

Hofstaðir 2014. Interim report



Hildur Gestsdóttir

With additions by Jannie Ebsen



FS557-910117

Reykjavík

2015

©Fornleifastofnun Íslands

Bárugötu 3

101 Reykjavík

Sími: 551-1033

Fax: 551-1047

Veffang: fsi@instarch.is

Table of content

Introduction	5
Previous seasons.....	6
1999-2004.....	6
2010.....	6
2011	7
2012.....	7
2013.....	7
Methods	8
Results	9
1410-1477	9
1300-1410.....	14
Pre-1300	15
Burials	16
Future work	23
References	24
Appendix 1: Conservation remarks (Jannie Ebsen)	27
Iron	27
Copper alloys	27
Bone	27
Appendix 2: Unit register.....	29
Appendix 3: Finds register.....	33

Appendix 4: Skeletal register	37
Appendix 5: Samples register	39
Appendix 6: Bibliography for Hofstaðir	41
Reports.....	41
Publications	41
Unpublished dissertations/theses.....	42
Ph.D.....	42
M.Sc.....	42
M.A.	42
B.A.	42
Current projects using Hofstaðir skeletons	43
Ph.D.....	43
Other projects	43

Introduction

The 2014 excavation season at Hofstaðir was four weeks, from July 21st through August 15th. This was the fifth season since excavations started again in 2010 after a hiatus. Those who took part were archaeologists Hildur Gestsdóttir (project manager), Stefán Ólafsson, Oddgeir Isaksen (28th July – 1st August) Nikola Trbojevic (28th July – 15th August) and Liam Lanigan (28th July – 15th August). In addition, Brenda Prehal, a Ph.D. student from Hunter College, City University of New York joined the excavation for two weeks (21st July-1st August) and Gunnlaugur Garðarsson, student, for just over a week (21st – 29th July). In addition Nikola Trbojevic worked on the post-ex. Funding for the project was provided by Fornminjasjóður and The National Science Foundation (CIE grant) through Dr. T. McGovern and the North Atlantic Biocultural Organisation (NABO). This season's work at Hofstaðir was made possible by the kind permission of Árni Pálsson, the trustee of the Hofstaðir farm, who gave us permission both to excavate and stay at Hofstaðir farm for the duration of the excavation.

Tephrochronology demonstrates that the cemetery at Hofstaðir went out of use before 1300, although use of the church itself may have continued. The main aim of the investigation is to carry out a comprehensive investigation of an early medieval church and cemetery, to increase our understanding and knowledge of church structures and burial practises from the period in Iceland. With that in mind, the long term aim of the investigation is to excavate the entire cemetery, not only inside the cemetery boundary, but also outside it to investigate whether there are structural features located outside it, and in particular whether there are any extramural burials of individuals who for some reason could not be laid to rest in sacred ground.

Another aim of the project is to carry out intensive osteoarchaeological analysis of the human skeletal remains. Some research projects have already been carried out using the Hofstaðir skeletal remains. For details of these, both current and past projects, see Appendix 6.

Previous seasons.

1999-2004

Archaeological investigations in the cemetery at Hofstaðir started in 1999. Geophysical surveys revealed a circular boundary, approximately 30m in diameter with an irregularity in its centre. Trial trenches revealed burials within the boundary, and central structural remains. In 2000 an area approximately 231m² was opened over the central part of the cemetery, and excavations there carried on until 2004. During this period the remains of three structures were excavated in the central area. The latest was turf built, post 1477, but had been so severely damaged during levelling of the site in the mid-20th century that its function remains unknown, although it is most likely the remains of a smithy (Orri Vésteinsson 1996). This sat on top of two phases of timber churches, the earlier and slightly larger of these appears to have been in use in the late 10th century, while the later, a stave church, was constructed some time before 1300. In addition 76 graves which surrounded the churches were excavated in the area (Hildur Gestsdóttir 1999; 2001; 2002; 2003; 2004; 2006). After the 2004 season, excavations were put on hold for a few years, and resumed in 2010.

2010

The 2010 season lasted five weeks. It involved continued excavation in the southern part of the excavation area abandoned in 2004, where the 34 burials which remained were excavated. In addition, a new area, 491 m², was opened to the north and east of the old excavation area with the aim of exposing the cemetery boundary seen on the 1999 geophysical survey. By the end of the 2010 season, although the outline of the boundary could be clearly seen, it had not yet been exposed. In addition, several grave cuts could be identified inside the boundary. Some later remains, associated with the farm-mound were excavated, including a modern sheet midden and a rubbish pit, probably originating from the 17th-18th century, and partially reused toward the end of the 19th century (Hildur Gestsdóttir and Oddgeir Isaksen 2011).

2011

The 2011 field season was three weeks. The burials inside the northern part of the cemetery which had been exposed at the end of the 2010 season were excavated, seven in total containing the remains of eight adults. Six of the burials were *in situ*, while two contained re-deposited skeletons. One contained a small chest with the commingled remains of two individuals, while one was a small pit containing the remains of one individual. Outside the cemetery boundary a small midden situated between the H1300 and V1477 tephra was excavated. It was rich in artefacts and animal bones. An article detailing the analysis of the latter has already been submitted to the *Journal of the North Atlantic* (Oddgeir Isaksen and Hildur Gestsdóttir 2012b; McGovern et al. in press).

2012

The 2012 season was two weeks. The focus of the work was on completing the excavation of the area in the northern and the eastern part of the cemetery, opened in 2010. This involved the excavation of the cemetery boundary itself, as well as two grave cuts outside the boundary.

The boundary wall was turf built, up to three courses high, and containing the V940 tephra. Its preservation was varied, although it is in most places around 1 m wide, and between 0.1-0.3 m high. The turf from the wall was cut from either side of it, so it sat on a small bank of *in situ* soil, which added about 5 cm to its height. A stone-built entrance with a stone pavement was discovered in the eastern part of the wall.

The two graves excavated were up against the north-eastern border of the boundary, and both undercut the boundary wall. Only one was found to contain a neonatal skeleton. The other was the same shape and size as the neonatal burials at the site, but was not found to contain skeletal remains (Oddgeir Isaksen and Hildur Gestsdóttir 2012b).

2013

The 2013 field season was four weeks. The focus of the work was twofold. First of all there was the completion of the excavation of two burials within the old excavation area

(within group [1747]). The second was the opening of a new area (228.1 m²) over the southern part of the cemetery, extending beyond the boundary as demonstrated by the geophysical survey. The excavation within the area could be divided into three phases, based on the *in situ* tephra. The youngest phase within the new area the rubble from the old farm mound which stood west of the excavation area and was abandoned and subsequently bulldozed in the middle of the 20th century. This sealed a dump, which consisted of ash and charcoal, with large amounts of iron slag, indicating that this is a dump from a smithy. The smithy dump was sat directly on top of the tephra from the 1717 eruption in Veidivötn.

