Hofstaðir í Mývatnssveit

Framvinduskýrsla 1997

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Framvinduskýrsla 1997 / Preliminary Report

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Adolf Friðriksson & Orri Vésteinsson, FSÍ:

1.0 Fornleifarannsóknir á Hofstöðum 1997

Sumarið 1997 hófst annar áfangi rannsóknar á fornbýli á Hofstöðum í Mývatnssveit (Fig. 1.1). Er það jafnframt fimmta sumarið er Fornleifastofnun vinnur þar að rannsóknum[1]. Hér verður rakin framvinda og árangur uppgraftarins. Rannsóknin skiptist í nokkra þætti og hafa verið skrifaðar stakar skýrslur um hvern þeirra:

1)Adolf Friðriksson og Orri Vésteinsson, *Hofstaðir 1997. Svæði D, uppgraftarskýrsla*.

2) Howell M. Roberts, *Archaeological Excavations at Hofstaðir, Mývatnssveit, August 1997. Area E, A Preliminary Report*.

3) Thomas McGovern & Thomas Amorosi, *Hofstaðir 1997. Area G Excavation Report*,

4) Ian Simpson & Karen Milek, *Hofstaðir, 1997: Geo-archaeological Sampling Report*.

5) Karen Milek, *Archaeological Soil Sampling at Þverá, Laxárdalur, NE-Iceland, 1997: A Preliminary Report.*

6) Magnús Á. Sigurgeirsson, *Fornleifarannsókn að Hofstöðum í Mývatnssveit. Greining gjóskulaga.*

Í viðaukum aftast í þessu skýrslusafni er að finna skrár yfir fundi, teikningar og sýni.
Auk þessara skýrslna, hefur verið gerð sérstök skýrsla um afrakstur fornleifaskráningar sumarsins í Skútustaðahreppi, þ.e. á Ytri- og Syðri-Neslöndum, Vindbelg, Geirastöðum, Arnarvatni, Litluströnd, Sveinsströnd og í Baldursheimi[2].

Lesendum skal bent á að þessi skýrsla hefur ekki að geyma endanlega úrvinnslu uppgraftargagna, heldur er hér birtur annar áfangi úrvinnslunnar og drög að túlkun á þeim mannvistarleifum sem

[1]Adolf Friðriksson & Orri Vésteinsson, "Hofstaðir revisited", *Norwegian Archaeological Review*, 1997-2 ; - *Fornleifarannsóknir á Hofstöðum í Mývatnssveit 1991-1992*, FSÍ, Reykjavík ; - *Fornleifarannsóknir á Hofstöðum í Mývatnssveit 1995*, FSÍ, FS011:91024, Reykjavík ; - *Hofstaðir í Mývatnssveit. Uppgraftarskýrsla 1996*, FSÍ, FS026:91024, Reykjavík.

[2]Sjá Orri Vésteinsson, Sædís Gunnarsdóttir, Elín Hreiðarsdóttir, *Fornleifaskráning í Skútustaðahreppi II*. FS. Reykjavík 1997.

rannsakaðar voru sumarið 1997. Eflaust munu þær ályktanir sem nú verða dregnar eiga eftir að breytast í ljósi frekari athugana, en engu að síður er brýnt að greina vandlega frá stöðu mála að loknum þessum áfanga.

Fornleifarannsóknir í Mývatnssveit hafa verið studdar af mörgum aðilum. Rannsóknarráð Íslands greiddi kostnað við fornleifauppgröft, Skútustaðahreppur fornleifaskráningu og Þjóðminjasafn Íslands, NABO, Hunter College, National Geographic, Sheffield University, Stirling University og Cambridge University fornvistfræðirannsóknir. Jafnhliða rannsóknunum var í fyrsta sinni haldið námskeið í verklegri fornleifafræði. Námið sóttu 12 nemendur frá sex löndum og styrkti Menntamálaráðuneytið skólahaldið. Verkefninu stjórna Adolf Friðriksson og Orri Vésteinsson. Garðar Guðmundsson hafði umsjón með fornvistfræðirannsóknum á öllu svæðinu, Ian A. Simpson stjórnaði jarðvegsrannsóknum, Ragnar Edvardsson stjórnaði uppgrefti á svæði D, Howell M. Roberts á svæði E og Thomas McGovern og Thomas Amorosi á svæði G. Við rannsóknirnar unnu auk þeirra fornleifafræðingarnir Hildur Gestsdóttir og Mjöll Snæsdóttir, Magnús Á Sigurgeirsson gjóskulagafræðingur, Paul og Philip Buckland skordýraleifafræðingar. Auk vísindamanna, tóku 12 nemendur þátt í rannsóknunum á vegum fornleifaskóla FSÍ : Bruno Berson (Tours), Chris Callow (Birmingham), Karen Milek (Cambridge), Michele Smith (Toronto), Nicholas Crank (Lampeter), Kjartan Langsted (Kaupmannah.), Katherine J. Rusk (York), Katerina Hornickova (Prag), Natascha Mehler (Bergen), Bridget Edwards (St. Andrews), Sædís Gunnarsdóttir (Akureyri) og Elín Ó. Hreiðarsdóttir (Akureyri). Kostnaður vegna þátttöku erlendu nemanna var greiddur með styrk frá menntamálaráðuneyti. Auk fjárstuðnings sjóða og stofnana hefur Hofstaðaleiðangur 1997 notið aðstoðar margra Mývetninga. Vilja höfundar þakka Ingólfi Jónssyni á Helluvaði, Árna Gíslasyni á Laxárbakka, Árna Einarssyni forstöðumanni rannsóknarstöðvarinnar á Skútustöðum, Hólmfríði Jónsdóttur á Arnarvatni og Hólmfríði Guðmundsóttur skólastjóra fyrir margvíslega aðstoð. Sem fyrr reyndust Ásmundur og Guðmundur Jónssynir á Hofstöðum leiðangursmönnum vel í alla staði. Sá árangur sem náðst hefur við rannsóknirnar hefði aldrei orðið jafn mikill án þeirra dyggu aðstoðar. Hafi þeir bestu þakkir fyrir.

Markmið rannsóknar 1997

Markmið rannsóknanna 1997 var þríþætt. Í fyrsta lagi var haldið áfram fornvistfræðirannsóknum á fyllingu í jarðhúsi á svæði G. Fyllingin tilheyrir öðru skeiði mannvistar á Hofstöðum og miðar rannsóknin þar að því að greina vísbendingar um mataræði, dýrahald og eldivið, jafnframt því sem jarðhúsið sjálft, en það tilheyrir fyrsta skeiði mannvistar, verður tilbúið til rannsóknar að fyllingunni fjarlægðri.

Í öðru lagi var haldið áfram að rannsaka byggingaleifar vestan við skála sem tilheyra þriðja skeiði mannvistar. Haldið var áfram að athuga aldur, gerð og hlutverk byggingaleifa við suðvesturhorn skála á svæði D og hafnar voru athuganir á mannvistarleifum við norðvesturhorn skála á svæði E. Markmið með þessum rannsóknum er að skilja samhengi hinna mismunandi byggingarskeiða frá 9. til 11. aldar og greina byggingartækni og efnisnotkun.

Í þriðja lagi var byrjað að kanna aldur og gerð mannvirkja í grennd við skálann, þ.m.t. túngarðs norðaustan við skála og s.k. hestagirðingar sunnan við hann (svæði H). Þær athuganir eru fyrsti liður í umfangsmeiri rannsóknum á umhverfi bæjarstæðisins og leit að öðrum 9. - 11. aldar minjum í nágrenni þess.

Aðferðir

Beitt var sömu aðferðum og fyrri ár að því frátöldu, að nú voru opnuð stærri svæði en áður. Helsta einkenni rannsóknarinnar er að staðnum hefur áður verið raskað við fornleifarannsóknir og því verður að haga uppgrefti og skráningu upplýsinga í samræmi við það. Áður hefur verið fjallað um aðferðafræðina við enduruppgröft á Hofstöðum. Við rannsóknir á svæði D 1997 kom m.a. í ljós að árið áður hafði ekki allt úrkast frá 1908 verið hreinsað frá eins og talið hafði verið. Upplýsingar voru skráðar á vettvangi á sama hátt og fyrri ár. Eru mannvistarlög og jarðlög flokkuð í einingar og gefin númer sem einkennd eru með bókstafnum "C".[3] Við lok rannsóknar voru settir skærlitir plastborðar í skurðbotna, þá jarðdúkur og fyllt yfir. Tekinn var í notkun gagnagrunnurinn "Grefill" sem heldur utan um uppgraftargögn. Hann samanstendur af nokkrum skrám sem færðar eru jafnóðum, með upplýsingum um einingar, ljósmyndir, frumteikingar og

[3] C stendur fyrir enska hugtakið ?context? en það hefur verið þýtt á íslensku sem ?eining?.

fundi. Þessi nýjung reyndist vel við úrvinnslu á rannsóknargögnum.

Í rannsóknarskýrslum frá 1908 voru uppgraftarsvæðum, könnunarskurðum og holum gefnir einkennisstafir frá A til P. Byggingin við suðvesturhorn skálans var merkt "D", mannvistarleifar við norðvesturhorn "E", gryfjan sunnan skálans var kölluð "G" og hestaréttin í brekkunni þar sunnan við ? H? . Við rannsóknina nú hefur þessum táknum verið haldið sem tilvísunum til rannsóknarsvæða. Innan hvers svæðis eru mannvirkjum gefnir tölustafir: D1, E2 o.s.frv.

Lýsing á rannsóknarsvæði

Rannsóknarstaðnum á Hofstöðum hefur verið lýst í fyrri skýrslum og hér verða því eingöngu gefnar nánari lýsingar á þeim svæðum þar sem unnið var 1997 (Fig. 1.2).

Við vesturvegg aðaltóftarinnar (AB) mótar fyrir upphækkunum á tveimur stöðum, er önnur við suðvesturhorn (D), en hin nærri norðvesturhorni (E). Níu metra beint í suður frá gafli tóftarinnar er gryfja (G). Uppgröfturinn fór einkum fram á þessum þremur svæðum: D, E og G. Einnig voru gerðar athuganir á jarðvegi milli svæða D og E, og á hleðslum í s.k. hestarétt (H) og í túngarði utan við aðalrústasvæðið.

Svæði D: mannvistarleifar við SV-horn skála: Á yfirborði sér móta fyrir mannvirki við suðvesturhorn skála. Það er nokkurn veginn ferhyrnt og virðist vera áfast vesturvegg skálans. Á þessum stað var grafin ferhyrnd gryfja og útskot úr henni til norðurs og austurs árið 1908. Árið 1996 var hreinsað upp úr þeirri gryfju, sbr. uppgraftarskýrslu þess árs, þar sem einnig er að finna nánari lýsingu á staðnum. 1997 var uppgraftarsvæði fyrra árs stækkað, einkum til suðvesturs, vesturs og norðurs.

Svæði E: mannvistarleifar við NV horn skála: Á þessu svæði er ávalur hryggur eða bunga sem snýr A-V, nánast hornrétt á vesturvegg skála, en lækkar, verður flatari og sveigir ögn til norðurs við vesturendann. Árið 1908 var grafinn aflangur skurður, frá skálavegg og langsum í gegnum þennan hrygg. Við enda þessa skurðar var grafið lítillega inn í stálið til suðurs og norðurs, og á stöku stað í norðurstálinu. Skammt norðan við norðurbrún skurðarins var grafin ferhyrnd hola, um 1 m á hvorn veg. Við rannsóknina 1908 fannst móaska og dýrabein bæði í skurðinum og

holunni, en engar byggingaleifar voru greindar þá. Árið 1992 var grafinn 1 m breiður skurður frá nyrðri brún langskurðarins, hann hreinsaður upp og teiknuð þversnið. Jafnframt var skurðurinn lengdur til vesturs og dýpkaður uns komið var í óhreyfð jarðlög. Uppmokstur 1908 var látinn óhreyfður í suðursniði og vestast í norðursniði, þar sem grafið hafði verið inn í norðustálið. Þungamiðja rannsóknanna 1992 voru athuganir á norðursniði langskurðarins. Helstu niðurstöður voru þær að þar sem skurðurinn skar vesturvegg skála mátti sjá torfveggjaleifar. Í sniði virtist þar vera tvöfaldur torfveggur. Utan veggjar lágu nokkur jarðlög með torfleifum yfir dökkleitum mannvistarlögum, blönduðum móösku og kolum. Vestast í skurðinum komu í ljós torfveggjaleifar. Var talið að þar væru fundnar leifar af áður óþekktu mannvirki, sem staðið hefur vestan skálans, eða jafnvel verið eldra en hann. 1997 var rist ofan af stóru svæði sunnan, vestan og norðan við skurðinn frá 1992 og meðal annars hreinsað upp úr prufuholu norðan við skurðinn sem merkt var F við rannsóknina 1908. Sú hola telst nú innan svæðis E.

Svæði G: gryfja sunnan skála: Árin 1908 og 1965 voru gerðar rannsóknir á gryfjunni sunnan við skálann. Um þessar rannsóknir vísast til fyrri skýrslu. Árið 1995 hófust þar nýjar rannsóknir, þar sem grafið var niður að takmörkum fyrri rannsókna. Árangri rannsókna þá sem og árið 1996 hefur áður verið lýst. Árið 1997 takmarkaðist rannsóknin við vestur- og norðurhluta gryfjunnar og vísast til skýrslu Thomas McGovern og Thomas Amorosi um hana.

Aðrir rannsóknarstaðir

1) *Svæði vestan skála:* Við upphaf rannsókna sumarið 1997 var svæðið á milli D og E og norðan og vestan E kannað til að athuga útbreiðslu mannvistarleifa í næsta nágrenni við skálann. Utan skálaveggjar og D og E er svæðið að mestu flatt og ekki mótaði fyrir mannvirkjum á yfirborði en vitað er að tún hafa verið sléttuð rækilega þétt upp að tóftinni á þessari öld og því ekki örvænt að fornleifar væru þar undir sverði. Á móts við miðjan skálann utan veggjar, hafði Daniel Bruun grafið könnunarholu. Er henni ekki lýst í útgefnum skýrslum og ekki sýnd á prentuðum uppdrætti, en staðsetning og lögun er sýnd á óútgefnum frumuppdrætti sem varðveittur er í danska þjóðminjasafninu. Samkvæmt uppdrættinum var holan u.þ.b. 1 m á hvorn veg. Árið 1997 var þessi hola hreinsuð upp að hluta og jafnframt voru grafnar nýjar prufuholur á þessu svæði til að kanna hvort þar væri mannvirki eða aðrar mannvistarleifar að finna. Þá var grafin prufuhola í túninu um 50 m vestan við E.

2) *Túngarður (SÞ-214:060)*. Þessu mannvirki er svo lýst í Fornleifaskrá FSÍ: "Túngarður heitir stór og gamall garður umverfis Hofstaðabæinn. Að sunnan hefst hann við Laxá og sést vel í brekkunni upp frá ánni og upp á móts við núverandi íbúðarhús. Þar er nú komin stór eyða í hann, sunnan við fjárhúsin. Aftur sést svo til garðsins uppi á hjallanum ofan við bæinn og hefur hann þar beygt til norðurs og má rekja hann óslitið þar til hann beygir aftur til vesturs niður að Laxá en þar er erfiðara að greina hann þó hann sjáist vel á loftmynd. Garðurinn er hlaðinn í deiglendi neðantil við Laxá en liggur um þurra móa ofan á hjallanum ofan við bæinn. Hann er víðast 2-3 m breiður og 1,3-1,75 m hár á hjallanum ofan við bæinn. Svæðið sem hann afmarkar er miklu stærra en túnin sem nú eru, hvað þá gamla túnið[4]." Árið 1997 hófust rannsóknir á túngarðinum og voru grafnir prufuskurðir í hann á tveimur stöðum, suður af Hofstaðabæ annarsvegar og uppi á hjallanum, austur af bænum, hinsvegar.

