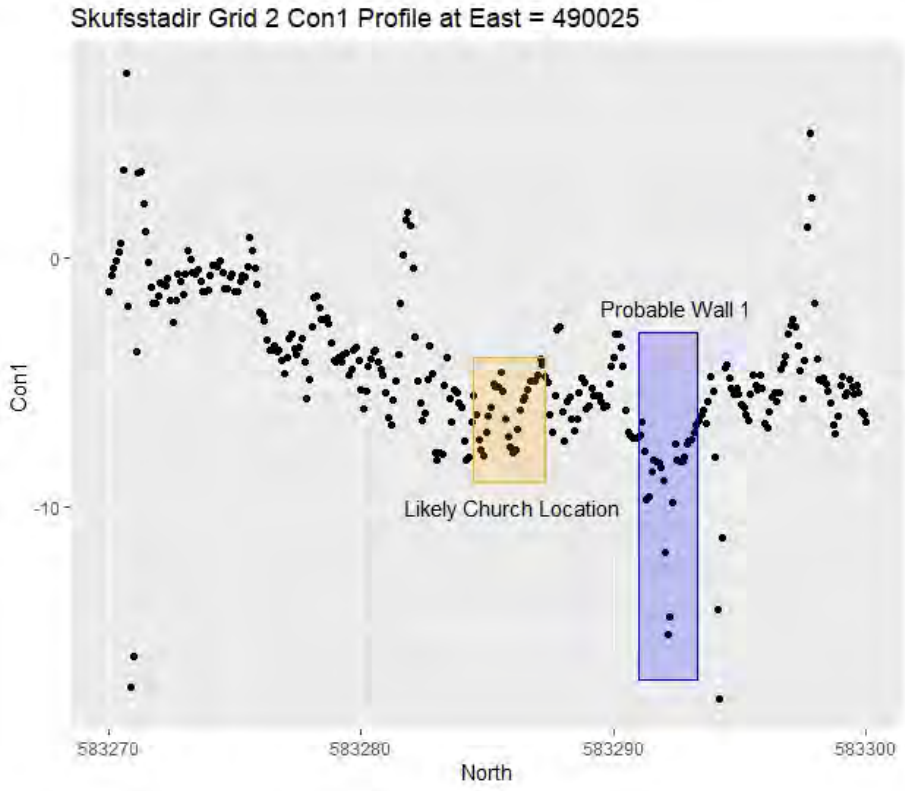

Figure 94. Transect 025 Con1 profile.

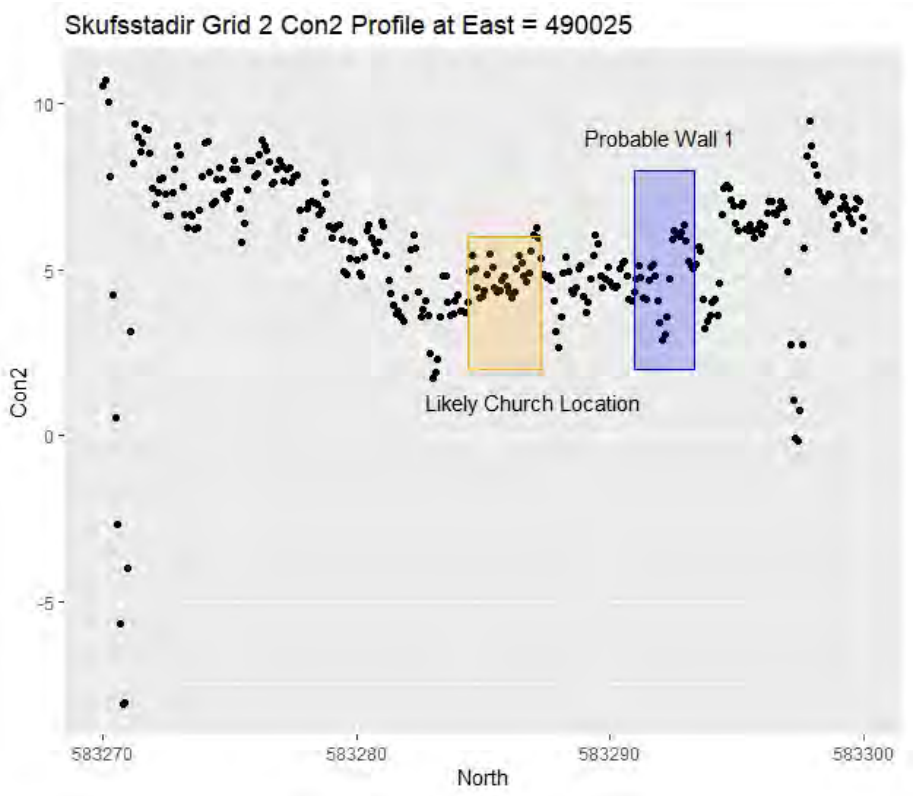

Figure 95. Transcect 025 Con2 profile.