Between 1717 and 1477 marked a period of inactivity within this part of the cemetery with limited evidence of nearby human occupation. The period between 1300 and 1477 marked the abandonment phase of the cemetery, with a series of turf deposits separated by intermittent aeolian deposits being placed within the boundary wall. These sealed the 1300 tephra from the eruption in Hekla, which in turn sealed the surface at which the burials within the cemetery were cut (Hildur Gestsdóttir & Oddgeir Isaksen, 2014).

Methods

Excavations were carried out using the single context recording method. This involves treating each unit; deposit or cut, as a unique event in the build-up of the area being investigated. The main aim is to maintain a good overview of the chronology of the units making up the excavation area as well as the relationships between different structural elements or phases. Each unit is recorded with photographs, plans and levels and is given a unique number within a running number system.

During the excavation these units are entered into a flow chart (Harris matrix) which documents the stratigraphic relationship between the different units. Where necessary, units which are in some way associated (e.g. belong to the same structure or phase) are grouped together under unique group numbers. These group numbers are then used when describing within a text the common unit numbers which belong to them.

Artefacts, samples and buried skeletons discovered during the excavation are similarly recorded using find, sample and skeletal registers unique numbering system where they are associated with the unique unit number within which they were recovered (Lucas 2003).

Results

All the work carried out during the 2014 season was within the southern area of the cemetery (228.1 m²), opened in 2013. The work can be divided in to two main areas, excavation inside the cemetery boundary and excavation outside the cemetery boundary. The following sections will describe the archaeology excavated in these two areas, split into phases based on the *in situ* tephra excavated on the site. These are V1477, V1410 and H1300. Artefactual and skeletal analysis is yet to be carried out. However, registers for these, as well as the conservation report, are included in the Appendices.

1410-1477

All the excavation in this phase carried out in the 2014 season at Hofstaðir was outside the cemetery boundary (see figure 4 for the main units excavated in this phase).

Most of the work was concentrated in the area south of the boundary. The V1477 tephra in this area sealed a series of aeolian deposits excavated in 2013 (Hildur Gestsdóttir and Oddgeir Isaksen, 2014), and a turf debris dump [5285], which in turn sealed a cluster of cooking pits and single use hearths, which were found up against and cutting into the cemetery boundary. In total three cooking pits and at least two single use hearths (as well as a third cut which may be an emptied out hearth) were excavated in the area during the 2014 season.

Cooking pit [5284] was located just south of the cemetery boundary (see figure 1). It was a sub-circular cut, 1.5 m in diameter (max) and 0.6 m deep. The southern edge was slightly inclined, while the northern edge was undercut by 0.2 m. The base was relatively

flat. The pit contained a single fill [5270] consisting mainly of fire cracked rocks surrounded by silts heavily mixed with charcoal.



Figure 1. Cooking pit [5284]. Facing west.

Cooking pit [5286] was cut into the southern part of the cemetery boundary (see figure 2). It was a sub-circular cut, 1.5 m in diameter (max) and 0.6 m deep. It had near vertical sides, which were slightly undercut at the base. It contained a series of three fills. The topmost fill was a thick layer of charcoal [5279], with inclusions of fire cracked stones and a large amount of animal bones. This sealed a layer of mixed silts, with charcoal and fire cracked rocks [5280]. These two layers formed the majority of the fills of the pit. In the northern half of the base was a thin layer of wood ash with some fire cracked rocks [5281].



Figure 2. Cooking pit [5286]. Facing west

Cooking pit [5306] was located in the south-western corner of the excavation area, and extended slightly under the western limit of excavation (see figure 3). It was a sub-circular cut, 1.4 m in diameter (max) and 0.3 m deep with gently sloping sides and a concave base. The pit contained five separate fills. The topmost was a charcoal layer [5301], with inclusions of fire cracked stones. This sealed a layer of turf debris [5302], which in turn sealed a thin layer of charcoal in amongst large fire-cracked rocks [5303]. This sealed another layer of turf debris [5304]. The base of the fill was a mixed layer of charcoal and peat ash lenses, with H3 tephra inclusions [5305]. This deposit covered the base of the cut, and lay up against its southern edge.



Figure 3. Cooking pit [5306]. Facing west

These cooking pits are all cut into the same surface, formed by a series of units, an aeolian deposit [5293] and two small wood ash/peat ash deposits, [5296] & [5298], which overlie a large aeolian deposit with slight charcoal content, [5309]. They therefore appear to be largely contemporary. Two of the single use hearths also appear to be roughly contemporary to the cooking pits. Cut [5292] was a small sub-circular cut, 0.4 m in diameter (max) and 0.1 m deep, with concave sides and base. It was filled with a deposit of mixed silts with a slight charcoal content [5290], and may be an emptied out hearth. Hearth [5308] was sub-circular, 0.7 m in diameter and 0.2 m deep. The edges are near vertical, the base flat. There was a single fill [5307], charcoal and turf mix, with frequent fire cracked rocks inclusions, in particularly near the upper part of the fill.

Aeolian deposit [5309] overlay the last single use hearth excavated in the area south of the cemetery boundary during the 2014 season. This was hearth [5319], as sub-rectangular cut, 0.45 x 0.75 m, and 0.15 m deep. It had near vertical edges and a flat

base. It had two fills. The upper one of these was a deposit of turf debris with charcoal inclusions and ash lenses [5317], which sealed a thin layer of charcoal which lined the base of the cut [5318].

The cooking pits and hearths truncated a series of turf debris- [5312] and [5321], aeolian- [5320], and charcoal [5316] deposits, which in turn sealed the tephra from the 1410 eruption in Veidivötn [5325].