3) *Svæði H: Hestarétt (SÞ-214:012c)* Um þetta mannvirki hefur ekki verið fjallað í fyrri skýrslum og verður því greint frá eldri lýsingum og skoðunum fræðimanna. Fyrstu lýsingu af þessum stað gerði Kristan Kålund á áttunda áratug 19. aldar: "Syd for denne tomt [þ.e. skálann AB] findes en smuk lille kredsformig tomt (4 fv. i diameter, og med væg af ca. 1 1/2 al's höjde) [þ.e. jarðhúsið G]. Sydöst for denne, oppe i bakkeskråningen, ud mod den smalle dal ses en större kredsformig tomt (ca. 9 fv. i diam.) - dette siger man, er den gamle hestefold (hestarétt), der benyttedes af de tempelsögende[5].? Daniel Bruun gerði uppdrátt af staðnum árið 1896. Þar er sýnd stóra tóftin, gryfjan sunnan hennar og "Hestefold", upp í hlíðinni skammt SSA við gryfjuna. Lýsing hans hljóðar svo: "Omtrent 60 Fod længere mod Öst ligger en anden uregelmæssig Indhegning op ad en Skraaning, c. 50 Fod i Gennemsnit. Den har udtrykkelig, efter Overleveringen, været benyttet til Hestefold (hestarétt) i Hedenskabets Tid[6]." Í lýsingu Brynjúlfs Jónssonar frá 1901 er eingöngu

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[4]Orri Vésteinsson, *Fornleifaskráning í Skútustaðahreppi I:Fornleifar á Hofstöðum, Helluvaði, Gautlöndum og í Hörgsdal*, Fornleifastofnun Íslands, Reykjavík, 1996, bls. 89.

[5]P.E.K. Kålund, *Bidrag til Topografisk-Historisk Beskrivelse af Island*, Copenhague, Gyldendalske Boghandel, 1877-1882.

[6]Daniel Bruun, *Fortidsminder og nutidshjem paa Island: Orienterende Undersögelser foretagne i 1896*, Kh., 1897, bls. 175, sbr. uppdr. nr. 175 bls. 174.

greint frá staðsetningunni, en hann nefnir ekki hlutverk þessa gerðis[7]. Bruun gerði á ný nákvæmari lýsingu og uppdrátt af staðnum árið 1908: "Sydöst for foregående [þ.e. skála og gryfju] og op ad skråningen lå en stor, tydelig tomt, om hvilken overleveringen sagde, at den havde været benyttet som 'hestefold' (hestarjett) for den tempelsögende. Den var af noget uregelmæssig form, c. 17 m. x c. 19 m. i tværmål. Væggene havde åbenbart været opförte af jordtörv og var nu i deres sammenfaldne tilstand c. 1 m. brede og 20-35 cm. höje. En sådan fold vilde kunne give plads til omtrent 150 heste[8]." Í Fornleifaskrá frá 1996 segir jafnframt: " Vesturhlið hennar hefur verið sléttuð undir tún en suður- og austurveggirnir sjást enn[9]." 1997 var grafinn skurður í gegnum norðausturhlið þessa gerðis.

Yfirlit um gang uppgraftar

Uppgröfturinn hófst 3. ágúst 1997. Leitað var að hælum frá 1996 hnitakerfinu og settir upp fleiri í námunda við rannsóknarstaðinn. Þá var hafist handa við að hreinsa upp úr skurðinum á svæði E frá 1992. 4-5. ágúst var hreinsað upp úr vesturenda skurðarins á E svæði. Einnig var hreinsað upp úr prufuholu sem grafin var 1908 á milli D og E, skammt vestan skálaveggjar. Grafnar voru 9 nýjar prufuholur norðan og sunnan E til að ákvarða hvar og hve mikið svæði skyldi rista ofan af. 6. ágúst var byrjað að rista ofan af og stinga niður á svæði D og E. Skurðgrafa kom til aðstoðar á svæði E, en bilaði áður en kom að svæði D og því þurfti að ljúka því verki á höndum. 7-9. ágúst var grafvangurinn á D og E skafinn nokkrar umferðir. Mannvirkjum í D var gefin tákn. D-1 er ferhyrnda tóftin við suðvesturhorn skálans, en D-2 eru meintar gólfleifar milli skála og D-1. 8. ágúst hófst undirbúningur að rannsóknum á svæði G, torf var tekið ofan af. 11. ágúst hófust rannsóknir á fyllinguni í G, jarðvegur sigtaður og leitað beina og funda og dagana 11-16. var áfram skafið á D og E. Farið var yfir kontextskrá og númer samræmd. 14-15. ágúst kom fram hleðsla úr nokkrum steinum á E svæði og leifar torfveggjar. 15-16. ágúst var svæði D stækkað til norðurs og grafið ofan af norðurvegg mannvirkisins D-1, og inngangur á vesturhlið D-1 að hálfu.

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[7]Brynjúlfur Jónsson, ? Rannsóknir á Norðurlandi sumarið 1900 ?, *Árbók Hins íslenzka fornleifafélags*, 1901, bls. 12-13.

[8]Daniel Bruun & Finnur Jónsson, ? Om hove og hovudgravninger paa Island ?, *Aarb?ger for nordisk Oldkyndighed og Historie*, 1909, 1909, bls. 267-268 sbr. uppdr. nr. 2, bls. 267.

[9]Orri Vésteinsson, tilv. rit., bls. 77.

Vikuna 18-23. ágúst héldu rannsóknir áfram áfallalaust. Á svæði E komu fram torfveggjaleifar áfastar skálavegg sem nefndar eru E-1 og áður nefndur torfveggur og steinhleðsla virðast vera hluti af ferhyrndri torfbyggingu, E-2. 21. ágúst hófust jarðvegsrannsóknir og þá voru gerðar gjóskulagaathuganir. Einnig var grafið snið í svonefnda hestarétt sunnan skálans, og tvö snið tekin í túngarðinn. Dagana 25-27. var haldið áfram að skafa fram einstaka staði, gera teikningar, lýsa kontextum og taka sýni. 27. ágúst hófst frágangur á svæði D og E. Lagður var gróðurdúkur í botninn og tyrft yfir. Dagana 28-29. var lokið við frágang á öllum uppgraftarsvæðum og leiðangurinn hélt heim 30. ágúst.

Helstu niðurstöður

Í næstu skýrslum hér á eftir verður greint frá framgangi og árangri rannsókna á hverju svæði fyrir sig, en hér eru tekið saman stutt yfirlit um helstu atriði.

Svæði D. Á þessu svæði hafa komið fram mannvistarleifar utan við skálavegginn, sem virðast vera af tveimur byggingum. D-2 er nær skálanum og virðist vera undir bæði skálavegg og austurvegg D-1, en var ekki rannsakað árið 1997. D-1 er vestan skála og D-2 og þar voru gerðar töluverðar rannsóknir 1997. D-1 er aflangt hús sem hefur sömu stefnu og skálinn, þ.e. N-S, og er 7,8 m x 3,8 m að innan en u.þ.b. 12 m langt og 7 m breitt að utan. Dyr eru á sunnarlega á vesturhlið og sennilega tvær á austurhlið. Ekki hafa enn fundist skýrar leifar torfveggjar á suðurgafli. Sýnt er að D-1 hefur verið lengi í notkun, verið endurbyggt og breytt um hlutverk en óljóst er að hversu miklu leyti byggingin var í notkun á sama tíma og skálinn. Niðurstöður á jarðvegsathugunum, sem geta varpað ljósi á fyrra hlutverk þessa húss, liggja ekki fyrir enn sem komið er.

Svæði E. Við uppgröftinn 1997 kom í ljós að við norðvesturhluta skálans eru leifar tveggja húsa, E-1 og E-2. E-1 er áfast skálaveggnum, en ekki er fulljóst hvort það hafi verið reist á sama tíma og hann. Húsið er aflangt, u.þ.b. 5-6 m langt og 3-4 m breitt að utanmáli, með veggjum hlöðnum úr streng og stefnir í vestnorðvestur frá skálanum. Skammt vestan við þetta hús kom í ljós annað, nánast ferhyrnt hús, E-2, u.þ.b. 5 m langt og 4 m breitt. Veggir eru úr torfi, en innan við vesturvegg er jafnframt gróf hleðsla úr fremur stórum steinum. Dyr virðast hafa verið á miðjum vesturvegg. E-2 er eina byggingin á rannsóknarsvæðinu sem ekki hefur verið raskað við fyrri rannsóknir. Árið 1992 höfðu veggir E-1 sést í sniði, en voru þá túlkaðir sem hrun eða hluti af

skálavegg. Sama ár hafði verið staðfest að fleiri byggingaleifar væru vestan skála þegar áður óþekktur torfveggur kom þar í ljós, og er það sama bygging og E-2. Hefur myndin af byggingaleifum á þessu svæði því töluvert breyst. Rannsóknum á þessum mannvistarleifum verður haldið áfram 1998.

Svæði G. Haldið var áfram rannsóknum á ruslalögum í G. Nú hefur u.þb. 1/3 holunnar, þ.e. norðvesturhluti hennar, verið hreinsaður upp. Í lögunum kom fram mikið af beinum sem fyrr og eru þau vel varðveitt. Fundust þar bein úr kindum, geitum, nautgripum, hestum, svínum, fuglum sem og eggjaskurn og skeljar. Athygli vakti að í einu laginu fannst töluvert af beinum úr unglömbum, kiðlingum, kálfum og grísum og þar voru einnig eggjaskurnir. Er ljóst frá hvaða árstíð það lag er og er spennandi að eygja þar möguleika á að skoða árstíðabundin sérkenni ruslalaganna. Auk lífrænu leifanna fundust járnnaglar og járnbrot, brýni og nokkrir smáhlutir aðrir, en enginn þeirra gefur vísbendingu um aldur eða aðrar mikilvægar eða afgerandi upplýsingar. Undan ruslalögunum hafa torflög komið æ betur í ljós. Svo virðist sem hið meinta jarðhús hafi verið ferhyrnt, u.þ.b. 6-7 m á hvorn veg, en ekki er hægt að skera úr um stærð hússins að svo stöddu, enda hylja ruslalögin enn stóran hluta þess.

Svæði H. Í ljós kom að svokölluð hestarétt er tvíhlaðinn garður og skurður utanmeð honum. Hleðslurnar eru eldri en H-1104/58 og er ljóst að einhverkonar jarðrækt hefur farið fram innan gerðisins.

Túngarður. Túngarðurinn er torfhlaðinn með smágrjóti ofaná torfinu og eru heðslurnar eldri en ? a? gjósakan frá um 1477, sennilega miklu eldri.

Niðurlag

Á Hofstöðum var rannsakað með fjölbreyttum aðferðum sumarið 1997. Auk rannsókna á beinaleifum hefur umfangsmikill uppgröftur verið gerður í og við Hofstaðaminjar. Tekin hafa verið jarðvegssýni á svæðum D, E og G, til efnagreiningar og örformgerðargreiningar og eru þau nú í vinnslu, en markmið þeirra rannsókna er bæði að leita vísbendinga um byggingarsögu staðarins, þ.e. samhengi jarðhúss, smáhýsa og skála, og að fá almennar upplýsingar um byggingartækni, efnisfræði torfs og eldsneytisbrennslu. Til að afla samanburðarefnis var farin

rannsóknarferð að Þverá í Laxárdal og tekin þar gólfsýni úr 19. aldar húsaleifum. Er fyrstu niðurstaðna af þeim athugunum að vænta á næsta ári.

Það hefur verið höfundum þessarar skýrslu mikil ánægja og dýrmæt reynsla að vinna að uppgrefti á íslenskum minjum með jafnfjölbreyttum aðferðum og í góðum hópi reyndra sérfræðinga á ólíkum sviðum. Er ljóst að við lok þessa verkefnis verður unnt að varpa ljósi á marga þætti fornískenskrar húsasgerðar, landnáms, landbúnaðar, veiða og lífsafkomu frumbyggja landsins. Það er því tilhlökkunarefni að takast á við lokaáfanga verksins á næsta sumri.

Adolf Friðriksson & Orri Vésteinsson, FSÍ:

2.0 Hofstaðir 1997. Uppgraftarskýrsla, svæði D, garðlög og gerði

Inngangur

Hér er greint frá árangri uppgraftar á þremur svæðum: svæði D, svæði vestan skála, svonefndum túngarði, og svonefndri Hestarétt á svæði H. Um rannsóknir á svæði D vísast einnig til skýrslu um jarðvegsrannsóknir og um túngarð og hestarétt vísast jafnframt til skýrslu um gjóskulagaathuganir.

Svæði D: mannvistarleifar við SV-horn skála

Árið 1996 hófst uppgröftur á svæði D og er lýsingu á því að finna í skýrslu um rannsókn þess árs. Þá var gryfjan frá 1908 hreinsuð upp að mestu og kom í ljós að þar var að finna ferhyrnt mannvirki með torfveggjum. Á milli þessa mannvirkis og skála voru einnig mannvistarleifar, sem líklega eru leifar eldri bygginga(r). Við upphaf rannsókna 1997 var þessum mannvirkjaleifum gefið heitið D-2 og torfbyggingin vestan þeirra D-1. Ekki voru gerðar frekari rannsóknir á D-2 að sinni, en ýtarlegar athuganir gerðar á D-1 (Fig. 2.1).

Mannvirki D-1. Á uppdráttum frá 1908 eru uppgraftarmörk sýnd og er að sjá að grafin hafi verið nokkurn veginn ferhyrnd gryfja með beinum veggjum. Þegar fyllingin úr þeirri gryfju var hreinsuð kom í ljós að ystu mörk uppgraftarins voru vissulega regluleg, en voru öllu óreglulegri er neðar dró. Daniel Bruun og félagar hafa byrjað á að opna stórt reglulegt svæði en síðan reynt að fylgja torfveggjum þaegar niður á þá var komið. Næst skálanum hefur gröfurunum ekki tekist að átta sig á mannvistarleifunum, þar eru holur þeirra óreglulegar og veggjaleifar hafa að hluta til verið grafnar burt. Í skýrslu Bruuns kemur einnig fram að þeir hafi leitað af sér grun um að dyr væru milli skála og þessa mannvirkis. Utar hafa þeir grafið innan úr D-1 að mestu og að stórum hluta farið þar í gegnum gólf. Þeir hafa hinsvegar ekki áttað sig á norðurenda byggingarinnar og skildu þar eftir tvo bálka hvorn í sínu horni. Sumarið 1997 voru enn hreinsuð upp uppgraftarmörk frá 1908, einkum við og ofan á austurvegg mannvirkis D-1. Uppgraftarsvæðið var stækkað til allra átta og er nú um 13 m á hvorn veg.

Rifjum nú snöggvast upp helstu atriði rannsóknarinnar. Við uppgraftarlok 1996 virtist sem svo að

fundin væri ferhyrnd torfbygging, sem sneri eins og skálinn, þ.e. N-S, og væri u. þ. b. 10 x 7 m að utanmáli. Að innanmáli virtist hún vera u.þ.b.3,5 m á breidd. Lengdin var ekki ljós, en þar sem sást til veggja, mátti ætla að þeir væru um 1,25 m á breidd, og því gæti lengdin að innan verið um 7-8 m. Vandinn við að ákvarða stærð byggingarinnar er annarsvegar fólginn því raski sem gert var árið 1908 og hinsvegar vegna þess að 1996 var eingöngu hreinsað upp meint fylling frá 1908, en húsið hafði þá ekki verið að fullu grafið út. 1908 var grafinn burtu fleygur af innri hlið vestur-langveggjar hússins, skammt frá NV horni og suður til SV horns. Ekki var grafið að norður- og suðurgafli hússins og ekki grafið út úr inngöngum, nema að nokkru leyti úr dyrum á miðjum eystri langvegg en þar höfðu grafarar 1908 rekist á einbera torfveggi og hætt án þess að fá niðurstöðu.