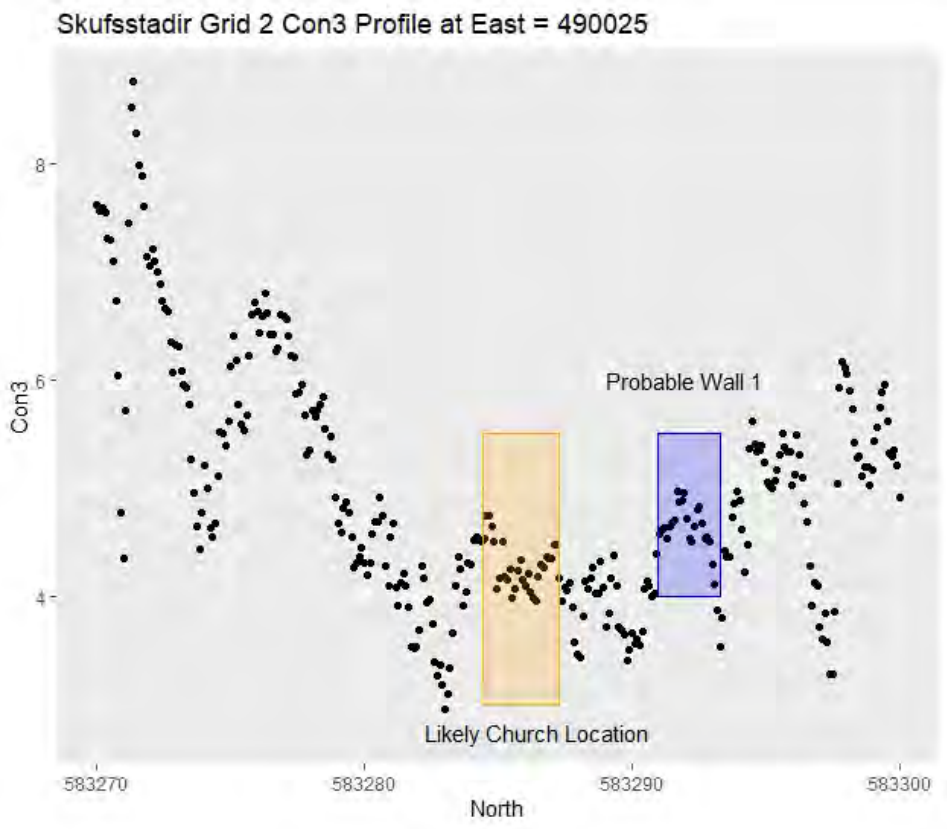

Figure 96. Transcect 025 Con3 profile.

Profile Interpretation

Transect 020 was chosen because it crossed the wall in two places and the spike/trough associated with the wall could be seen in two different places. In Con1, the walls appear differently (one is a spike, the other a trough), likely because of midden/other materials above the wall visible in the Con1 interpolation. The trough is more reflective of how a wall should appear; turf and rocks are both resistive and should have a lower bulk conductivity value than floor and midden. Compared to probable wall 1, represented by a trough, the inside yard is higher in Con1 (Figure 90). Con2 is generally similar, with both walls now appearing as resistive troughs compared to a more conductive inner yard (Figure 92). Con3 is quite different; the walls now both appear as spikes with a trough on either side, with the inner yard lower than the spikes but higher than the troughs (Figure 91). A possible interpretation of this is that the wall is made of turf and/or stones and then filled with midden, which could explain the conductive spike (midden) between troughs (turf/rocks). It is unclear why this relationship would only appear at the lowest level and why the interior of the yard would contain less midden/floor than the walls. Excavations in 2024 will hopefully be able to resolve some of this uncertainty by determining the makeup of the walls and seeing if it shifts dramatically at a certain depth.

Transect 025 was chosen because it passed through a wall and through the center of the churchyard, where a structure was likely to be. It was less easy to interpret. The wall followed the same broad pattern, appearing as a trough in Con1 and Con2 and a spike surrounded by troughs in Con3. There was no second wall visible in Con1 or Con2, attributed to the same material covering the south section of the church, but there is a spike surrounded by troughs in Con3 that might indicate a second wall, though it is much higher than the spike for the known wall and both spikes were very similar to transect 020 Con3. The center of the church has a small spike in Con3 that might correspond to a church floor, but this is highly speculative.