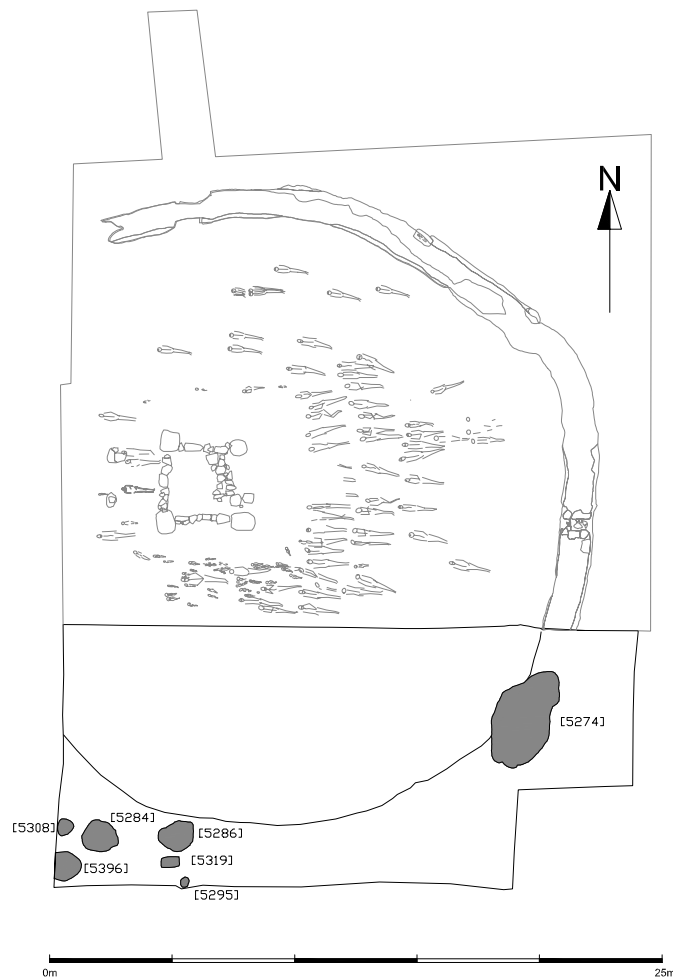


Figure 4. The main archaeological features in the 1410-1477 phase. The earlier excavation area is shown in grey, the current excavation area in black. The inner edge of the cemetery boundary is shown.

It is worth noting that although the cooking pit and hearths post-date the use of the cemetery for burials, they are made during a period when the church was most likely still in use, and the inner edge of the cemetery boundary would have been clearly visible. It is therefore quite possible that these pits are in some way associated with the use of the church. However, future excavations of the area to the west of the current excavation may paint a clearer picture of the association of these pits to their surroundings.

Three contexts belonging to the 1410-1477 period were removed on and outside the eastern part of the cemetery boundary. Immediately below the V1477 tephra (which was excavated during the 2013 season), was a windblown deposit with slight charcoal inclusions [5267]. This sealed a large irregular cut [5274]. The cut was sub-oval in shape, 1.3 x 2.4 m and 0.3 m deep. It was oriented northeast-southwest, following the line of the cemetery boundary, and removing it to a great extent. The edges of the cut were very irregular, and stepped in some places, and the base was similarly very irregular. There was a single fill within the cut, [5269], a midden deposit, heavily mixed with windblown material, charcoal, turf fragments, stones and rocks. The fill extended beyond the outline of the cut, in particular to the north, where the cut was the shallowest.

1300-1410

A single deposit belonging to this phase was excavated during the 2014 season (see figure 5). This was a turf cap [5330]=[5331], 5.5 m long with an average width of 0.5 m, which had been placed on top of the southern part of the cemetery boundary. Similar features have been seen in other parts of the cemetery (Oddgeir Isaksen and Hildur Gestsdóttir, 2012a). They indicate that the cemetery boundary wall was being maintained during this period, even though the cemetery was no longer being used for burials.



Figure 5. The archaeological features in the 1300-1410 phase. The earlier excavation area is shown in grey, the current excavation area in black. The inner edge of the cemetery boundary is shown.

Pre-1300

All the archaeology predating the 1300 eruption in tephra excavated during the 2014 season was inside the cemetery boundary. This work can be divided into four different groups.

Immediately below the H1300 was a series of turf deposits [5265] & [5268] with intermittent aeolian- [5264], and upcast [5266] deposits which mark the last units of group [5261], most of which were excavated during the 2013 season at Hofstaðir.

Together these units formed a small mound in the middle of the cemetery. They appear to have been to some extent deliberately laid down, although over a long period, starting before 1300 and ending by 1410 (cf Hildur Gestsdóttir and Oddgeir Isaksen, 2014). This appears to be some sort of landscaping of the cemetery, perhaps marking the period after burials ceased, but while the church was still in use.

Group [5261] sealed intermittent deposits which represent the latest period of use within the cemetery. One of these, group [5344] is a series of upcast deposits, [5272], [5289], [5337], [5339], & [5342], sealed by a single windblown deposit [5273]. These upcasts deposits are most likely associated with the cutting of graves within the cemetery. To some extent contemporary with these upcast layers, were a series of aeolian deposits (group [5343]) which had collected up against the inner edge of the cemetery boundary wall. These were units [5263], [5283], [5291], [5324], [5332], [5333], [5336], & [5338]. Sealed by [5273], an aeolian deposit in group [5344] was a small hearth, cut [5282]. This comprised of a small sub-circular pit, 0.7 m in diameter with concave sides and base, and a maximum depth of 0.2 m. It had two separate fills. The upper, [5275] consisted of a mixed silt with inclusions of charcoal flecks and fire-cracked rocks. The base of the cut was lined by a thin (4 cm) layer of charcoal [5276]. What the function of this pit was is unclear, however, it appears to be contemporary with the use of the cemetery.

Burials

The following section will discuss the burials excavated during the 2014 season (see figure 9). In most instances the grave cuts are sub-rectangular in shape, oriented east-west, with vertical-undercut edges and a flat base. The fill is a mottled mixed silt with inclusions of prehistoric tephra (in particular H3), made up of the material dug up when the grave was cut. The skeleton is usually in a supine position with the head oriented to the west. In the following text, a note will be made of all the burials which do not fit to this pattern

Eleven burials were excavated during the 2014 season. Six of the burials were sealed by a turf deposit [5260], which was a part of group [5261]. These were in two clusters in the

north-western quadrant of the excavation area. Southernmost were two intercutting burials. The later of these, cut [5278], which was 0.5 x 2.0 m and 0.7 m deep. It contained a heavily mottled mixed silt [5277] and skeleton HSM-A-124, a well preserved adult, buried with the head tilted to the left. The legs and arms were straight, the left hand resting on top of the left hip, and the right hand under the left hip. There was no evidence of the individual having been placed in a coffin, there were however a small amount of black ash placed on the chest of the individual. The western end of cut [5278] truncated the eastern end of an earlier grave, cut [5295]. This had a preserved dimension of 0.4 x 0.5 m and a depth of 0.6 m. The grave contained a fill of mixed silts, [5294] and skeleton HSM-A-126. This was a well preserved neonate, buried in a supine position with straight arms and legs. The lower part of the legs had been truncated by [5278] with only the femora preserved. There was no evidence of a coffin.