Sumarið 1997 var einkum unnið við eftirfarandi þætti: a) Grafin voru burtu óhreyfð fylling í norðurenda og að hluta til í suðurenda; b) tekið var ofan af norðurvegg að hluta, norðvesturhorni og suðurvegg, en austurveggur hafði þegar komið í ljós 1996; c) grafið var út úr inngöngum, d) tekin voru sýni til jarðvegsathugana á meintum gólflögum, hinu svokallaða C4 lagi, hrundu torfi og torfi í veggjum. Verður nú hverjum þessara þátta verður lýst nánar.

Óhreyfð jarðlög undir og yfir D-1. Yfir öllu uppgraftarsvæðinu liggur grasrótarlag (C1) sem er að meðaltali um 5 sm þykkt. Undir grasrótinni innan uppgraftarmarka, liggur úrkast (C2) frá uppgreftinum 1908. Er það brún gróðurmold, mikið rótuð, með gjóskuflekkjum, móósku, torfi og sóti, sem komið hafa upp við rót í mannvistarleifunum fyrir neðan. Undir grasrótinni, við uppgraftarmörk er moldarlag (C16) með allnokkrum gjóskulögum, þ.e. gjóskusyrpa frá 1104-1717. Er þetta lag óhreyft af fyrri rannsóknum og yngra en mannvistarleifarnar. Liggur neðsta gjóskulagið, þ.e. 1104, sem jafnframt er mjög slitrótt, u.þ.b. 5 sm ofan við efstu brún mannvistarleifa. Undir C16 eru þær mannvistarleifar sem hér nefnast D-1. Skiptast þær í margar einingar. Áður en frá þeim verður skýrt, skal gerð grein fyrir mannvistarlaga- og jarðlagasyrpunni undir D-1. Neðstu sýnilegu mörk D-1 eru ofan á mjög dökku, grábrúnu lagi með móósku í, og minnir það mjög á C4. Undir þessu lagi er dökkbrún, lítið hreyfð mold (C17) og undir henni er mjög dökkt, grábrúnt lag með koli, smáum eggjaskurnbrotum og beinflísum og er talið vera C4, sama lag og liggur yfir yngstu mannvistarleifum á svæði G. Undir C4 taka við óhreyfð lög, þ.e. landnámssyrpan *in situ* og önnur forsöguleg gjóskulög (C3). Þessi lýsing á ekki við um alla jarðlagaskipan í og við D-1, en gefur einna skýrustu myndina sem unnt er að fá nú af samhengi D-

1 við þekkt jarðlög og mannvistarlög á grafvangi.

Nú skal vikið að þeim einingum sem D-1 sjálft samanstendur af, en það eru veggir, gólflög, fyllingar, rof og holur. Sá hluti mannvirkisins sem er best farinn og mest áberandi eru torfveggirnir.

Veggir D-1. Þegar litið er yfir D svæði blasa við reisulegir torveggir (C24), hlaðnir úr streng, með eldrauðum og svörtum röndum í torfinu. Þeir eru lítið signir og standa óvenju vel, um hálfur metri á hæð og rúmur metri á breidd. Í sniði á norðurhlið dyra á vesturlangvegg má sjá vegginn í þversniði (Fig. 2.2). Út frá veggnum að utanverðu, liggur u.þ.b. 20 sm þykkt lag úr sama torfefni og veggurinn sjálfur (og hefur sama C-númer, C24), og teygir sig rúman metra frá honum. Þetta lag situr á fremur ljósleitu moldarlagi (C53), sem er með móósku- og kolaflekkjum. Undir því er annað athyglisvert lag (C54), sem er líka fremur ljósbrúnt og með hvítum flekkjum. Það situr beint ofan á C4 og virðist ganga undir vegginn. Nú sést til austur- og vesturlangveggja og norðurgafl, en samskonar torfveggur er ekki fyrir suðurgafli og áhöld um hvort þar hefur verið torfveggur yfirhöfuð. Er snúið að lesa þar úr jarðlagaskipan (Fig. 2.4). Þar sem hefði mátt vænta suðurgafls sést í suðursniði samskonar veggjarefni og annarsstaðar í veggjum hússins, en tætingslegra - líkt og hann hafi verið rifinn eða þá hrunið. Vandinn er m.a. sá að sama jarðlagasyrpa undir vegg (C24) og er greinileg í endilöngu vestursniði heldur áfram vestast í suðursniði, en síðan hverfur hún. Í stað C4 og C3 syrpunnar kemur C57 lagið, sem er ljósleit og hreyfð brún mold. Fyrir utan hvað torfveggjaleifarnar C24 eru þunnar og tætingslegar í suðursniði þá er allþykkur móóskubunki (C50) yfir þeim vestantil en hann gæti bent til að suðurgaflinn hafi verið opinn einhverntíma í sögu byggingarinnar. Ofan á C50 er ljósbrúnt moldarlag (C58) sem hefur engin einkenni torfveggjar önnur en þau að það hefur útbreiðslu alveg eins og veggur. Það er líkt C21 (efri hluta fyllingar í D-1) en skýr skil eru engu að síður á milli laganna þar sem gaflinn er.

Veggurinn gæti hafa verið rifinn á einhverju stigi málsins, eða þá að þetta litla hús hefur verið byggt með sama lagi og getið hefur verið til með stóra skálann, þ.e. með trévegg á suðurgafli. Hornin þar sem langveggirnir nema við norðurgaflinn eru skýr og virðast nánast hornrétt, en ekki vottar fyrir sambærilegri hleðslu sunnanmegin. Í þessu tilfelli kemur ekki til greina að

uppgröfturinn 1908 hafi fjarlægt mannvistarlög sem ella myndu skýra myndina, því að Bruun og félagar höfðu ekki grafið suður úr D-1 og 1997 voru skilin á milli C21/C43 og gaflsins mjög skýr, vandamálið er að gaflinn er ekki sannfærandi hleðsla. Hugsanlegur möguleiki er að syrpan C24, C50 og C58 í suðurgaflinum sé öll eldri en D-1, að þar hafi verið bunga áður en húsið var byggt og að látið hafi verið nægja að byggja U-laga torfvegg gagnvart henni og hún þannig myndað fjórða vegginn í hinu nýja húsi. Skurðurinn C56 gæti þá verið enn einn útgangurinn á D-1. Þetta er þó aðeins tilgáta, og er ekki unnt að segja um eðli suðurhluta tóftarinnar fyrr en frekari rannsókn hefur verið gerð. Þá þarf m.a. að skoða nánar þennan niðurgröft þar sem C3-4 syrpu sleppir svo og fyllinguna (C57) þar í og hvað undir henni leynist.

Dyr á vesturhlið. Við uppgröft 1996 kom í ljós inngangur (C23), sunnarlega á vesturhlið, með fyllingu úr dökkleitri mold, eða tætingslegum torfleifum (C22). Dyrnar eru um eins metra breiðar og eru steinar í brúninni beggja vegna (Figs. 2.2-2.3). 1997 var þessi fylling grafin út og var þá í fyrsta sinni svipast um utan D-1 og samhengi þess skoðað við jarðlögin utandyra. Í ljós kom að utan við torfvegginn er lag með sama torfefni í og veggurinn er byggður úr,og nær það rúman metra út frá veggnum. Undir þessu lagi eru tvö önnur hreyfð lög (C53 og C54). Undir þeim liggur C4 lagið. Ekki var grafið niður úr því lagi að svo stöddu. Neðst í innganginum lá dreif af steinum af ýmsum stærðum, en ekkert eiginlegt gólflag var sýnilegt. Þar eð D-1 var lítillega niðurgrafið, hallar innganginum dálítið niður á við.

Dyr á austurhlið. Árið 1997 komu ljós aðrar dyr (C27), u.þ.b. á miðri austurhlið. Þar hafði verið grafinn e.k. krókur inn úr D-1 árið 1908 og að því er talið var í fyrstu, í gegnum vegginn. Nú er ljóst að þarna eru dyr, um 0,9 m breiðar. Að innanverðu eru litlar stoðarholur, hvor sínu megin dyraopsins og eru þrír steinar í hnapp við hvora holuna.

Ekki er útilokað að enn einar dyr sé að finna á D-1, þ.e.a.s. skammt sunnan við þessar síðastnefndu dyr. Svo virðist sem að austurveggurinn sé rofinn 1,6 m sunnan við dyrnar og gegnt áðurnefndum dyrum á vesturhlið. Ef svo er þá er ekki útilokað að innangegnt hafi verið milli D-1 og skála (AB) en um það verður þó lítið sagt fyrr en svæðið milli AB og D-1 hefur verið kannað til hlítar.

Gólf í norðurenda D-1. Svo sem áður hefur komið fram, þá var nær allur jarðvegur fjarlægður innan úr D-1 árið 1908. Þó var skilinn eftir suðurendi og tveir stæðilegir skikar í norðurenda hússins. Þessir hlutar voru nú rannsakaðir. Þegar fyllingin (C21) í norðurenda var fjarlægð kom í ljós moldarlag (C43) með torfi í, sem lá jafnt yfir öllum norðurhluta D-1 og sést sömuleiðis í suðurenda. Torf þetta er mjög heilt og reglulegt enda virðast Bruun og félagar hafa haldið að það væri veggur. Sennilega er um að ræða leifar af torfþaki og gæti hugsast að það hafi verið fellt ofan í tóftina og þessvegna hafi torfurnar ekki rofnað meira en raun ber á. Undir þessu lagi kom fram rauðbrúnt og bleikt móöskulag (C50) sem lá yfir öllum norðurenda og er sambærilegt við lag sem fundist hefur í suðurhluta tóftarinnar og utan hennar. Hugsanlegt er að þetta lag hafi legið yfir öllum fleti hússins. Undir því kom fram forvitnilegt lag, það er margskipt, brúnbleikt, með lífrænum leifum sem gætu verið heyleifar (C51) og bíður frekari rannsókna eftir rækilega sýnatöku. Undir þessu lagi komu í ljós nokkrir steinar og holur af mismunandi stærðum. Virðast steinarnir og holurnar eiga við slitróttar leifar gólflaga (C52) sem þarna komu einnig fram. Sjá mátti linsur af grábrúnum og svörtum jarðvegi, sem líkist einna helst gólflögum. Gerðar voru rækilegar jarðvegsrannsóknir á þessu efni og er vísað til skýrslu Simpsons og Milek um sýnatöku og rannsóknir á þeim. Í suðurenda var ekki komið niður á gólflög sambærileg þeim sem sáust í norðurenda en undir C43 sést þar lag með lífrænum leifum sem sennilega er það sama og C51. Það liggur yfir stoðarsteinum á fleiri en einum stað og tilheyrir því klárlega síðari notkunarskeiðum byggingarinnar.

Aldur og hlutverk D-1. Ljóst er af afstöðu jarðlaga að D-1 er frá 10 og/eða11.öld. Mannvirkið er reist eftir að landnámsgjóskan féll árið 872"2 og eftir að C4 lagið myndaðist, en hefur verið farið úr notkun allnokkru áður en gjóska féll við Heklugos árið 1104. Byggingin tilheyrir því þriðja skeiði búsetu á Hofstöðum, er yngri en jarðhúsið G og ruslið sem fyllir tóft þess. Ekki er ljóst hversu lengi var búið í jarðhúsinu eða hversu langt leið frá því að það féll saman og þar til hætt var að henda rusli í tóftina en reikna má með að það hafi verið nokkrir áratugir. Það má því reikna með að D-1 geti ekki verið miklu eldra en frá miðri 10. öld og að það hafi verið fallið fyrir lok 11. aldar. Nánari aldursákvörðun er ekki möguleg að svo búnu. D-1 er sennilega að einhverju leyti samtíma skálanum AB, þ.e. bæði húsin hafa verið í notkun á sama skeiði, en þar eð austurhluti svæðis D utan veggja D-1 var ekki rannsakaður nú, er ekki unnt að segja nánar um samhengi skála og D-1. Þar bíður spennandi rannsóknarverkefni.

Ýmsar vísbendingar um hlutverk D-1 hafa komið fram en engar afgerandi. Ljóst er að hlutverk hússinns hefur breyst oftar en einu sinni og hefur verið sett fram sú vinnutilgáta að upphaflega hafi verið í húsinu trégólf, eða a.m.k. trépallar meðfram veggjum. Það myndi benda til að búið hafi verið í húsinu. Gólfjalirnar eða pallarnir hafa síðan verið fjarlægðir og gólflag náð að myndast en síðast virðist húsið hafa verið notað sem heygeymsla. Þegar þetta er ritað liggur fyrir að rannsaka fjölda jarðvegssýna úr torfi og meintum gólfleifum og er niðurstaðna að vænta innan tíðar.

Einingaskrá

Nr.	*Tegund*	*Staðsetning*	*Eldra en...*	*Yngra en...*	*Annað*
1	grasrót	yfir öllu uppgraftarsvæði		C2, C3,	
2	fylling	yfir uppgrefti 1908	C1	C16	
3	óhreyfður jarðvegur	undir mannvistarlögum	C4,	0	Skorið af C11
4	úrgangur	í fyllingu gryfju	C15-16, C2-1	C3, C5,C17	
15	veggur	V-langveggur skálans		C4	
16	óhreyft	yfir mannvistarlögum	C1, C2	C21,C24	skorið af C2
17	fokmold	lítið hreyft	C4,C3	C16	
18	mold m. torfi	hreyft	C15	C4	
19	steinaröð	í D-1	C25,C20,C16	C4	
20	hrun. torf m. kolum, ösku, og gjósku	í sniði milli A+B og D-2	C25,C16,C2	C19,C4	Skorið af C2
21	torfhrun innan D2	í D-2	C16	C43	skorið af C2
22	fylling í dyrum	vesturdyr í D-2	C16	C23	skorið af C2
23	dyr	vesturdyr í D-2	C23,C16	C4	Skorið af C2
24	torfveggur	n-v- og a-D-2	C16	C4	Skorið af C2
25	gryfja	grunnur D-2	C24-C21,C16	C3	Sker C4, C3

41	kolalag	í prufuholu 50 m vestan við E	C16	C3	
43	mold með torfi í, hrunið þak?	liggur jafnt yfir öllum norðurhluta D-2	C21	C51,C52	skorið af C2
50	Rauðbrúnt og bleikt móöskulag	Í n-enda, D-2, og líkl. í suðursn., væntanl. y. öllu	C21?	C24?	
51	Margsk. brúnbleikt, lífr. leifum, gras/hey	í n-enda D-2.	C21?	C52	skorið af C2
52	Hart, svart, margskipt lag, gólf?	slitrótt í norðurenda D-2	C51		
53	Hreyft lag, m.kolum og beinum	í vesturdyrum D-2	C16	C54	
54	Hreyft lag, líkt 53		C24, C53	C4	
55	Ljósbr. mold, fylling með torfhruni	í suðursniði D-2	C21	C56	
56	niðurgröftur	í suðursniði D-2	C55		sker C21, C24, C58
57	Ljósbrúnt, hreyft lag	í sniði í suður D-2	C24, C56?	?C4	
58	Ljósbrún hr. mold	í sniði í suður D-2	C56?	C24,C50	skorið af C56

Svæði vestan skála

Áður en takmörk uppgraftarsvæða D og E voru ákveðin, voru grafnar 9 prufuholur og hreinsað upp úr tveimur öðrum frá 1908 vestan skálans, auk þess sem þverskurðurinn frá 1908 og 1992 var lengdur til vesturs (Fig. 2.5). Fyrir utan holu sem Bruun lét grafa 1908 og fékk þá heitið F voru engar mannvirkjaleifar í þessum holum. Hinsvegar komu fram undarlegar ójöfnur í jarðveginum undir grasrót um 10 metrum vestan skálans. Í þversniði var að sjá sem jarðvegur undir H-1104/58 og LNL risi upp í tungur. Ekki er ljóst hvort um rask af mannavöldum er að ræða (t.d. staflað torf eða jarðvinnsla), eða hvort þetta eru náttúrulegar myndanir (frostverkun). Hefur Magnús Á. Sigurgeirsson jarðfræðingur hallast að hinu síðarnefnda (sjá skýrslu hans).