Immediately north (0.5 m) of this burial cluster was a series of four intercutting burials. The latest of these was grave cut [5311], 0.5 x 1.9 m, 0.6 m deep with stepped – near vertical edges. It contained a fill of mixed silts, [5310] and skeleton HSM-A-128 (see figure 6). This was a well preserved adult. The stepping of the grave cut, meant that it was very narrow at its base, and it appeared to be slightly too narrow for the individual buried there. They had been laid out with the head facing forward and straight arms and legs. However, due to the narrowness of the grave cut it did not fit the shoulders of the person, and so the arms were rolled inwards, and were resting up against the section. The left hand was resting on top of the left hip, and the right hand underneath the right hip, while the left foot rested on top of the right one. There was no evidence of a coffin, but a small amount of black ash was found on the chest cavity. There were also stains under the pelvis and legs which may indicate the presence of branches. Grave [5311] truncated three earlier burials. The eastern end of the cut truncated the north-western corner of grave cut [5327]. This had a WSW-ENE orientation, measuring 0.5 x 0.8 m, 0.6 m deep. It contained a mixed silts fill, [5326] and skeleton HSM-A-131 (see figure 7). This was a well preserved neonate, laid out on his back. The arms were straight with the hands resting on the hips, while the knees were slightly bent to the right, with the left foot on top of the right one. There was evidence of a coffin, with the soil preserving the

coffin outline, and staining of the base. The coffin was rectangular in shape with a preserved dimension of 15 x 45 cm and no evidence of a lid. Cut [5311] truncated the north-west corner of the coffin, and disturbed the cranium as well as the left arms and ribs of the skeleton.



Figure 6. Skeleton HSM-A-128, grave cut [5311].

The western end of cut [5311] truncated two earlier graves. The later of these, cut [5323] had the eastern end truncated by cut [5311]. It was oriented WNW-ESE, and its surviving dimensions were 0.3 x 0.6 m, 0.2 m deep. It contained a mixed silts fill [5322] and skeleton HSM-A-130. This was the poorly preserved skeleton of a neonate. He had been buried within a coffin, and appears to have rolled on his left side up against the edge of the coffin, and so the skeleton was found lying on its left side with their face against the southern section of the cut. The only thing which remained of the coffin was only wood-staining along the northern edge as well as parts of each end. It appears to have been rectangular in shape, with a preserved dimension 15 x 45 cm and no evidence

of a lid. Cut [5311] did not truncated the skeleton or the coffin. Immediately south of grave [5323], and truncated by it and grave [5311], was grave cut [5335]. The north-eastern corner had been truncated by [5323] and the western end by [5311]. The surviving dimensions were 0.3 x 0.7 m, 0.4 deep. It contained a mixed silts fill [5334] and skeleton HSM-A-133. This was a well preserved neonatal skeleton, laid out with straight arms and legs with the hands resting next to the pelvis. It had been placed in a coffin, which was visible only as wood stains. The coffin was rectangular in shape, with a surviving dimension of 14 x 45 cm. Slight soil staining on top of the skeleton indicates that the coffin may have had a lid.



Figure 7. Skeleton HSM-A-131, grave cut [5327]. The truncation of the burial by grave cut [5311] can be seen in the top left hand corner of the photograph

North-west of this burial cluster (0.6 m) was a third burial cluster consisting of four burials. These were sealed [5289] an upcast layer, part of group [5344], probably contemporary with the burial period within the cemetery. One of the latest of these was

grave cut [5300]. This lay furthest to the north within the cluster, and had been truncated by grave cut [1879] excavated during the 2004 season (Hildur Gestsdóttir, 2006). The cut was 0.6 x 1.4 m, and 0.6 m deep. It contained a mixed silts fill [5299] and skeleton HSM-A-127. This was a well preserved juvenile skeleton, laid on its back with the head facing forwards and the arms and legs straight. The hands were resting next to the hips, and the right foot was resting on top of the left foot. There was no evidence of a coffin, and a small amount of black ash had been placed on the left side of the chest.

Furthest south in this cluster of burials is grave cut [5314]. It was oriented WNW-ESE and measured 0.2 x 0.9 m, 0.4 m deep. It contained a mixed fill [5313] and skeleton HSM-A-129. This was an average preserved skeleton of a juvenile who lay in a supine position, the head facing left with the left arm straight, hand next to the hip and the right arm slightly bent with the hand resting on the hip. The legs were straight, but the feet were not preserved. This individual was buried in a rectangular coffin with a lid, only observable through wood staining in the soil. The preserved dimension of the coffin was 15 x 77 cm. There was no evidence of ash being placed in the grave.

Grave [5314] was cut into an earlier grave, cut [5329]. This burial had a more normal east-west orientation, which meant that grave [5314] was cut diagonally into the grave [5329], from the middle of its southern edge and into its western end. The dimensions of grave [5329] were unusual, it was very wide compared to its length, measuring 0.7 x 1.5 m, 0.7 m deep. It contained a mixed silts fill [5328] and skeleton HSM-A-132 (see figure 8). This was a well preserved juvenile skeleton, laid out with the facing to the left. The left arm was slightly bent at the elbow with the left hand underneath the pelvis, while the right arm was parallel to the body with the hand next to the hip. The legs and feet were straight, parallel to each other. This individual had been placed in a coffin, which was only preserved through wood staining. The coffin appears to have been trapezoidal in shape, slightly wider at the head (western) end, 35 cm than at the foot (eastern) end, 25 cm. It was 140 cm long. A soil stain of a single plank 5 cm wide and 120 cm long indicated that this coffin had a lid. There was no evidence of ash being

placed within this grave. As the cut [5314] was considerably shallower than cut [5329] it did not truncate skeleton HSM-A-132, or the coffin.



Figure 8. Skeleton HSM-A-132, grave cut [5329] The truncation of the grave by cut [5314] can be seen in the bottom centre of the photograph.

The last grave in this group was cut [5341]. This had been truncated by both [5300], the north-western corner, and [5329], $\frac{2}{3}$ of the south-eastern edge. Due to the truncation, the maximum width of the cut is unknown, maximum surviving width was however 0.5 m. It was 2.0 m long and 0.7 m deep. The cut contained a mixed silts fill, [5340] and skeleton HSM-A-134. This was a well preserved adult skeleton, laid out with the head facing to the right, with straight arms, the left hand resting on top of the thigh, while the right lower arm and hand were underneath the pelvis. The legs and feet were parallel to each other. The individual had been placed within a coffin, which was only visible through wood staining in the soil. The coffin trapezoidal in shape, wider at the head (western) end, 45 cm, than the foot (eastern) end, 20 cm. It was 185 cm long. There was

no evidence that this coffin had a lid. Although the grave was heavily truncated by later burials, this has not affected the skeleton or coffin.



Figure 9. The main archaeological features in the pre-1300 phase. The skeleton numbers are shown. The earlier excavation area is shown in grey, the current excavation area in black. The inner edge of the cemetery boundary is shown.

East (1.4 m) of this burial cluster was a single excavated burial, cut [5288]. It was sealed by [5272] an upcast deposit, part of the [5344] group. This grave did not truncate, and was not truncated by, other grave cuts. The grave was oriented WNW-ESE, and was 0.6 x 2.0m, 0.6m deep. It contained a mixed silts fill, [5287] and skeleton HSM-A-125. This was a well preserved adult skeleton laid out with the head facing forwards. The arms were both slightly bent at the elbows with the left hand resting on the left hip, and the

right hand on the right hip. The legs and feet were straight, parallel to each other. There was no indication of a coffin, and a small amount of black ash had been placed on the chest of the individual.

Future work

The main focus for the 2015 season at Hofstaðir will be to finish excavating the southern area. This will involve the excavation of all the graves in the area, which have been estimated to be between 30-40, as well as the completion of the excavation outside the cemetery, in particular in the southern part of the site, where it is quite likely that at least two unexcavated cooking pits remain.



Figure 10. The site at the end of the 2014 season, facing east. The cemetery boundary wall can be seen curving around the right hand side of the photograph. Right of that is one excavated cooking pit, and two which remain to be excavated. The excavated burials can be seen in the top left hand corner. The unexcavated burial cuts are seen in the centre left of the photograph. There has been some truncation of the surface into which the burials are cut, in some instances down to the prehistoric H3 tephra, seen *in situ* in the centre top of the photograph.

The final, unexcavated part of the cemetery, lies to the west of the current excavation area. This is mostly sealed by the post-medieval farm buildings, as reported by the occupants of the farm, and demonstrated by the geophysical survey carried out in 1999 (Orri Vésteinsson, 1996; Horsley and Dockrill, 2002). There are plans to excavate the post-medieval farm-mound, and so the final part of the cemetery will be excavated in conjunction with this. The farm-mound excavations are due to start in 2016/7.

References

- Hildur Gestsdóttir. 1999. The medieval churchyard. In: Lucas G, editor. Hofstaðir 1999 Framvinduskýrslur/Interim Reports. Reykjavík: Fornleifastofnun Íslands FS102-91017. p 44-54.
- Hildur Gestsdóttir. 2001. The medieval chapel and churchyard. In: Lucas G, editor. Hofstaðir 2000 Framvinduskýrslur/Interim Report. Reykjavík: Fornleifastofnun Íslands FS130-91018. p 21-25.
- Hildur Gestsdóttir. 2002. Area Z. In: Lucas G, editor. Hofstaðir 2001 Framvinduskýrslur/Interim report. Reykjavík: Fornleifastofnun Íslands FS167-91019. p 29-34.
- Hildur Gestsdóttir. 2003. The chapel. In: Lucas G, editor. Hofstaðir 2002 Framvinduskýrslur/Interim report. Reykjavík: Fornleifastofnun Íslands FS193-910110. p 26-29.
- Hildur Gestsdóttir. 2004. Hofstaðir 2003. Framvinduskýrsla/Interim report. Reykjavík: Fornleifastofnun Íslands FS230-910111.
- Hildur Gestsdóttir. 2006. Hofstaðir 2004. Interim Report. Reykjavík: Fornleifastofnun Íslands FS311-910112.
- Hildur Gestsdóttir and Oddgeir Isaksen. 2011. Fornleifarannsókn á kirkjugarði á Hofstöðum í Mývatnssveit sumarið 2010 (Framvinduskýrsla). Reykjavík: Fornleifastofnun Íslands FS455-910113.
- Hildur Gestsdóttir and Oddgeir Isaksen. 2014. Hofstaðir 2013. Interim report. Reykjavík: Fornleifastofnun Íslands FS533-910116
- Lucas G. 2003. Archaeological field manual. Reykjavík: Fornleifastofnun Íslands.
- McGovern TH, Gestsdóttir H, Isaksen O, Brewington S, Harrison R, Hicks M, and Smiarowski K. in press. Medieval climate impact and human response: an archaeofauna circa 1300 AD from Hofstaðir in Mývatnssveit, N. Iceland. *Journal of the North Atlantic*.
- Oddgeir Isaksen and Hildur Gestsdóttir. 2012a. Fornleifarannsókn á kirkjugarði á Hofstöðum í Mývatnssveit sumarið 2011 (Framvinduskýrsla). Reykjavík: Fornleifastofnun Íslands FS485-910114.
- Oddgeir Isaksen and Hildur Gestsdóttir. 2012b. Fornleifarannsókn á kirkjugarði á Hofstöðum í Mývatnssveit sumarið 2012 (Framvinduskýrsla). Reykjavík: Fornleifastofnun Íslands FS504-910115.

Orri Vésteinsson. 1996. Fornleifaskráning í Skútustaðahreppi I: Fornleifar á Hofstöðum, Helluvaði, Gautlöndum og í Hörgsdal. Reykjavík: Fornleifastofnun Íslands FSo22-96011.

Appendix 1: Conservation remarks (Jannie Ebsen)

Iron

The iron objects were in a fair state of preservation but show no signs of active corrosion. Some of objects have a tendency to flake. All iron objects were put in perforated find bags before being placed in airtight boxes with desiccating Ruben Silica gel to prevent future corrosion. The relative humidity in the drying box should be 10 % RH or lower. The relative humidity in the box should be checked regularly at the enclosed humidity indicator sticks and additionally by the change in colour of the silica gel from dark Ruben red e.g. dry state to lighter red or orange. The silica gel should be changed if necessary.

Copper alloys

The copper alloy objects are in a relatively good state of preservation and mostly show no signs of active bronze corrosion. The objects were lightly brushed and also packed in the drying box along with the iron objects. HST14-33-F20 and HST14-33-F28 could undertake future mechanically cleaning made by a conservator, if found necessary in connection to revealing further information or decoration. HST14-33-F20 showed signs of more active bronze corrosion, should be monitored.

Bone

HST14-33-F22 turned out to be a piece of whale bone. The piece was lightly cleaned and following packed.