Ein stök hola var grafin úti í túni um 50 m vestan við norðurenda skálans. Þar var þykkt kolalag með miklu af gjalli og einni stórri gjallköku (HST-073) milli LNL og H-1104/58. Það bendir til að smiðja gæti verið þar í nánd og verður hennar leitað sumarið 1998. Undir þessu kolalagi eru svipaðar fellingar og sáust í holunum nær skálanum og styður það tilgátuna um að um náttúrlegar myndanir sé að ræða.

Túngarður

Markmið rannsóknar á túngarði var að athuga aldur hans og byggingu. Grafnir voru skurðir í garðinn á tveimur stöðum: í suðurhlið hans neðan við fjárhús, og í austurhlið á móts við norðurenda skálatóftar. Í skurðinum á suðurhlið garðsins sáust hleðsluleifar mjög óskýrt og þar greindust engin gjóskulög frá sögulegum tíma. Í skurðinum í austurhlið sást að garðurinn er hlaðinn úr ljósu strengjatorfi og hefur verið bætt við hann a.m.k. einu sinni. Efst í viðbótinni voru litlir hnefastórir steinar ofan á garðinum. Hleðslan er rúmir 60 sm á hæð og mjög lítið sigin. Landnámslagið er undir garðinum og hið svokallaða "a" lag frá 1477 er hátt yfir honum en engin spor sáust eftir aðra hámiðaldagjósku sem annars er vitað um á svæðinu, s.s. H-1104, H-1158, K-1264 eða H-1300. Að mati gjóskulagafræðings er garðurinn nokkrum öldum eldri en ? a? miðað við afstöðuna milli gjósku og veggs. Í þessum holum fundust því ekki fullnægjandi upplýsingar um aldur mannvirkisins, en sniðtaka á öðrum stöðum kann að leiða fleiri gjóskulög í ljós milli 1477 og garðsins.

Einingaskrá fyrir túngarð SÞ-214:060

Nr.	*Tegund*	*Staðsetning*	*Eldra en...*	*Yngra en...*	*Annað*
1101	óhreyfður jarðvegur	undir túngarði	C1102		LNL efst
1102	torfveggur	túngarður	C1103	C1102b	strengur
1102b	hreyfð mold	undir túngarði	C1102	C1101	samskonar efni og í C1102
1103	torf	á túngarði	C1104	C1102	með steinum í
1104	óhreyfður jarðvegur	yfir túngarði		C1103	með ? a?

Svæði H: Gerði ("Hestarétt")

Hin svonefnda Hestarétt sunnan skálans er sýnd á flestum uppdráttum af Hofstaðaminjum og hafa fræðimenn ætíð talið að hún væri frá sama tíma og skálinn (hofið). Engar rannsóknir hafa þó verið gerðar á aldri þessa mannvirkis fyrr en nú.

Markmið athugana á gerðinu sunnan skálans var að kanna aldur og gerð vegghleðslunnar. Áætlað er að í framhaldi verði gerðar efnagreiningar á sýnum af jarðvegi innan úr gerðinu. Grafinn var þverskurður í gegnum norðurausturhlið gerðisins og hafði hann stefnuna SV-NA. Skurðurinn var 0,8 m breiður og 2,60 m á lengd. Í honum sást að áður en veggur var hlaðinn á þessum stað hefur þar myndast dökkbrún mold, blönduð með miklu af móösku, dálitlu af viðarkolum og lífrænum leifum (C1203a). Lag þetta er samsett úr mörgum linsum sem gæti bent til að það hafi myndast á löngum tíma. Undir því er þunnt (0,5 - 5 sm) lag af ljósleitri fokmold yfir landnámslaginu (C1202). Þegar veggurinn var byggður hafa þessi lög verið skorin (C1211) til að gera skurð meðfram veggnum að utan. Skurðurinn er um 25 sm djúpur og er sú hlið hans sem snýr að veggnum allbrött en ekki var grafið að ytri hliðinni. Það sem sást af skurðinum við uppgröftinn var hann meir en 60 sm breiður og má vera að ytri hliðin sé meira aflíðandi. Á skurðbrúninni hefur í fyrstu verið hlaðinn lítilfjörlegur garður úr strengjatorfi, innan við 50 sm breiður (C1204). Hann hefur sigið ofan í skurðinn yfir fyllingarnar C1205 og C1206 en hún er mun minna hreyfð en sú eldri. Ofan á veggjarstúfinn leggst samskonar lag og er undir honum (C1203b), þó meira blandað af viðarösku.[10] Það bendir til að sömu ferli hafi verið í gangi á þessum stað eftir að garðinum var hrófað upp sem áður. Lagið C1203-1203b er greinilega myndað innan við garðinn en ekki utan við hann. Það verður þó ekki rakið lengra en 80 sm inn fyrir garðinn. Ofan á þetta lag og eldri garðinn hefur síðar verið byggður miklu stæðilegri garður (C1207). Hann er úr mun grófara efni en sá eldri og virðist byggður úr hnausum þó erfitt sé að greina einstakar torfur. Efnið í þennan garð hefur verið tekið nálægt húsum sem sjá má af því að í því eru talsverðar móöskulinsur og annað ruslaefni. Þessi veggur hefur sigið útyfir skurðinn, sem hefur sennilega verið orðinn sléttfullur er veggurinn var byggður. Yfir því sigi er gjóskan H-1104/58 og hefur garðurinn því verið byggður allnokkru áður en lagið féll og verið farinn að síga allverulega. Yfir Heklugjóskunni sást gjóskulagasyrpan öll, K-1262, H-1300, ? a? lagið o.s.fr.v. utanmeð garðinum en að innan

[10] Sem er athyglisvert því sambærileg breyting verður á öskumagni í fyllingu G, þ.e.a.s. viðaraskan er ráðandi í yngri lögunum en móaska og viðarkol í þeim eldri.

varð aðeins ? a? lagið greint. Að innanverðu legst hreyft moldarlag upp að þessum yngri vegg, blandað blettum af H3 og dálitlu af ösku (C1208). Eins og C1203a-b bendir C1208 til að jarðrask hafi átt sér stað innan gerðisins og er einsætt að túlka það sem vitniburð um jarðyrkju. Frekari rannsóknir á svæði H munu miða að því að staðfesta þá tilgátu og komast að því hvers eðlis sú jarðyrkja hefur verið.

Einingaskrá fyrir ? Hestarétt? , SÞ-214:012c

Nr.	*Tegund*	*Staðsetning*	*Eldra en...*	*Yngra en...*	*Annað*
1201	óhreyfður jarðvegur	undir mannvistarlögum	C1202		LNL efst, skorið af C1211
1202	fokmold	undir gerði	C1203	C1202	skorið af C1211
1203a	blönduð mold	undir garðlagi	C1204	C1203	Skorið af C1211
1203b	blönduð mold	yfir eldra garðlagi	C1207	C1204	
1204	vegghleðsla		C1203a	C1203b	
1205	fylling	í skurði	C1206	C1211	
1206	fylling	í skurði	C1207	C1205	
1207	vegghleðsla		C1208	C1206	
1208	blönduð mold	innan gerðis	C1209	C1207	
1209	gróður- og fokmold	yfir mannvistarlögum	C1210	C1207	H-1104/58 neðst
1210	grasrót			C1209	
1211	skurður	utan með garði	C1205	C1203a	

Niðurlag

Að loknum rannsóknum 1997 hefur töluvert áunnist. Myndin af mannvirkjaleifum við

suðvesturhorn skálans er tekin að skýrast, en rannsóknum þar er ekki lokið. Byggingin D-1 er greinilega frá sama tímaskeiði og skálinn þó enn sé ekki að fullu ljóst hvernig sambandi þeirra er varið. Byggingin hefur breytt um hlutverk í tímans rás og sýnilega verið endurbyggð a.m.k. einu sinni. Fjölda jarðvegssýna hefur verið safnað í því skyni að grafast nánar fyrir um hlutverk byggingarinnar og breytingar á því. Í næsta rannsóknaráfanga verður haldið áfram að rannsaka byggingarsögu D-1. Þá verður suðurgafl rannsakaður nánar, samhengi D-1 við D-2 og skála athugað og árangur jarðvegsathugana felldur að þeirri mynd sem þá hefur fengist af þessum mannvirkjaleifum. Þá verða tekin jarðvegssýni á svæði H til að rannsaka hlutverk þess og haldið áfram að leita að gjóskulögum yfir túngarði sem gætu gefið skýrari vísbendingar um aldur hans en fengust sumarið 1997.

Howell M. Roberts, FSÍ:

3.0 Hofstaðir 1997. Area E, A Preliminary Report.

Summary (Figures 1.1 and 1.2).

An archaeological research excavation was undertaken by Fornleifastofnun Íslands and NABO (North Atlantic Bio-cultural Organisation) during August 1997 at Hofstaðir in Mývatnssveit, northeastern Iceland (Figure 1.1). The excavation was conducted in conjunction with the Field School in Icelandic Archaeology. The purpose of the excavation was to investigate the nature and extent of preserved archaeological deposits within and around the home field of the farm of Hofstaðir (hereafter ? the site?). The excavations are part of an ongoing research project, and revealed extensive archaeological deposits preserved in situ, including two small structures not previously described. These deposits have been shown to be earlier than 1104/1158 AD (Magnús Á. Sigurgeirsson 1996), and are believed to represent several phases of construction and occupation. The complexity of the remains, and their early date, highlight the potential for further research at the site. It is hoped that these investigations will shed some light on the processes involved in the settlement of Iceland.

Three areas were opened for excavation during the 1997 season (Areas D, E and G), and these formed the principal areas for investigation (Figure 1.2). A number of other exploratory trenches were also investigated, together with broader environmental studies addressing the context within which the site is situated. These investigations were carried out by a multinational and multidisciplinary team, coordinated by Adolf Friðriksson and Orri Vésteinsson for Fornleifastofnun Íslands.

Introduction (Figures 1.2 and 3.1)

Evaluation work undertaken by Fornleifastofnun Íslands in 1992 (Adolf Friðriksson & Orri Vésteinsson 1992) reopened a trench originally dug by Daniel Bruun and Finnur Jónsson in 1908. This trench (Trench E) cut through the western wall of a large structure, some 45m in length and

10m in width, defined by Bruun and Jónsson as a pagan temple (hereafter Skáli A/B). Trench E was located across the northern part of Skáli A/B, and extended beyond the western limit of that structure. The evaluation revealed a series of archaeological deposits not fully described in the publication of the 1908 excavation (Bruun & Finnur Jónsson 1911), and indicated the presence of both structural and occupational remains, located to the west of Skáli A/B. It was not, however, possible to fully define the nature and extent of the remains within the limited remit of an evaluation.

Excavations undertaken by Fornleifastofnun Íslands / NABO in 1995 and 1996 (Adolf Friðriksson & Orri Vésteinsson 1995; - (eds.) 1996) demonstrated the complexity of the extant remains in other areas of the site. To gain a more complete understanding of the surviving archaeological deposits, an area to the north and south of Trench E was targeted for area excavation during the 1997 and 1998 seasons.

Background (Figure 1.1)

The background to the 1997 excavations, and the history of archaeological excavation at Hofstaðir has been discussed in detail elsewhere, (Adolf Friðriksson & Orri Vésteinsson 1997). The history of archaeological research in Iceland and the importance of Hofstaðir therein has also been discussed by Friðriksson (1994), and will not be treated in depth here.

The modern farm of Hofstaðir is located within the valley of the Laxá river in Mývatnssveit, northeastern Iceland, circa National Grid Reference 461488/568107, at an elevation of circa 250m above sea level. The remains of Skáli A/B and its associated structures (the site) are located approximately 100m to the east of the modern farmhouse. The site lies within the home field of the farm, an area that is cultivated for hay production. The valley is aligned approximately north-south, with the river course situated approximately 200m to the west of the site. To the east of the site, the land rises rapidly and this higher ground is given over to heath land and rocky outcrops.

Methodology

In order to gain the fullest possible understanding of the surviving archaeological deposits, a single context planning approach was adopted. This approach was supported by the re-

excavation of Trench E. This sectional information assisted targeting strategies and allowed a comparison with contexts previously described in 1992, and to which unique context numbers had already been assigned.

Excavations previously undertaken, by Bruun and others, have significantly depleted the archaeological resource at Hofstaðir, and with no immediate threat to the site, care has been taken to leave adequate remains for reinterpretation at some later date.

A grid system was established from previous fixed points using a Total Station Theodolite, and the areas targeted for excavation were located within that grid. Modern turf and topsoil were removed by hand, down to an horizon marked by a thick dark grey tephra layer, dated to 1477 (Magnús Á. Sigurgeirsson 1996). At this level planning areas were defined, each measuring 6 metres north-south and 5 metres east-west. Context recording was by means of a pro-forma context sheet, supported by plans at a scale of 1:20 for each context, and by photography as deemed necessary. All artefacts were recovered and located in three dimensions, and all bone samples were separately bagged and indexed. Environmental samples were retrieved under the guidance of the site specialist, and areas of special interest were assessed for micro-morphological sampling.

Excavation in Area E was carried out by students of the Field School in Icelandic Archaeology, closely supervised and monitored by Fornleifastofnun Íslands. The excavation was conducted partially as a training exercise, intended to familiarise the student participants with the unique complexities of turf built structures, and to acquaint them with a variety of methodological approaches and recording techniques.

Results (Figure 3.1)

Modern turf, topsoil and backfill were removed by hand, exposing the sections of Trench E and revealing an horizon marked by a deposit of dark grey tephra (dated to 1477). The tephra layer was shown to form the upper horizon of a pale to mid yellow-brown silt layer (context 1016), extending across the whole of Area E, between 0.10m and 0.35m thick. Context 1016 was found to include occasional small lenses of peat ash, and towards its lower horizon, frequent small lenses

of white-cream tephra dated to 1104/1158. Context 1016 is interpreted as representing a continuum of natural deposition including occasional episodes of manuring, consistent with agricultural use. Within that continuum, a discreet episode of dumping was identified (context 1043). The latter context, a pale yellow-brown silt, was located at the northwestern limit of Area E, and was defined by a higher concentration of animal bone together with a higher organic content. When these layers were removed, to the north of Trench E, they revealed various layers of turf, disturbed turf debris and a number of large angular stones, consistent with the dereliction of a structure or structures.

The uppermost of these layers (context 1041) was a dark grey-brown silty loam including small fragments of mixed turf. Context 1041 was up to 0.20m in depth, and was located to the north of Trench E towards the eastern limit of the area. Below context 1041 was a dark brown silty soil (context 1042) including frequent pieces of red/orange/brown turf with occasional pieces of charcoal. Context 1042 was found to fill a shallow depression up to 0.22m in depth, its lower horizon defined by thin lenses of red-pink peat ash. The underlying deposit (context 1015) was a dark yellow-brown silty soil, up to 0.25m in depth, including very frequent pieces of yellow/green/grey turf. Context 1015 was apparent in section, and had previously been interpreted as the wall of Skáli A/B. When exposed in plan, the random arrangement of turf pieces within context 1015 showed that it should be reinterpreted as an episode of collapse or dereliction, derived from Skáli A/B or other structural remains. Below context 1015 was a dark red-brown silt (context 1035) extending across the central part of Area E, measuring between 0.05m and 0.20m in thickness. Context 1035 was a highly mixed layer including frequent small fragments of red/yellow turf. Context 1035 overlay context 1044, a widespread deposit comprising larger fragments of red/yellow/black turf in a matrix of red-brown silt. Context 1044 included frequent patches of charcoal and extended up to 13m east-west, 6m north-south and measured 0.10 to 0.20m in depth. At its northeastern limit, context 1044 overlay a further layer of mixed turf debris (context 1052), in turn overlying a fine gritty grey brown deposit (context 1053). A similar gritty grey brown layer (context 1030), was identified beneath context 1044 immediately to the north of Trench E, at the eastern limit of Area E.

Towards the western limit of Area E, the removal of context 1044 exposed further deposits

including the remains of a small sub-rectangular structure (Structure E-2, see below). The removal of the above contexts also revealed elements of another structure (Structure E-1, see below), located in the eastern part of Area E. Study of the extant remains of Structure E-1 showed that it had been substantially truncated by the original excavation of Trench E. Possible structural remains were identified in the north facing section of Trench E, and excavation was commenced to the south of the trench in order to establish any association between these deposits and Structure E-1.

Context 1016 could be traced around the limits of excavation, as was shown to seal the southern portion of Area E. This context was removed, revealing a sequence of deposits comparable to those described in the northern portion of Area E. Unfortunately, due to truncation by Trench E, the direct stratigraphic equivalence of these two sequences could not be demonstrated. They are, none-the-less, interpreted as originating from similar episodes of deposition.

Below context 1016 was a mixed layer of dark grey-brown silt with frequent small fragments of turf (context 1049), measuring 2.5m east-west, 0.52m north-south and up to 0.20m in depth. Context 1049 was located directly south of Trench E, towards the eastern limit of Area E, and was interpreted as equivalent to context 1041. Beneath context 1049 was a dark brown silt layer (context 1051) including larger fragments of green/grey turf. Context 1051 was interpreted as equivalent to context 1015. Also below context 1016, located in the southernmost portion of the area excavated, was a series of further contexts comprising mixed turf debris (1045, 1050, 1054) representing episodes of collapse or dereliction. The removal of these layers exposed structural elements associated with those apparent north of Trench E, and thus the possible extent of Structure E-1.

Structure E-1 (Figure 3.)

Structure E-1 is primarily formed by two positive features comprising in situ *strengur* turf (contexts 1055 and 1074). These latter contexts are parallel to each other, and include the Landnám tephra sequence within individual turves. Contexts 1055 and 1074 have the same colours (grey/green/yellow), and are extant to similar heights. They are interpreted as the long walls of a small sub-rectangular building associated with, and probably contemporary in use to,

Skáli A/B. Context 1055 is located to the north of Trench E, and measures 4.5m east-west and 0.82m to 1.08m north-south. The full height of this feature has not yet been established, but is at least 0.34m high at its external (northern) limit. Context 1074 measures 2.6m in length and 0.30m in width, but has been severely truncated, both by Trench E and at its external (southern) face. Context 1074 is only partially exposed at this time. Context 1062, comprising blocks of red/yellow/black turf, appears to abut the western end of context 1055, and may represent a repair or alteration to that wall. Context 1061, similarly comprising red/yellow/black turf, is located slightly to the south and west of context 1062, and is believed to represent a remnant of the western wall of Structure E-1. The south western corner of the structure appears to have been completely truncated by Trench E. The eastern limit of Structure E-1 appears to abut the western wall of Skáli A/B. Adjoining the internal (southern) face of context 1055 is an isolated block of grey/green/yellow turf strengur (context 1048), measuring 0.98m east-west and 0.52m north-south. Context 1048 is extant to the same height as context 1055 and may also be a part of the structure, possibly reinforcing the northern wall. It is also possible that context 1048 represents the collapse of part of the wall, although this interpretation seems unlikely. Context 1048 was abutted at either side by mixed turf debris (contexts 1046 and 1047).

The above elements enclose a space circa 5m in length and between 2.20m and 2.4m in width. Structure E-1 also contains a number of internal deposits that are likely to represent occupation. Of these, only contexts 1030 and 1075 have been exposed in plan. Context 1030 is located north of Trench E, and context 1075 to the south. Both are mid grey-brown sandy silts with a gritty texture and include occasional sub-angular stones. Together they form a concave horizon within Structure E-1, overlying deposits recorded in section during evaluation work in 1992 (Adolf Friðriksson & Orri Vésteinsson 1992). These earlier deposits await further study. At the southern external face of Structure E-1, context 1074 is apparently overlain by an extensive deposit of mixed turf debris (context 1077). Beneath context 1077 is a blue-grey ash deposit (context 1078). Context 1078 includes charcoal and fragments of bone, and may prove to be equivalent to contexts 1004 and 1059 (See below).

To the north of Structure E-1 a series of external deposits were identified in plan. At the eastern limit of Area E is a layer of green/grey/purple turf debris (context 1056) adjoining context 1055.

Context 1056 slopes down rapidly from east to west, and is believed to represent the remains of the western wall of Skáli A/B. A similar deposit (context 1076) has been identified to the south of Structure E-1. Beneath, and to the west of context 1056 is a layer of red-pink peat ash (context 1057). The latter context includes occasional charcoal pieces and appears to be overlain by discreet patches of grey silt rich in charcoal (context 1058). Beneath context 1057 is a blue-grey ash deposit (context 1059) that includes frequent fragments of charcoal and small pieces of bone. Context 1059 is also overlain by another layer of pink peat ash (context 1063) and by a mixed deposit of brown-grey silt (context 1060), including fragments of turf. Context 1060 is truncated by a test-pit (excavated by Bruun and Jónsson) and extends up to 5.10m east-west and 4.0m north-south. At its western limit context 1060 appears to overlie contexts 1067 and 1068, both latter contexts forming part of Structure E-2 (See below). At its northern limit context 1060 overlies context 1063. Towards the northern limit of excavation, context 1063 is also overlain by contexts 1064 and 1065. Context 1064 is a pale yellow-brown silty layer, possibly part of a process of deposition also represented by the excavated context 1016. Context 1065 is a mid to dark grey silt including frequent fragments of charcoal, and appears to be overlain by context 1068 (See below). Beneath context 1065 at its western limit is a further deposit of pink peat ash (context 1066).

Structure E-2 (Figure 3.1)

Structure E-2 is a small sub-rectangular building, aligned approximately north-south, located at the western limit of Area E, approximately 8m to the west of Skáli A/B. It encloses an internal space approximately 4.5m in length and 2.8m in width. The western wall of the structure is internally lined with irregular angular stones measuring up to 760mm x 320mm. It is believed that an entrance to Structure E-2 is located at the centre of its western wall. This structure is almost wholly undamaged by truncation, and awaits further investigation.

The walls of Structure E-2 are primarily formed by contexts 1068 and 1071. Context 1068 comprises red/yellow/grey turf blocks, each measuring approximately 600mm x 400mm. These individual blocks are most clear in the northern and eastern walls of the structure, becoming less well defined to the south and west. Beneath context 1068 is a layer of green/grey/yellow turf blocks (context 1071) including the Landnám tephra sequence. Context 1071 is apparent beneath

the western limit of context 1068 and may extend further. At its eastern limit context 1068 appears to be overlain by a deposit of yellow-brown sandy silt (context 1067), and at the south overlain by a similar deposit (context 1072). The area enclosed by Structure E-2 is filled by a mixed deposit of red/yellow/brown turf fragments (context 1069). This latter context includes frequent small patches of charcoal and occasional lenses of pale white-yellow organic material. It is anticipated that context 1069 will be subdivided upon further investigation. Context 1069 appears to overlie a layer of green/yellow/grey turf fragments (context 1070) at its eastern limit. Context 1070 may prove to be equivalent to context 1071. To the west and south of Structure E-2 a further deposit of turf debris including the Landnám tephra sequence is apparent (context 1073). This latter deposit is beneath context 1066 (see above), although its relationship to context 1071 awaits further clarification. Structure E-2 also overlies context 1004, a blue-grey ash/charcoal rich deposit exposed at the base of Trench E. Context 1004 may be equivalent to contexts 1059 and 1078, and also the marker layer C4 identified within other areas of the site.

Context Records

Nr.	***Description***	***Location***	***Earlier than...***	***Later than...***	***Comments***
1004	Grey ash deposit, with charcoal and burnt bone.	W. end of Tr. E, and in section of Tr. E.	1068, 1074 ?		Equiv. to C4, 1059, 1078.
1015	Turf collapse, internal.	E. part of Structure E1.	1042.	1035.	Inc. LNL tephra
1016	Post-abandonment accumulation.	Site wide.	C1, C2.	1041, 1049, 1045.	Inc. 1104/1158, 1477 tephra.
1030	Grey-brown sandy silt, internal.	E. part of Structure E1.	1048.	1060.	Equals 1075?
1035	Red-brown silt with turf debris.	W. part of Structure E1.	1015	1044	
1041	Grey-brown silt with turf debris, internal.	Structure E1	1016	1042	Highly mixed.
1042	Grey-brown silt with orange-red turf pieces.	Structure E1	1041	1015	
1043	Dumping episode	N. of Structure E2.	------	------	*Within* 1016
1044	Red-brown turf debris	Between Str. E1 & E2	1035	1046,1052,1069,1072	
1045	Grey-brown sandy silt, external.	S. of Structure E1	1016	1050	

1046	Mixed fill, internal.	N. part of Structure E1	1044	1048	Equiv. to 1047
1047	Mixed fill, internal.	N. part of Structure E1	1044	1048	Equiv. to 1046
1048	Turf block, internal. Poss. structural element	N. part of Structure E1	1046, 1047	1030	*Strengur*, inc. LNL tephra.
1049	Grey-brown silt with turf debris, internal.	S. part of Structure E1	1016	1051	Equivalent to 1041
1050	Mixed turf debris	S. of Structure E1	1045	1054	
1051	Turf collapse, internal	S. part of Structure E1	1049	1075	Equiv. to 1015
1052	Red-brown turf debris.	N. of Structure E1	1044	1053	Inc. LNL tephra
1053	Grey-brown sandy silt, external.	N. of Structure E1	1052	1056, 1058	
1054	Mixed turf debris.	S. of Structure E1	1050	1077	Soft, disturbed.
1055	Turf wall, *strengur*.	Structure E1, north.	1062, 1063	1057?	Inc. LNL tephra
1056	Grey-green turf collapse	N. of Structure E1	1053	1057	Inc. LNL tephra
1057	Pink peat ash	N. of Structure E1	1056, 1058	1059	Equiv. to 1063?
1058	Grey silt with charcoal	N. of Structure E1	1053	1057	
1059	Grey ash, with charcoal and burnt bone	N. of Structure E1	1057, 1063		Equiv. to C4, 1004, 1078
1060	Mixed turf debris	Between Str.E1 &E2	1030	1061, 1062, 1067	
1061	Red/Yellow turf, disturbed. Structural?	Structure E1, west.	1060	1055?	Wall, or wall repair ?
1062	Red/Yellow turf wall.	Structure E1, west.	1060	1055	Addition
1063	Pink peat ash	NE of Structure E2	1065	1059	Equiv. to 1066
1064	Post-abandonment layer	NE of Structure E2	1063	--------	Equals 1016
1065	Grey silt with charcoal	N of Structure E2	1068	1063, 1069	
1066	Pink peat ash	NW of Structure E2	1065	1073?	Equiv. to 1063
1067	Yellow-brown sandy silt, external.	E of Structure E2	1060	1068	Equals 1072?
1068	Red/Yellow turf wall	Structure E2	1067,1069,1072.	1065, 1070, 1071	
1069	R/Y turf debris, internal	Structure E2	1044	1068	

1070	Turf collapse, internal	Structure E2	1068?	1066?	Inc. LNL tephra
1071	Turf wall	Structure E2	1068	1066	Inc. LNL tephra
1072	Yellow brown sandy silt, external.	S. of Structure E2	1044	1068?	Equals 1067?
1073	Mixed turf debris	S & W of Structure E2	1066?	1004/1059?	Inc. LNL tephra
1074	Turf wall	Structure E1 south	1075, 1077	1078?	Inc. LNL tephra, truncated.
1075	Grey-brown sandy silt, internal.	Structure E1 south	1051	1074	Equals 1030?
1076	Grey-green turf collapse	E of Structure E1 south	1077?	1078?	Inc. LNL tephra
1077	Brown silt, with turf debris, external.	S of Structure E1	1054	1074, 1076, 1078	
1078	Grey ash deposit with charcoal and burnt bone	S of Structure E1	1074? 1076?	---------	Equiv. to C4, 1004, 1059?

Discussion / Conclusions

The above results are of a preliminary nature and are subject to ongoing revision. The significance of contexts exposed in plan but as yet unexcavated requires further investigation.

The contexts excavated to date are interpreted as a sequence of episodes representing a period of abandonment and dereliction. The depth and complexity of those layers, suggest that some period of time had elapsed between that abandonment and the subsequent deposition of the 1104/1158 Hekla tephra deposit. The varied nature of those deposits suggests that Skáli A/B, Structure E-1 and Structure E-2 were subject to a variety of processes following their disuse, including natural weathering and possibly deliberate dismantling for the recovery of valuable building materials.

Prior to further excavation, it would be premature to attempt to define the function of Structures E-1 and E-2. Structure E-1 is closely associated with Skáli A/B, and is likely to have a function subordinate to that of Skáli A/B. It is apparently contemporary in use to Skáli A/B, although it may belong to a separate phase of construction. Structure E-2 however, is set apart from the Skáli A/B complex, and this may be indicative of a specialised function.

Structures E-1 and E-2 appear to overlie a series of ash deposits, both pink peat ash (contexts 1057, 1063, 1066) and grey deposits rich in charcoal (contexts 1004, 1059, 1065, 1078). These deposits may be associated with an earlier phase of occupation, and are seen as consistent with a process of midden formation.

These preliminary results demonstrate that the archaeological remains at Hofstaðir are more complex than previously shown. Skáli A/B is seen as one element within a sequence of construction and occupation. The early date of the remains at Hofstaðir, and the excellent preservation of deposits still unexcavated, offers a unique opportunity for understanding the development of a high status settlement and the impact of that settlement upon its environment. It is not yet understood why these structures were abandoned, or why the focus of habitation at Hofstaðir was later relocated approximately 140m to the southwest. It is possible that the maintenance of such a large settlement at Hofstaðir proved unsustainable, or that the location of the structures proved undesirable for reasons unknown. To begin to address these issues, more must be known about the mechanisms of settlement at Hofstaðir, and about the functions of the extant structures. To achieve this aim, further research is necessary.

Proposals (Figure 3.3)

It is proposed that further excavation should be undertaken within Area E during the 1998 season, continuing the work described above. A larger area to the south of Trench E will be investigated, hopefully clarifying the extent of the truncated southern part of Structure E-1. Sampling and excavation will continue within Structure E-1, with the aim of ascertaining the primary function of the structure, and clarifying the nature of its relationship with Skáli A/B. Contexts 1057/1063/1066 (pink peat ash layers) and 1004/1059/1065/1078 (grey ash/charcoal rich layers) are extremely promising for the recovery of ecofacts, and will be assessed for specialised sampling approaches. The latter contexts are thought to be amongst the earliest anthropogenic layers at Hofstaðir. Structure E-2 is unique at Hofstaðír as it has not been truncated by earlier investigation. It is proposed that the excavation of Structure E-2 proceeds by single context planning in opposing quadrants (see Figure 3.3). These quadrants would be formed by the division of the structure along axises determined by the form and location of the extant remains. This approach permits the complete recording of true longitudinal and latitudinal sections through the

structure, in addition to single context planning of stratigraphic layers. It also provides an opportunity for the systematic collection of samples for environmental and micromorphological analysis. Individual stratigraphic contexts may also be spatially subdivided for additional sampling, following the advice of the site environmental specialist.