Appendix 2: Unit register

Unit	Group	Type	Material	Contextual	Description
5263	5343	Deposit	Mixed silts	Aeolian	Windblown material up against and inside churchyard wall
5264	5261	Deposit	Mixed silts	Aeolian	Windblown material inside cemetery
5265	5261	Deposit	Mixed silts	Dump	Turf deposit inside cemetery. Levelling deposit after burials in the cemetery ceased?
5266	5261	Deposit	Mixed silts	Dump	Mixed turf debris and H3 tephra. Inside cemetery
5267		Deposit	Mixed silts	Aeolian	Windblown sandy silt mixed with charcoal. Outside cemetery
5268	5261	Deposit	Mixed silts	Dump	Mixed turf debris and H3 tephra. Inside cemetery
5269		Deposit	Mixed silts	Dump	Rubbish layer. Mix of windblown material, charcoal, turf fragments, stones and rocks. Fill of [5274]
5270		Deposit	Wood ash	Dump	Wood ash with rocks. Fill of cooking pit [5284]
5271		Group			Cooking pit
5272	5344	Deposit	Mixed silts	Dump	Mixed turf upcast, inside cemetery
5273	5344	Deposit	Mixed silts	Aeolian	Windblown deposit, inside western end of cemetery
5274		Cut	Cut interface	Pit	A rubbish pit (?). Irregular cut through the western end of cemetery boundary
5275		Deposit	Mixed silts	Dump	Mixed silt with slight charcoal content. Fill of pit [5282]
5276		Deposit	Wood ash	Dump	Charcoal, filling the base of pit [5282]. Single use hearth (?)
5277		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-124
5278		Cut	Cut interface	Gave	Sub rectangular grave cut. Associated with skeleton HSM-A-124 (0.5 x 2.0 m, 0.7 m deep)
5279	5271	Deposit	Wood ash	Dump	Wood ash mixed with turf fragments and silts. Large amounts of animal bone. Uppermost fill of cooking pit [5286]
5280	5271	Deposit	Mixed silts	Dump	Mixed silt mixed with charcoal. Middle fill of cooking pit [5286]
5281	5271	Deposit	Wood ash	Dump	Wood ash mixed with cracked stones and occasional bits of charcoal. Bottom fill of cooking pit [5286], only found in the northern part of the pit

Unit	Group	Type	Material	Contextual	Description
5282		Cut	Cut interface	Pit	Small circular pit filled with charcoal. Single use hearth (?)
5283	5343	Deposit	Mixed silts	Aeolian	Windblown material inside the western part of the cemetery
5284		Cut	Cut interface	Pit	Cut for cooking pit (1.5 m in diameter, 0.6 m deep)
5285		Deposit	Mixed silts	Dump	Turf debris layer outside southern part of the cemetery
5286	5271	Cut	Cut interface	Pit	Cut for cooking pit (1.5 m in diameter, 0.6 m deep)
5287		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-125
5288		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-125 (0.6 x 2.0 m, 0.6 m deep)
5289	5344	Deposit	Mixed silts	Dump	Upcast inside cemetery, associated with burial activity
5290		Deposit	Mixed silts	Dump	Mixed silts with slight charcoal content. Fill of pit [5292]
5291	5343	Deposit	Mixed silts	Aeolian	Windblown material mixed with turf debris and charcoal inside western half of the cemetery
5292		Cut	Cut interface	Pit	Small circular pit outside cemetery boundary. Possibly an emptied out hearth? (0.4 m in diameter, 0.1 m deep)
5293		Deposit	Mixed silts	Aeolian	Windblown material with slight turf content. Outside southern part of the cemetery boundary
5294		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-126
5295		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-126 (0.4 x 0.5 m, 0.6 m deep)
5296		Deposit	Wood ash/peat ash	Deposit	Mix of wood ash and peat ash, with mixed silts inclusions. Outside southern part of cemetery boundary
5297		Group			Cooking pit
5298		Deposit	Peat ash	Dump	Peat ash deposit outside southern part of cemetery boundary
5299		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-127
5300		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-127 (0.6 x 1.4 m, 0.6 m deep)
5301	5297	Deposit	Charcoal	Dump	Charcoal deposit with fire cracked stone. Uppermost fill of cooking pit [5306]

Unit	Group	Type	Material	Contextual	Description
5302	5297	Deposit	Mixed silts	Dump	Mixed turf debris. Part of fill of cooking pit [5306]
5303	5297	Deposit	Stone	Dump	Stone deposit. Part of fill of cooking pit [5306]
5304	5297	Deposit	Mixed silts	Dump	Mixed turf debris. Part of fill of cooking pit [5306]
5305	5297	Deposit	Peat ash/ charcoal	Dump	Mixed layer with peat ash and charcoal lenses as well as flecks of prehistoric tephra, HS. Bottom fill of cooking pit [5306]
5306	5297	Cut	Cut interface	Pit	Circular cooking pit (1.4 m in diameter)
5307		Deposit	Mixed silts	Dump	Mixed silts with stones and gravel. Fill of a small single use hearth, cut [5308]
5308		Cut	Cut interface	Pit	Circular cut for single use hearth
5309		Deposit	Mixed silts	Aeolian	Windblown deposit with slight charcoal inclusions. Outside southern part of cemetery
5310		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-128
5311		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-128 (0.5 x 1.9 m, 0.6 m deep)
5312		Deposit	Mixed silts	Dump	Turf debris with charcoal inclusions. Outside the southern part of the cemetery boundary
5313		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-129
5314		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-129 (0.2 x 0.9 m, 0.4 m deep)
5315		Group			Cooking pit
5316		Deposit	Charcoal	Dump	Small charcoal deposit. Outside the southern part of the cemetery boundary
5317	5315	Deposit	Mixed silts	Dump	Turf debris mixed with charcoal and wood ash lenses, topmost fill of cooking pit [5319]
5318	5315	Deposit	Charcoal	Dump	Thin charcoal layer, the bottom fill of cooking pit [5319]
5319	5315	Cut	Cut interface	Pit	Circular cut for a cooking pit
5320		Deposit	Mixed silts	Aeolian	Windblown material with slight turf fragment inclusions. Outside the southern part of the cemetery boundary
5321		Deposit	Mixed silts	Dump	Turf debris layer with charcoal inclusions. Outside the southern part of the cemetery boundary
5322		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-130

Unit	Group	Type	Material	Contextual	Description
5323		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-130 (0.3 x 0.6 m, 0.2 m deep)
5324	5343	Deposit	Mixed silts	Aeolian	Windblown deposit within the eastern half of the cemetery
5325		Deposit	Mixed silts	Aeolian	Windblown deposit, containing <i>in situ</i> (?) V1410 tephra
5326		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-131
5327		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-131 (0.5 x 0.8 m, 0.6 m deep)
5328		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-132
5329		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-132 (0.7 x 1.5 m, 0.7 m deep)
5330		Deposit	Mixed silts	Construction	Turf cap on the cemetery wall = [5331]
5331		Deposit	Mixed silts	Construction	Turf cap on the cemetery wall = [5330]
5332	5343	Deposit	Mixed silts	Aeolian	Windblown deposit inside eastern part of the cemetery
5333	5343	Deposit	Mixed silts	Aeolian	Windblown deposit inside western part of the cemetery
5334		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-133
5335		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-133 (0.3 x 0.7 m, 0.4 m deep)
5336	5343	Deposit	Mixed silts	Aeolian	Small layer of windblown deposit within eastern end of the cemetery
5337	5344	Deposit	Mixed silts	Dump	Turf debris layer inside the western part of the cemetery.
5338	5343	Deposit	Mixed silts	Aeolian	Windblown material with slight turf debris inclusions. In the southern part of the cemetery
5339	5344	Deposit	Mixed silts	Aeolian	Windblown material with slight turf debris inclusions. In the western part of the cemetery
5340		Deposit	Mixed silts	Grave	Grave fill, mixed silts with disturbed prehistoric tephra. Associated with skeleton HSM-A-134
5341		Cut	Cut interface	Grave	Sub-rectangular grave cut. Associated with skeleton HSM-A-134 (0.5 x 2.0 m, 0.7 m deep)
5342	5344	Deposit	Mixed silts	Aeolian	Windblown deposit with slight turf debris inclusions, central section of the southern part of the cemetery
5343		Group			Series of windblown deposits up against cemetery boundary
5344		Group			Series of upcast deposits within cemetery. Associated with burial period

Appendix 3: Finds register

Find no	Unit	Material	Description	Quant	Wt (g)
HST14-33-001	5264	Iron	Head of iron nail	1	3
HST14-33-002	5264	Bone	Animal bone		108,0
HST14-33-003	5265	Bone	Animal bone		60,5
HST14-33-004	5265	Iron	Iron objects	9	19,5
HST14-33-005	5263	Bone	Animal bone		405,0
HST14-33-006	5263	Stone	Manuport	6	2
HST14-33-007	5263	Iron	Iron nail (incomplete) + iron object	2	10,5
HST14-33-008	5266	Bone	Human incisor	1	1
HST14-33-009	5266	Bone	Animal bone		319,0
HST14-33-010	5266	Iron	Iron object	1	3,5
HST14-33-011	5268	Bone	Animal bone		141,0
HST14-33-012	5260	Iron	Iron nail, incomplete	1	8,5
HST14-33-013	5260	Bone	Animal bone		345,0
HST14-33-014	5267	Iron	Iron object	1	2
HST14-33-015	5272	Bone	Animal bone		220,0
HST14-33-016	5271	Bone	Animal bone		-
HST14-33-017	5273	Iron	Iron nails, complete	2	15,5
HST14-33-018	5273	Stone	Stone object	1	6
HST14-33-019	5273	Bone	Animal bone		8,5
HST14-33-020	5269	Copper	Copper button(s), heavily deteriorated	2	3
HST14-33-021	5269	Textile	Piece of textile, associated with find nr,20	1	1,5
HST14-33-022	5269	Bone	Worked piece of whale bone	1	90

Find no	Unit	Material	Description	Quant	Wt (g)
HST14-33-023	5269	Bone	Animal bone		113,0
HST14-33-024	5270	Copper	A decorative fitting	1	5,5
HST14-33-025	5271	Bone	Animal bone		3049,0
HST14-33-026	5271	Wood			3,0
HST14-33-027	5270	Bone	Animal bone		2275,0
HST14-33-028	5270	Copper	Fragment of a copper plate	1	2
HST14-33-029	5285	Bone	Animal bone		184,0
HST14-33-030	5293	Bone	Animal bone		158,0
HST14-33-031	5296	Bone	Animal bone		189,0
HST14-33-032	5291	Copper	Copper object	1	1,5
HST14-33-033	5291	Stone	Whetstone	1	35,5
HST14-33-034	5291	Bone	Animal bone		111,0
HST14-33-035	5291	Bone	Animal bone		657,0
HST14-33-036	5297	Iron	"U" shaped iron object	1	7,5
HST14-33-037	5297	Stone	Manuport	1	1
HST14-33-038	5298	Bone	Animal bone		50,0
HST14-33-039	5307	Bone	Animal bone		391,0
HST14-33-040	5307	Stone	Manuport	3	4
HST14-33-041	5309	Iron	Iron nails, incomplete	2	6
HST14-33-042	5309	Bone	Polished bone	1	3
HST14-33-043	5309	Slag	Slag	1	6
HST14-33-044	5309	Bone	Animal bone		1066,0
HST14-33-045	5309	Bone	Animal bone		15,5
HST14-33-046	5321	Bone	Animal bone		116,0
HST14-33-047	5324	Bone	Animal bone		312,0

Find no	Unit	Material	Description	Quant	Wt (g)
HST14-33-048	5325	Bone	Animal bone		1956,0
HST14-33-049	5325	Iron	Iron objects	3	13,5
HST14-33-050	5330	Bone	Animal bone		16,5
HST14-33-051	5277	Bone	Animal bone		30,5
HST14-33-052	5331	Bone	Animal bone		13,5
HST14-33-053	5333	Bone	Animal bone		598,0
HST14-33-054	5333	Stone	Manuport	1	3
HST14-33-055	5342	Iron	Iron nails, one complete	3	14
HST14-33-056	5337	Bone	Animal bone		161,0
HST14-33-057	5337	Iron	Iron nails, one complete	2	7
HST14-33-058	5267	Bone	Animal bone		36,0

Appendix 4: Skeletal register

Skeleton no.	Group	Fill	Cut	Notes
HSM-A-124		5277	5278	Adult skeleton
HSM-A-125		5287	5288	Adult skeleton
HSM-A-126		5294	5295	Neonatal skeleton
HSM-A-127		5299	5300	Juvenile skeleton
HSM-A-128		5320	5311	Adult skeleton
HSM-A-129		5313	5314	Juvenile skeleton
HSM-A-130		5322	5323	Neonatal skeleton
HSM-A-131		5326	5327	Neonatal skeleton
HSM-A-132		5328	5329	Juvenile skeleton
HSM-A-133		5334	5335	Neonatal skeleton
HSM-A-134		5340	5341	Adult skeleton

Appendix 5: Samples register

Sample no.	Unit	Quantity	Description
2014-33-1	5279	10l	Charcoal
2014-33-2	5270	10l	Wood ash
2014-33-3	5281	10l	Wood ash
2014-33-4	5313	Small bag	Coffin wood
2014-33-5	5322	Small bag	Coffin wood
2014-33-6	5325	Small bag	Tephra
2014-33-7	5326	Small bag	Coffin wood
2014-33-8	5334	Small bag	Coffin wood