Additionally, the excavation of two opposing quadrants may provide sufficient data for a satisfactory interpretation of Structure E-2. This would permit the preservation of a part of the archaeological resource, and would enable reinterpretation at some later date

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Tom McGovern & Tom Amorosi:

4.0 Hofstaðir 1997

- Area G Excavation Report

Excavation Strategy

In 1997 the area G excavation team continued work begun in 1996 to systematically remove the stratified layers of apparent midden deposit filling the feature G depression (see Buckland, Buckland, Mainland, McGovern in *Fornleifastofnun Íslands* 1996 season report). The area G team (Tom Amorosi, Tom McGovern, Daniel McGovern plus an average of two field course members on 2-3 day rotation) began work August 9th and continued to Aug 24th, with the main investigations taking place between Aug 10th-22nd. The 1997 investigations continued the basic strategy begun in 1996 of a horizontal open area excavation combined with the vertical profiles first opened by Bruun & Jonsson? s ? T? shaped test trench in 1908. The combination of simultaneous vertical and horizontal perspectives had proven extremely useful in 1996, and one of the first tasks of the 1997 season was to completely clear the entire 1908 ? T? trench. The 1997 season also had the advantage of the profiles created by the 1996 area excavation along the 469Y grid line (running E-W) and a shorter profile along the 219 X grid line (running N-S). These profiles were cleaned and layers tagged for identification, and a continuous (temporary) profile will be maintained across the G feature on the 469Y line.

Feature G 1997 Season Objectives

1) Connect , document, and tag for reference major stratigraphic units (layers) in all 1908 profiles and 1996-97 horizontal exposures. The complex stratigraphy observed in 1995-96 required definitive documentation and correlation across the entire exposed vertical and horizontal are of the G feature to ensure the accuracy of stratigraphic removal of the layers in the 1997 and subsequent seasons. Aluminum tags were attached to layers all along the exposed faces of the 1908 and 1996 profiles. Standard Icel. Arch. Inst. computerized context forms and amended profiles were prepared, which should permit well controlled stratigraphic excavation of the remaining midden fill in subsequent years.

2) Clear stratified midden fill (layers in the C4, C5, C6 series) from the north 1/3 of the feature G depression, recovering a stratified collection of artifacts and ecofacts for analysis, and providing profiles useful for pedological analysis.

3) Clear the outline of the north end of the probable wall tops of the suspected sunken pit house underlying the later midden fill. Begin the process of planning and documentation of the suspected structure.

The major focus of the 1997 season was the portion of the pit fill north of the 469Y grid line (squares 216/269-220/473, with some work in squares 216/246 and 216/468). This area approximately bisects the apparent center of the feature G depression (see Figure 4.1). Our task in this region was to document and remove in stratigraphic order the layers of midden fill in the context C4-4a, C5a-b, and C6a-6o midden layer series, clearing the surface down to the context C7d-7e series wall - collapse layers to reveal the outline of the probable structure wall below.

The stratigraphic correlation and documentation work was somewhat time consuming in the first week of excavation, but the work allowed rapid, accurate removal of the last of the C6 series in the 219-220/469-470 area at the end of the season. While some stratigraphic units proved to be lenses of limited horizontal spread (eg. C 5b,C6b) other major layers formed horizons that covered much of the exposed unit, and served to connect all the profiles (eg. C5a, C6d, C6f). Profiles drawn in 1995-96 could be revised in light of the horizontal exposures made in 1996. A unified drawings registration system provided a new designation series for the feature G profiles :

A= 106

B= 107

C=108

D=109

E=110

F (217-218/469, not yet drawn)= 111

G(219-220/469, not fully excavated)=112

H (217/471) photo only =113

The combination of revised profiles and permanent metal tagging of standing profiles should allow for rapid progress in excavating the midden fill in the 219-220/469-470 and 219-220/467-468 area in 1998.

The squares 217/469, 217/470, 218 470, 218/469 were carried to the base of the C6 midden layers, reaching the interface with the wall-collapse layers of the C7 series. Squares 219-220/469-470 were excavated to the base of the C5 midden series, and require additional work in 1998 to bring them into phase. The excavations in 216/246 and 216/468 were intended to trace the top of the emerging structural wall, and these reached the base of the C4 layer and the top of the wall but were not carried deeper in 1997. As in 1996, the C4,5, & 6 series midden fill contexts proved to be extremely rich in well preserved mammal bone, mollusca, bird egg shell and bone, and wood charcoal, and major ecofact collections approximately 1.5-2 times the size of the 1996 season were recovered.

The preliminary structural investigations demonstrated clearly that the buff-light brown wall (context C10) of the probable pit house was in fact sub-rectangular rather than oval or round in plan, with two clear corners emerging from the midden fill in squares 217/470 and 220/470. This would appear to strengthen the interpretation of feature G as a pit house filled by later midden, as other pit houses known from Iceland share a similar sub-rectangular plan. In the last days of the excavation, it also became clear that there had been a period of extensive wall collapse (something like a melting down slope) of the turf and earth walling, (perhaps after the roof had been removed) prior to the deposition of the midden units in the C6 series. Two concentrations of stones (ca 15-30 cm in longest dimension, some fire damaged) appeared at the interface between the C6 series fill and the C7 wall collapse layers, one in 217/470 about half way up the slope of the apparent wall, and a second on the border of 217/469 and 218/469 near the foot of the wall slope. Some of the stones definitely rest upon the surface of the C7 series, while others appear to be more deeply embedded in the C7 series. These concentrations may relate to features connected to the floor and occupational layers (hearth features?) or they may represent stones associated with the roof and the roof collapse. These were left in place for further investigation. It was also noted that substantial amounts of animal bone (including a dense concentration of salmonid bone in 218/470) were emerging from within or beneath the buff C7 series wall collapse. These may reflect debris left on the terminal floors of the pit house, or they may reflect a period of midden dumping that took place prior to the major wall collapse of the C7 series. Further investigation is again required. The emerging outline of the wall top suggests a structure on the order of 4 x 5 m

in extent, with floor layers probably resting ca. 75 -100 cm below the surface of the C4 horizon.

Recovery Methods

Excavation was by natural stratigraphic layer, and all soil was sieved through 3 mm mesh dry sieves apart from 5 kg whole soil samples collected from each layer in squares 218x/469-472 y, and spot samples of concentrations of carbonized wood and associated deposit. All artifacts found in situ were plotted to the nearest cm, bone and other finds were bagged by meter square and layer. Fire cracked stones were counted and recorded by layer, and then discarded, except for a sample systematically retained from square 219/469. These measures continued the sampling strategy of the 1996 season. Despite record densities of black flies (*Simulium sp*.), the crew performed excellently, recovery standards were high, and the backdirt commendably sterile.

Conditions of Preservation

The deposits sampled in 1997 held large amounts of exceptionally well preserved bone, with little evidence for surface weathering, chemical attack, or frost produced exfoliation. The presence of large amounts of bird egg shell and well preserved fish bone (both cod family and salmon family) further suggested a generally favorable depositional environment. The multiple cases of articulation observed (both in mammals and fish) and the coherence of lumps of egg shell all suggest limited post depositional reworking of deposits. No cryoturbation or frost effects were observed in profile or plan view. A series of soil pH readings were taken by Tom Amorosi on August 15th (following a light rain) with the following results (using Kelway bipolar soil pH meter):

Context (by depth)		pH (7= neutral, 8= basic)	
Modern Turf surface		5.8	
Brown Andisol below			
1477 tephra and above C4		5.9	
C4	midden fill		6.3
C4a	?		6.1
C5a	?		6.4
C5 b	?		6.6

C6a	?	6.1
C6d	?	6.8
C6i	?	6.8
C6g	?	6.2
C6f	?	6.5
C10 (wall of pit house)		5.5

The general tendency for pH to rise (become less acid) within a midden deposit has been documented in many other sites in Iceland and Greenland, and the buffering effect of midden organics may regularly create micro-environments more friendly to bone preservation than the background soil pH.

Stratigraphic Observations

The 1997 excavations in area G broadly confirmed the initial stratigraphic observations of the 1995 profiles, while allowing some greater refinement and identification of additional layers made evident by the horizontal stripping carried out in 1996-97. The widespread C4 layer definitely extends across the entire G depression, from 216/469 to 220/469, except where disturbed by the 1908 and 1965 excavations. While the majority of the C4 deposit was characterized by a nearly black color (10YR 2/1 rich in wood charcoal), a major lens of predominately lighter colored , mottled ash (10YR 5/1-6/2, designated C4a) appeared to fill the lowest area of the G depression (near the juncture of the 1908 ? T? arms). The C4a deposit appeared to also be rich in ash, and had the same high concentrations of bone and charcoal that have characterized the rest of the C4 deposit, and it is possible that this apparent lens is simply variant of the C4 sheet midden (perhaps mechanically affected by its position at the base of the feature G depression?). As in 1996, multiple concentrations of smooth surfaced, light green bird egg shells were recovered from the base of the C4 deposits. While exact quantification is difficult, the combined 1996-97 investigations have observed and recovered at least 67 separate egg shell concentrations from the C4 layer. Karen Milek expertly excavated an interesting concentration of water-rounded pebbles and rounded fine gravel near the base of C4 in 219/470, very similar to a concentration of rounded fine gravel recovered in 1996 from 218/470. Water rounded pebbles also appeared at the juncture between the C4 layer and the C10 wall top in 216/468. Was the distribution of C4 associated

with some sort of persistent or large scale water movement from the slope just to the East? Or are these concentrations of apparently water-rounded pebbles and gravel in fact displaced flooring or other human-transported material that has been scooped up and redeposited along with the other midden fill? As the Geo-archaeology report (Simpson & Milek, see below) indicates, further investigation of the nature and source of the widespread and stratigraphically important C4 deposit should prove interesting.

The continued excavation of the midden fill layers that appear to be entirely restricted to the feature G depression (C5 series and C 6 series) recovered large amounts of mammal, fish, and bird bone (both burnt and unburnt), mollusc shells, fire cracked stones, iron slag, corroded iron objects (probably mainly nails), bird egg shell, and substantial pieces of wood charcoal. As noted in prior reports, the character of the fill suggests a generalized domestic midden that combined refuse from many different activities (and possibly different activity areas) in a single depositional context. The quantitative analysis of the 1996 bone materials indicated that only 15% of the C4 context bones were burned, 32% of the C5 series bones were burned, and 13% of the C6 series bones were burned (Amorosi & McGovern 1997:figs 41-44). Even in the C5 deposits, the great majority of bone fragments were thus completely unburned, and in excellent condition of preservation. The lab analysis of the 1996 collections also indicated that while burned bones did show concentration by square and layer, these concentrations did not tend to overlap between major layers. Concentrations of white burned (calcined) bone and black burned (carbonized) bone also do not regularly overlap in the G deposits sampled. This suggests that these burned bone concentrations derive from separate dumps of bone subjected to different combustion conditions, and were not the product of a single, *in situ* fire. These observations do not support the interpretation of the fill of feature G as a specialized sacrificial deposit or outdoor cooking pit. No evidence for *in situ* hearth or fire place has been recovered during the open area excavations thus far, despite the high concentrations of ash and wood charcoal which may have led prior investigators (who had a more restricted view of the deposit) to consider the hypothesis of an outdoor cooking pit.

The work on profile correlation and the continued horizontal stripping of deposits confirmed the observations made by workers in 1995-96 that while the feature G midden fill does contain many

small lenses with restricted horizontal and vertical distribution, it also is characterized by very extensive stratigraphic layers that extend over most of the exposed profiles of the G unit. While some of the midden fill may have taken place as relatively low-volume ? basket load? dumps, it is clear that the majority of the fill was deposited by substantial cleaning events that moved a large amount of refuse and hearth contents at once. Given the seasonal indicators already observed in the bone collections (bird eggs, newborn lambs, calves, and piglets), a possible seasonal character of the feature G midden fill deserves further investigation.

As the 1997 investigations reached the base of the C6 series fill, the multiple profiles (esp. Profiles 106 and 111) and the horizontal stripping of layers allowed confirmation of the steep bedding angle of the C7 series wall fall and the midden layers directly above. These rest at an average angle of 45-60 degrees along the wall margin, and suggest the possibility of fairly rapid infilling by additional deposits would have been necessary to maintain this steep angle of repose for very long. The rate of accumulation of the G fill (and the source of the fill) remain important future research problems.

Finds

The 1997 excavations of the G deposits produced numerous small artifacts apparently lost or discarded in the refuse fill. These included two small iron knives, a small grey schist whetstone, a somewhat enigmatic circular (coin sized) copper alloy object, several iron nails, and many unidentified iron lumps. As in the 1996 investigations, the most common finds were pieces of iron slag. At the base of the C6 series fill (218/470), a large lump of iron smelting debris still showing the form of the smelting crucible and including immediately recognizable lumps of wood charcoal was recovered near the end of the excavation. In combination with the many bits of slag and another iron bloom recovered from the area D investigations, this find would strongly suggest that significant iron smelting (not only smithing) was taking place on or near the Hofstadir site early in its occupational history.

Bone and Shell

As noted in the 1996 zooarchaeology report (Amorosi & McGovern 1997), mammal bone elements suggest all stages of butchery (from initial dismemberment to table consumption), and

include both heavily fragmented meat-rich elements (humerus, femora) and nearly complete low-meat elements apparently discarded during dismemberment (metapodials and phalanges). Both shearing blows by an axe or heavy cleaver and finer knife scratches and slice marks were observed on the 1996 bones collected, sometimes on the same element. The 1997 excavation recovered multiple articulations of metapodials (cannon bones) and phalanges (hooves) from both adult and newborn sheep and goats from all layers. None showed the characteristic dual perforations for marrow extraction commonplace in Icelandic bone collections dating after ca. AD 1100, and many metapodials had been discarded without any attempt at marrow extraction. A particular concentration of articulated bones in the C6hk layer directly above the C7 wall collapse in 217/269-470 was recovered, including several segments of lumbar and thoracic caprine (sheep or goat) vertebrae, articulated metapodials and phalanges, and articulated tarsals (hock bones). These same deposits included caprine and pig mandibles and maxillae, and a large number of fragmentary limb bones. This dense concentration of bone from multiple species and many individuals (and including both primary dismemberment waste and ? prime cuts? showing evidence of consumption) directly upon the wall fall of the abandoned structure is suggestive of some sort of discrete event. Further excavation of these layers in subsequent seasons and laboratory analysis of the C6hk deposit during the coming winter may shed light on the nature of this bone concentration.

The bulk of the recovered bone material appears similar in general composition to that reported from the 1996 excavations, with domestic mammals (cattle, sheep, goat, horse, and pig) and fish bones making up the majority of the specimens. Pig and horse bones were recovered in some numbers, perhaps reflecting the early date of these deposits. Goat bones were again recovered in some numbers, including both adults and newborn kids. As observed in the 1996 excavations, most molluscan shell recovered was from very small (1 cm and smaller) but complete mussels (*Mytilus edulis*). These are unlikely to have been collected as food, and may well have been originally attached to sea weed brought from the coast. The continued presence of marine (cod family, probably both cod and haddock) fish bones also indicates a connection to the distant sea, and as in 1996 these bones seem to be restricted to vertebrae and cliethra often retained in prepared fish products. Bones of salmonids (trout and true salmon) were again extremely common, and several articulated vertebral series were recovered, along with many head and jaw

elements. Caprine, cattle, and pig tooth rows recovered in some quantity in the 1997 season will add to the sample now under investigation by Dr. Ingrid Mainland (Sheffield) for tooth wear and dietary reconstruction study.