Appendix 6: Bibliography for Hofstaðir

Reports

- Hildur Gestsdóttir. 1999. The Medieval Churchyard. in Lucas, G. (ed.) *Hofstaðir 1999. Framvinduskýrslur / Interim Reports*. Fornleifastofnun Íslands: FS102-91017: 44-54.
- Hildur Gestsdóttir. 2001. The Medieval Chapel and Churchyard. In Lucas, G. (ed.) *Hofstaðir 2000. Framvinduskýrslur / Interim Report*. Fornleifastofnun Íslands: FS130-91018; 21-25.
- Hildur Gestsdóttir. 2002. Area Z. Lucas, G. (ed.) *Hofstaðir 2001. Framvinduskýrslur / Interim Report*. Fornleifastofnun Íslands: FS167-91019: 29-34.
- Hildur Gestsdóttir. 2003. The Chapel. In Lucas, G. (ed.). *Hofstaðir 2002. Framvinduskýrslur / Interim Report*. Fornleifastofnun Íslands: FS193-910110: 26-29.
- Hildur Gestsdóttir. 2004. *Hofstaðir 2003. Framvinduskýrsla / Interim Report*. Fornleifastofnun Íslands: FS230-910111.
- Hildur Gestsdóttir. 2006. *Hofstaðir 2004. Interim Report*. Fornleifastofnun Íslands: FS311-910112.
- Hildur Gestsdóttir & Oddgeir Isaksen. 2011. *Fornleifarannsókn á kirkjugarði á Hofstöðum í Mývatnssveit sumarið 2010 (Framvinduskýrsla)*. Fornleifastofnun Íslands: FS455-910113.
- Hildur Gestsdóttir & Oddgeir Isaksen. 2014. *Hofstaðir 2013. Interim report*. Fornleifastofnun Íslands: FS533-910116.
- McGovern, TH, Smiarowski, K & Harrison, R. 2011. Hard times at Hofstaðir? An archaeofauna circa 1300AD from Hofstaðir in Mývatnssveit, N Iceland. NORSEC lab report no. 60.
- Oddgeir Isaksen & Hildur Gestsdóttir. 2012a. *Fornleifarannsókn á kirkjugarði á Hofstöðum í Mývatnssveit sumarið 2011 (Framvinduskýrsla)*. Fornleifastofnun Íslands: FS485-910114.
- Oddgeir Isaksen & Hildur Gestsdóttir. 2012b. *Fornleifarannsókn á kirkjugarði á Hofstöðum í Mývatnssveit sumarið 2012 (Framvinduskýrsla)*. Fornleifastofnun Íslands: FS504-910115.
- Orri Vésteinsson. 1996. *Fornleifaskráning í Skútustaðahreppi I: Fornleifar á Hofstöðum, Helluvaði, Gautlöndum og í Hörgsdal*. Fornleifastofnun Íslands: FSo22-96011

Publications

- Hildur Gestsdóttir 2009. Sögur af beinagrindum. *Árbók Hins íslenska fornleifafélags* 2008-2009: 123-142.
- Hildur Gestsdóttir. 2014. *Osteoarthritis in Iceland. An archaeological study*. Reykjavík: Háskóli Íslands.
- Hildur Gestsdóttir & Guðmundur I. Eyjólfsson. 2005. Mergæxli í fornri beinagrind frá

- Hofstöðum í Mývatnssveit. *Læknablaðið* 91: 505-9.
- Horsley, T.J. & Dockrill, S.J. 2002. A preliminary assessment of the use of routing geophysical techniques for the location, characterisation and interpretation of buried archaeology in Iceland. *Archaeologia Islandica* 2: 10-33.
- Lanigan, L.T. & Bartlett, D.W. 2013. Erosive tooth wear in relation to a subarctic diet in Medieval Iceland. *Archives of Oral Biology* 58(10): 1450-6.
- McGovern, T.H., Gestsdóttir, H., Isaksen, O., Brewington, S., Harrison, R., Hicks, M. & Smiarowski, K. (in press). Medieval climate impact and human response: an archaeofauna circa 1300 AD from Hofstaðir in Mývatnssveit, N. Iceland. *Journal of the North Atlantic*.
- Sayle, K.L., Cook, G.T., Ascough, P.L., Gestsdóttir, H., Hamilton, W.D. & McGovern, T.H. 2014. Utilisation of $\delta^{13}\text{C}$, $\delta^{15}\text{N}$ and $\delta^{34}\text{S}$ analysis to understand ^{14}C -dating anomalies within a late Viking Age community in north-east Iceland. *Radiocarbon* 56(2): 811-21.

Unpublished dissertations/theses

Ph.D.

- Horsley, T.J. 2004. *The potential of geophysical prospection techniques for archaeological field evaluation in Iceland*. (Unpublished Ph.D. thesis: University of Bradford).

M.Sc

- Lanigan, L.T. 2011. *Acid erosion in the dental enamel of an early Medieval Icelandic population*. (Unpublished MSc dissertation: University College London).
- Jeffries E. 2011. *The archaeology of children in northern Iceland: An analysis of the infant assemblages from Hofstaðir and Keldudalur*. (Unpublished MSc dissertation: University of Sheffield)

M.A.

- Ragnheiður Gló Gylfadóttir. 2008. „Þegar á unga aldri lifi ég enn...” *Barnaforneifafræði: Greftrun barna á kaþólskum tíma á Íslandi*. (Unpublished MA dissertation: University of Iceland).

B.A.

- Kristín Halla Baldvinsdóttir. 2008. *Aska og viðarkol í gröfum á Íslandi. Greining ösku og viðarkola á mannabeinum og í gröfum*. (Unpublished BA dissertation: University of Iceland).
- Lilja Laufey Davíðsdóttir. 2008. *Grafið en ekki gleymt: gerðir handastellinga í íslenskum gröfum og nýting þeirra til afstæðra aldursgreininga*. (Unpublished BA dissertation: University of Iceland).

Current projects using Hofstaðir skeletons

Ph.D.

Cecilia Collins. *Interpreting the prevalence of ear disease and maxillary sinusitis in medieval Iceland: an evaluation of adult and subadult skeletons using computed tomography, microscopy and endoscopy.* (Ph.D. University of Reading).

Ashot Margaryan. *Population genomics of Vikings.* (Ph.D. University of Copenhagen).

Other projects

Dr. Kerry Sayle & Dr. Derek Watson. *Utilisation of $\delta^{13}C$, $\delta^{15}N$ and $\delta^{34}S$ analyses to understand ^{14}C -dating anomalies within a Viking Age community in north-east Iceland.* (University of Glasgow, Scottish Universities Environmental Research Centre).