Botanical Remains

The archaeobotanical remains collected are being analyzed by Garðar Gudmundsson, and systematic and spot samples were collected throughout in consultation with him. A few preliminary field observations may be useful, particularly to note the density of substantial 10-15cm chunks of carbonized wood recovered from the base of the midden fill. The C6hk layers that proved rich in well preserved animal bone also produced multiple segments of burnt segments of large diameter birch or willow. These appeared substantially larger than trees growing in the area today, and their presence as casually discarded partially consumed fuel residue may suggest both a different landscape and a different attitude towards resource use than that prevalent in the later deposits we have encountered in Iceland.

Interpretations and Suggestions for Further Research

The 1997 investigations in area G helped resolve some basic questions about the nature of the deposit and the character of the structure emerging beneath, as well as considerably increasing recovery of artifacts and ecofacts, but several key issues remain to be addressed by future seasons:

- The source and nature of the widespread C4 sheet midden deposit. It may be useful to open additional test trenches on an E-W axis (perhaps on the 469 grid line) on both sides of the G depression to provide more opportunity to trace this layer.

- The nature of the wall fall (C7 series) deposits within the G depression, and its relationship to the apparently bone rich deposits just below. Are these additional midden-like fill deposits or the beginnings of floor layers?

- The actual extent of the C10 wall top and its apparently sub-rectangular outline needs to be traced continuously around the structure, continuing the work carried out in 1997.

- Midden fill needs to be cleared from a larger portion of the G depression, particularly on the Eastern side of the depression where stratigraphic tagging is nearly complete.

- The source of the midden fill deposits for G remains unknown. The structures investigated in area D are too recent to have generated these deposits, yet the character of these rich midden deposits suggests a full-scale farm (and smithy) operating in the near proximity. While tremendous progress has been made in uncovering the complex structural and midden stratigraphy of Hofstaðir, we clearly have a great deal to learn from this critically important site.

Ian Simpson (Department of Environmental Science, University of Stirling)
Karen Milek (Department of Archaeology, University of Cambridge):

5.0 Hofstaðir 1997

- Geo-archaeological Sampling Report

Introduction

Archaeological excavations at Hofstaðir in 1997 included the targeted sampling of soils and sediments for laboratory analyses. Bulk samples were taken from discrete layers for radiocarbon dating and organic geochemical analysis, and undisturbed blocks were removed for micromorphological analysis. During the 1997 field season, geo-archaeological sampling was focused on the turf structure in Area D, which had been partially excavated by Daniel Bruun in 1908 and was more clearly defined during excavation in 1996. Sampling was done strategically, with the purpose of answering the following series of questions that arose as a result of the 1996 field season:

1) *What is the chronological relationship between the turf structure in Area D, the long house (Areas A and B) and the pit house (Area G)?* Of prime importance is the integrity of the extensive cultural layer that has been designated ? C4? , a heterogeneous but distinctive deposit, probably a sheet midden, which post-dates the pit house, pre-dates the long house, and has been tentatively identified in Areas D and E.

2) *What was the architectural plan of the turf structure in Area D and how had this been altered over time?* Attention to this question has focussed on the western wall and doorway.

3) *What was the function of the structure in Area D and did this change over time? Is it possible to distinguish different activity areas and living conditions within the structure?* Here the main focus is on floor layers identified during excavation.

In addition, the preservation of the so called *Landnám* tephra sequence *in situ* below the western wall of the structure in Area D prompted the following question:

4) *Is it possible to detect differences in the soil preceding and following the* Landnám *tephra sequence, considering the building activity in the immediate vicinity (Area G), which we know took place not long after the deposition of this tephra sequence?*

These questions are integral to ongoing research projects conducted by the writers, both jointly and independently, on site formation processes on Norse rural settlements in the north Atlantic region. Using techniques based in the soil sciences, these projects are designed to contribute to the social and economic history of Norse settlement by enhancing archaeological interpretations related to resource management (where resources include land, fuel, building materials, edible plants and animals) use of space on farmsteads and within structures, building techniques, and living conditions.

Soil Sampling Rationale and Procedure (see Appendix 4.0)

1) Layer C4

The layer designated as C4 has become an important chronological marker on the site because of its lateral extent from Area G to Area A, but it is in fact a heterogeneous deposit of variable thickness, and it should not be assumed that it accumulated simultaneously in different parts of the site, or that the rate at which it was deposited was continuous or uniform across the site. In Areas D and E, extensive cultural layers consisting of grey ash, charcoal, small bone and egg shell fragments are very comparable to C4, and are thought to be a continuation of the same layer. In Area D, this layer is located above the so-called *Landnám* tephra sequence and a subsequent accumulation of windblown silt that is typical of Icelandic andisols (see figure 5.1). It pre-dates the construction of the turf structure in Area D, since it was truncated by the digging activity that created a sunken floor at the level of the Hekla 3 tephra layer, and is underneath the western wall of this structure.

In order to characterise ? C4? in this part of the site and to facilitate its comparison to the similar layer found in Areas E and G, two micromorphology samples were taken from the western profile (Ref. 1/1 and Ref. 2/3, figure 5.1). Thin section analysis will determine the composition of this layer, including the relative proportions of ash, charcoal, bone, shell, phytoliths, organic residues,

sand, silt and clay. The physical condition, orientation and distribution of these components will allow us to make interpretations about the mode and rate of deposition. Key features will be the presence or absence of fine laminae within the layer, signs of weathering on an exposed ground surface, the accumulation of windblown silt and soil development. Post-depositional disturbances such as bioturbation or trampling can be interpreted from the microstructure of the sediment and the degree of mixing. These samples form part of a continuous sequence of micromorphology samples, which incorporate the windblown silts and prehistoric tephra layers down to Hekla 3 (see figure 5.1), and have therefore been labeled as Reference samples.

Adjacent to micromorphology sample Ref. 2/3, C4 was bulk sampled for organic geochemical analysis (bulk sample no. 13). Analysis will focus on the lipid fraction in an attempt to characterise the organic materials that contributed to the formation of the deposit, but which will have decomposed to such a degree that they are no longer identifiable in thin section. Organic residues that may potentially be distinguished using lipid analysis include human and animal excrement, turf vegetation, fats and oils.

Due to the importance of layer C4 as a chronological marker, it will be a priority to determine its stratigraphic continuity across the site -- a goal for future excavations. As a complement to micromorphological interpretations about the rate of deposition, it is also important to determine the relative age of deposit C4 in all parts of the site. At the moment, absolute dating at Hofstaðir is dependent on tephra layers observed in untouched soils, which place all of the structures in Areas A, D and G between the *Landám* tephra of 871-2 A.D. and the tephra from Hekla that fell in 1104/1158 A.D. For this reason, bulk samples for high precision radiocarbon dates were taken from layers identified as C4 in Area D (C-14 sample 3), Area E (sample 1) and Area G (sample 2). For each of the three samples, it will be possible to date four different types of materials: bone, egg shell, charcoal and soil carbon. The overlap of these absolute dates and their low standard deviations should provide a higher resolution of dating than is currently possible through tephrochronology.

2) Western Wall and Doorway of the Turf Structure in Area D

In 1996, a continuous vertical sequence of micromorphology samples was taken from the turf wall

exposed in the west profile of Area D (figure 5.1). The analysis of these samples is still in progress. At the south end of this profile was a break in the turf wall, which appeared to have been a doorway that was later blocked with a fill of mixed soil and pieces of turf. In the threshold of this presumed door, there was a very sharp boundary between the floor of the structure, which was composed of Hekla 3 tephra (from *c.*2800 B.P.) undulating in a dark brown silt loam (7.5YR 3/3), and the soil/turf fill, with no evidence for either an accumulation above the floor or a layer that could represent a period of abandonment prior to the infilling of the door. A micromorphology sample was taken at this boundary (Pr. 1/1) in order to investigate the microstratigraphy. Unless they had been shovelled out prior to the infilling of the door, thin section analysis will detect any fine layers between the threshold and the fill. Trampling, which should be marked if this is indeed a threshold where traffic was probably heavy, will be visible in the microstructure and compaction of the soil/Hekla 3 floor. It will be interesting to compare trampling features in this sample with those from other parts of the house, where areas of heavy traffic cannot be directly inferred.

The turves within the fill were of various sizes and shapes, were randomly distributed, and were either horizontally oriented, or nearly so. They contained up to ten discrete lenses, some no more than 0.5 cm thick, which were composed of either tephra from the *Landnám* sequence, peat ash or windblown silt, or are mixed layers containing variable amounts of silt, charcoal, ash and black organic material. No two turves contained the same lenses, indicating that they had been of variable origin, and that their history was probably more complicated than that of wall or roof collapse. Also, turves containing such fine, variable layers have not been found in any of the turf structures that have been excavated on the site so far. Five micromorphology samples (Pr. 1/1-1/5) were taken in the hopes of determining whether they had first been used as building materials, or whether they had been freshly dug out of the ground and thrown into the threshold with the rest of the soil fill. This interpretation may be difficult but it will be aided by comparing these samples to those from the intact turf wall and the *in situ Landnám* tephra sequence. If it proves to be possible to detect features indicative of exposure, weathering, shrinkage, and/or loss of structural integrity prior to burial, it may be interpreted that these turves were used as building materials in a house that has not yet been excavated on the site, or at least that they were stockpiled prior to their use as fill in the doorway.

The uppermost micromorphology sample in this sequence (Pr. 1/5) is especially interesting because it contains the boundary between the doorway fill and the post-abandonment layer of windblown silt that also caps the turf wall. Because it is possible that the walls and roof were intentionally dismantled in order to fill in the structure, it will be interesting to see if there is any evidence for the intentional truncation of the doorway fill at this time. It may be difficult to interpret this, however, because the upper surface of both the wall and the fill will have been exposed, possibly for some time, before the windblown silt began to accumulate in sufficient amounts to protect them from degradation.

3) Floors of the Structure in Area D

The turf structure in Area D had been investigated by Daniel Bruun in 1908, but this year? s excavation revealed that Bruun had not completely removed the interior of the structure on its north end. On either side of Bruun? s north-south trench through the structure, floor layers were found preserved *in situ* under post-abandonment fill, which was composed of long horizontal turves and soil. Once again, the original floor surface was on the undulating Hekla 3 tephra layer and associated soil (silt loam; 5YR 3/4 dark reddish brown). At the time of construction, these layers had been reached by removing the overlying soil, prehistoric tephra layers and the ubiquitous C4, to a depth of 25-30cm below the ground surface. Ten micromorphology samples were taken from the floor layers in Area D, of which seven include the original floor surface (Pr. 2/1, 2/2; Pr. 3/3, 3/4; Pr. 4/1, 4/2, 4/3; see figures 5.2 and 5.3). The microstructure and compaction of the Hekla 3/soil layer, which will be visible in thin section, will provide information about the relative amount of trampling that had occurred in each of the sampled areas. The identification of areas of heavier and lighter traffic will be especially important where there was no accumulation of debris above the original floor surface, making the use of space more difficult to interpret. Although micromorphologists have tended to associate trampling with horizontal cracks in the substrate, the physical behaviour of soils is highly variable. Since volcanic ash and andisols tend to have unusual physical and chemical characteristics, such as very low bulk densities and very high plastic and liquid limits, future research will explore how these materials would have behaved as living surfaces. Experiments will include tests of shear strength, compressive strength, and water retention, which have implications for the movement of the

sediment under trampling and its ability to absorb liquid and solid refuse. All of these factors would have affected the living conditions within the structure.

In the metre-long profile between Bruun's trench and the eastern wall of the structure, it was possible to see that Hekla 3 had been disrupted by a series of depressions and small pits (figure 5.2). The stratigraphic sequence of these features is clear, and has been illustrated by a Harris matrix (figure 5.4). The three depressions, which are the earliest in the stratigraphic sequence, are very distinctive features and deserve some attention. They have been identified as depressions rather than post holes because the lowest layer of the fill of two of them is Hekla 3, which appears to have been pushed downwards and compressed by a weight from above. In plan they were circular or ovoid, with Hekla 3 forming the outer ring. It was possible to determine that these features sloped downwards on an angle because the cup-shaped depressions in the profile were reflected in circular features *c.*2cm away from and shifted to the south-east of the base of the profile. Although they are difficult to interpret, it is possible that these features were formed by the legs of a piece of furniture that was placed on and was pressed down into the original floor surface. Since Bruun does not seem to have excavated all of Area D down to the natural soil, it will be possible in future excavations to uncover more of the horizontal plan of these features. Their interpretation will also be aided by the analysis of a micromorphology sample that was taken from one of them (Pr. 3/4; see figure 5.2). In thin section, it will be possible to study the boundary between the feature and the natural soil/tephra below, as well as the composition of its fill.

Above Hekla 3 and capping the holes and depressions, was a dense black layer (5YR 2.5/1) with a very fine platy structure, which was designated "Context 52". Although very heterogeneous and often containing smaller laminae, this layer was generally composed of silt loam, decomposed organic matter, and very small inclusions of charcoal and bone (and possibly egg shell?). These characteristics suggest that cooking refuse accumulated and was trampled *in situ*, and therefore that the structure had once had a domestic function. In order to determine the precise composition of this layer, its mode of deposition and the extent to which it had been altered since its deposition, it was targeted with seven micromorphology samples (Pr. 3/1-3/5; Pr. 4/1, 4/2) and ten bulk samples for organic geochemical analysis (bulk sample nos. 1-10) (figures 5.2 and 5.3).

In each case, the bulk sample was taken immediately adjacent to the micromorphology sample in order to facilitate the integration of results. In addition, this layer was sampled for archaeobotanical and microrefuse analysis by Garðar Guðmundsson. The quantitative data supplied by the bulk analyses, coupled with information about the physical orientation and distribution of the components and the microstructure of the sediment, it should be possible to come to a conclusion about the function of the structure.

Context 52 was highly variable in thickness and did not extend uniformly across the surface of the floor. Close to the western wall of the structure, where the floor sloped upwards towards the wall (figure 5.2), Context 52 was present only as very fine (*c.*1mm thick), discontinuous black lenses. On the western profile of Bruun? s trench, which was *c.*80cm east of and parallel to the western wall of the structure, a 3cm-thick patch was found (figure 3). Fine horizontal laminations were clearly visible within this patch, although further analysis is needed to determine their precise composition. In contrast, the black layer is much more continuous on the eastern side of Bruun's trench. As the floor slopes up towards the eastern wall of the structure, the black layer divides into thinner lenses, which have thicker deposits of sediment between them. The latter consist of silt loam (7.5YR 3/3 dark brown) mixed with small quantities of charcoal and what appears to be aggregates of Hekla tephra. Since the discrete black lenses close to the eastern wall have the potential to show changes in the use of that area over time, they were sampled separately for organic geochemical analysis (bulk sample nos. 4-7), and one micromorphology sample was placed across all of them (Pr. 3/5). That there is so much lateral variability within such a small area (2x2m^2) attests to a complex use of space, although it is also possible that this variability is a result of the partial removal of Context 52 during the life of the structure. For example, the greater accumulation of sediment and debris towards the eastern wall may be due to the fact there is less traffic there, and/or that sediment was permitted to accumulate close to the walls while it was cleared out of the central areas of the structure. Even until the middle of this century, the accumulated occupation debris on the floors of turf houses was periodically cleared out to prevent the floor level from rising (Áskell Jónasson, pers. comm.).

All of the floor layers in this structure were capped by "Context 51", a soft silt loam containing several internal laminae. These fine layers ranged in colour from 5YR3/3 and 3/4 dark reddish brown to 7.5YR 4/6 strong brown and seemed to contain small white fibrous inclusions, but field

observations could not determine the cause of its laminated appearance. It is possible that this layer contains a high proportion of decomposed grass. In order to determine the precise composition of Context 51 and to interpret its mode of deposition and any post-depositional disturbances, it was targeted for micromorphological analysis (Pr. 2/1; Pr. 3/1, 3/2, 3/3, 3/5; Pr. 4/3), organic geochemistry analysis (bulk sample no. 8) and archaeobotanical analysis (by Garðar Guðmundsson). In addition, Pr. 2/2 is a very large undisturbed block, which was taken for the purpose of micro-excavation in the laboratory. This combination of techniques should allow us to determine whether Context 51 represents a change in the function of the structure over time or the early phases of abandonment. This layer was in turn capped by the horizontal pieces of turf and mixed soil that filled in the structure after its abandonment. The boundary between these phases will be visible in six micromorphology samples (Pr. 2/1; Pr. 3/1, 3/2; Pr. 4/1-4/3). It may be possible to interpret whether the turf fill is a result of intentional collapse of the roof or collapse due to neglect, if the intentional collapse was done immediately following the abandonment of the structure.

4) The Landnám Issue

Beneath the western wall of the structure in Area D, the so called *Landnám* tephra sequence was preserved *in situ*. Bearing in mind the important question of the earliest phase of settlement at Hofstaðir, and in Iceland in general, it was decided to compare the soils immediately above and below the tephra, in an effort to determine whether or not there were any signs of disturbance in the immediate vicinity prior to 871-2 A.D.. Two micromorphology samples were taken (Ref. 1/1 and Ref. 2/3) and two samples for organic geochemistry analysis were taken, one from below the *Landnám* tephra (bulk sample no. 11) and one from above it (bulk sample no. 12). The impact of humans on the natural soil sequence can take many forms, including changes in the structure of the soil (certain activities can cause it to become compacted and platy), and the input of anthropogenic materials such as fragments of charcoal and bone, plant matter and animal excrement. The latter two will decay, leaving only recalcitrant compounds in the soil, such as lipids, and phosphorus which is readily retained in andisols. In addition, the translocation of clay down the soil profile, which can be triggered by disturbances in the upper A horizon, may indicate that the surface of the ground has been cleared of vegetation. At the moment there is considerable debate about the strengths and weaknesses of using these soil characteristics to interpret the

presence and activities of humans in the landscape. Nevertheless, using converging lines of evidence from chemistry and micromorphology should suggest whether or not a drastic change in the landscape occurred only after 871-2.

Analysis of Soil Samples

The micromorphology samples will be manufactured and analysed at the Universities of Cambridge and Stirling. They will be dried using acetone replacement of the water, impregnated with a crystic polyester resin, and thin sectioned, a process that normally takes three to four months. Thin sections will then be analysed under a transmitting light microscope using a range of light sources (plane polarised, cross polarised and circular polarised) and at magnifications ranging from x4-x400. Descriptions will use internationally accepted terminology. The interpretation of thin sections will be aided by reference to micromorphology samples taken from known contexts in Þverá, a recently abandoned turf house that is only 14.25km away from Hofstaðir in the same river valley (Laxádalur).

Application for radiocarbon determination of materials from the C4 layer has been made to the UK Natural Environment Research Council (NERC), with a decision expected in January 1998. Application is also being made for soil lipid analyses at the NERC unit of Organic Geochemistry, University of Bristol. In this case too, it is hoped that interpretation will be aided by reference to distinctive chemical signatures, which may be detected in the soils sampled from the byre and the kitchen in Þverá.

Conclusion

The 1997 geo-archaeological sampling program at Hofstaðir was aimed at answering a series of questions about site formation processes that related to building techniques, the ways in which space was used on a farmstead and within a dwelling, and the living conditions within the dwelling as a result of these choices. The answers to these questions are of major importance to the understanding of structure, function and environmental resource exploitation patterns of Norse settlement in Iceland. Furthermore the excavations at Hofstaðir are part of a series of settlement and palaeolandscape investigations across the north Atlantic region. Ongoing excavation and analyses at sites in Orkney, Shetland and northern Norway are beginning to provide

complementary data for comparison with the analyses from Hofstaðir allowing regional, north Atlantic patterns to emerge. As a first contribution to these issues, the first analyses of thin sections from Hofstaðir will be completed by the end of December 1997 (and submitted to *Norwegian Archaeological Review)*, providing a first approximation of site formation processes in Area G (pit house formation and midden accumulation processes) and wall construction in Area D.

In 1998, in order to continue pursue these topics further, sampling will target the following areas:
-the natural soil profiles
-systematic sampling of the floor in the northern half of the pit house in Area G
-quartering and systematic sampling of the small structure that has been found in Area E
-defining the stratigraphic extent of C4; whether or not it is continuous, it would be worthwhile to take micromorphology samples from several places along its lateral extent
-the "vertical" stratigraphy in Area E.
-additional sampling at Þverá to provide a greater level of controlled analyses.

Karen Milek, Department of Archaeology, University of Cambridge:

6.0 Archaeological Soil Sampling at Þverá, Laxárdalur, NE-Iceland, 1997: A Preliminary Report

Introduction

Archaeological investigations at Hofstaðir in NE-Iceland (A. Friðriksson and O. Vésteinsson, Institute of Archaeology, Iceland) in August, 1997, included the excavation of a turf structure in Area D. This structure had been investigated by Daniel Bruun in 1908 but results were inconclusive, and one of the objectives of the 1997 field season was to reopen this area in order to determine the chronological relationship between this structure and the others on the site, its architectural form and function, and how these may have changed over time (*ibid*., pers comm.). Excavation revealed that Bruun had not completely removed the interior of the structure on its north end, and that floor layers were preserved *in situ* under post-abandonment fill consisting of mixed turf and soil. In order to extract as much information as possible about the activities that had occurred on these floors, the living conditions within the house during its occupation and the process of its abandonment, samples were taken from these floor layers for soil micromorphological analysis (the study of undisturbed soil in thin section), chemical analysis (particularly the types of lipids present), and archaeobotanical and microrefuse analyses.

The archaeological interpretation of soil micromorphology and chemistry is strengthened by reference to samples from known contexts, which have been either artificially derived through experimentation, or collected from contemporary or recently abandoned sites in what may be described as an historical-ethnoarchaeological approach. Because both soil characteristics and human behaviour are environmentally specific and reference samples do not yet exist for Iceland, it was deemed important to find a modern analogue with which to compare the samples from Hofstaðir. After visiting the *burstabær* at Þverá and interviewing Áskell Jónasson, the farmer who had lived in the house for 22 years, it was determined that the site could serve as an ideal modern analogue for the following reasons:

a) It contains building materials comparable to those used at Hofstaðir: turf walls and roof, and earthen floors;

b) Both Hofstaðir and Þverá are in the valley of the Laxá, only 14.25 km apart. They share the same microenvironment, including basic geology, soil type, climatic conditions, topographical position and vegetation cover. With local environmental conditions as a common baseline, it will be possible to compare the characteristics of the soils at both sites that are a result of human activity alone.

c) Áskell Jónasson, who was born in the turf house in 1938 and lived there until its abandonment in 1960, resides at the site in a modern house. He is a ready source of information about the activities and living conditions associated with the different rooms of the house during its occupation, and how the house has been maintained since its abandonment.

d) The function of the rooms did not change during the lifetime of Áskell Jónasson, and he thinks it unlikely that there has been any change in function since the construction of the house was completed in 1852. Since the floors of the house seem to have been in continuous and consistent use for over 100 years, soil analysis should reveal some of the micromorphological and chemical signatures associated with specific domestic activities.

e) Following its abandonment in 1960, the house was used in a very limited way as a storage facility until it came into the hands of the National Museum of Iceland in 1965. Since then, the walls and roof have been repaired as needed, but there has been minimal disturbance of the original floors.

In short, the environmental compatibility of the two sites, the wealth of ethnographic information available about Þverá, and the relatively pristine condition of the original floors, makes it an ideal source of comparative material through which the archaeological samples from Hofstaðir can be better understood.

Soil Sampling Procedure (See Appendix 5.0)

On August 26, 1997, the site was visited by the author and Ian Simpson (Department of Environmental Science, Stirling University), and with the permission of the National Museum of Iceland, a brief sampling program was carried out on the floors of the house. The primary goal was to assess the ability of two relatively new geoarchaeological techniques -- soil micromorphological analysis and lipid analysis -- to distinguish between rooms of different, known functions, and thereby to determine if the methods can be usefully applied to the unknown archaeological contexts at Hofstaðir. For this reason, samples were taken from two distinct rooms in the house, the kitchen and the byre. This involved the excavation of shallow test pits, the recording of stratigraphy using scale drawings and photographs of the exposed sections, and

the removal of small quantities of earthen material in 5 x 8 x 5 cm Kubiena tins (for micromorphological analysis) and in bags (for bulk chemical analysis). In all cases the test pits were backfilled once the samples were removed.

Area A: The Kitchen

Two test pits were excavated in the kitchen (Fig. 6.1). The first was a trench 100 x 20 cm in plan and 15 cm in depth, extending from the west wall of the kitchen to its centre, directly under the place where meat and fish used to be hung for smoking. Under a layer of loose, recently deposited turf and soil, was a thick layer of ash and occupation debris, which Áskell Jónasson identified as the original floor. Three micromorphology samples, each with three associated bulk samples, were taken from this test pit (Fig. 6.2).

A second test pit was placed directly to the south of the hearth where all of the cooking had been carried out until a coal stove was placed in another area of the house at the turn of the century. This pit was 30 x 20 cm in plan and only 5 cm in depth, after which stone flagging was reached. One micromorphology sample and two associated bulk samples were taken (Fig.6.3).

Area B: The Byre

A transect of four test pits was placed through the middle of the byre, running east-west across four distinct zones: the earthen floor west of the stone flagged drain, the drain itself, the turf- and stone-built feeding bench on the east wall, and the floor between the drain and the feeding bench, which is currently covered with wooden floor boards (Figs. 6.1 and 6.4). Bulk samples for chemical analysis were taken from the drain and the earthen floor to the west of the drain. Test pits measuring 30 x 20 cm, and reaching 20 cm in depth were placed in the feeding bench and underneath the floor boards. One micromorphology sample was taken from each of these, one bulk sample was taken from the feeding bench, and four bulk samples were taken from the four different layers observed under the floor boards.

Analysis of Soil Samples

All of the soil samples will be transported to the University of Cambridge, England, under the care of the author. The micromorphology samples will be dried, impregnated with resin, and thin

sectioned using the standard procedure set out in Murphy (1986), a process that normally takes 3-4 months. The thin sections will then be analysed under a transmitting light microscope at magnifications ranging from x4-x250, and described using the internationally accepted terminology in Bullock *et al*. (1985). In thin section, it will be possible to identify the mineralogy, texture and structure of the earthen materials that made up the floors, characteristics that are associated with the origin of the sediment used to construct the floor, how it behaved while it was being trampled under different moisture and temperature conditions, and what the living conditions were like within the house. It will also be possible to identify bone, shell, artefacts, coprolites, phytoliths, ash, pollen, charcoal and other plant remains in thin section, all of which are associated with particular domestic activities. Finally, the presence and movement of iron, manganese, phosphorous, carbonates, organic residues and clay minerals through the sediment will be visible in thin section and can be linked to specific environmental conditions acting on soils with certain chemical properties.

The bulk samples will be sent to the University of Bristol, England, where they will be treated and analysed for their lipid content -- molecules of organic origin which become fixed to stable inorganic compounds when the organic matter with which they were associated has decomposed, and which therefore do not move downslope or down the soil profile (Ian Simpson, pers. comm.). Cost allowing, a broad range of lipids will be selected for analysis, including bile acids, sterols, fatty acids, alkanols and alkanes, waxes and esters. Especially important are those that are potentially diagnostic of different domestic activities, such as those that can distinguish wetland from dryland vegetation, those that can identify food residues, including animal fat, fish oils and milk, and those that can distinguish human and animal excrement.

Conclusion

The results of the analysis of the micromorphological and the bulk soil samples taken from Þverá will be submitted to the National Museum of Iceland in a formal report. This report will include an assessment of the success of this pilot study, the significance of the results, and the potential benefit of extending the sampling program in the summer of 1998 to include more rooms within the house. It is hoped that the project will be successful -- that the soil samples from the kitchen and the byre and other rooms at Þverá will show markedly different chemical and

micromorphological signatures -- so that there will be a strong foundation for the interpretation of the turf structures of unknown function that are being excavated at Hofstaðir.

Acknowledgements

I would like to thank Hjörleifur Stefánsson and the National Museum of Iceland for granting permission to carry out this pilot study. I am also very grateful to Áskell Jónasson for his time and patience with my questions, to Orri Vésteinsson for translating the interview, and to Adolf Friðriksson for helping to secure essential equipment. I owe a great debt of gratitude to Ian Simpson for his role in the development of this project and for helping me take the samples.

Magnús Á. Sigurgeirsson, Orkustofnun:

7.0 Fornleifarannsókn að Hofstöðum í Mývatnssveit

- Greining gjóskulaga

Þann 21. ágúst skoðaði höfundur jarðvegssnið á Hofstöðum. Að þessu sinni beindist athyglin einkum að þrennu, í fyrsta lagi að finna út aldur meints hestagerðis suðaustan rústanna, í öðru lagi að aldursgreina garð sem liggur sunnan og austan rústanna og í þriðja lagi að reyna að skýra myndun óreglna sem koma fram í jarðvegssniði við norðanverða skálarústina. Ekki mun einstökum gjóskulögum verða lýst hér heldur bent á fyrri greinargerðir í því sambandi.

Hestagerði

Aldur meints hestagerðis tókst að finna út með allnokkurri nákvæmni, eða eins nákvæmri og kostur er með hjálp gjóskulaga. Snið var mælt í austanverðu gerðinu í skurði sem liggur í SV-NA stefnu í því utanverðu (sjá mynd). Í ljós kom að gjóskulagið H-1158[11] er í jarðvegi yfir garðinum. Á milli gjóskulagsins og torfsins er þunnt jarðvegslag, 1-2 cm. Undir garðinum er Landnámssyrpan (LNS). Ekki er greinanlegt bil á milli hennar og neðri marka garðsins. Næst utan við garðinn vantar LNS og Hverfjallsgjóskuna sem bendir til að þar hafi torf verið rist þegar hann var byggður á sínum tíma. Virðist sem þessi aðferð hafi tíðkast mjög við byggingu torfveggja á þessum tíma (þ.e. 900-1200 e.Kr.). Eru til allmörg dæmi sem sína að svo hefur verið. Afstaða gjóskulaga til garðsins bendir til að hann hafi verið byggður á tímabilinu 900-1050 e.Kr.

? Túngarður?

Ekki tókst að aldursgreina meintan túngarð með hjálp gjóskulaga að þessu sinni. Í jarðvegi yfir garðinum fannst aðeins eitt gjóskulag sem gefur einhverja vísbendingu um aldur, þ.e. gjóskulagið ? a? frá árinu 1477. Afstaða lagsins til garðsins bendir til að hann sé allmiklu eldri, sennilega einhverjum öldum. Meira er ekki hægt að segja að svo stöddu. Með tilliti til fyrri athugana við Hofstaði má þó telja víst að finna megi jarðvegssnið við garðinn þar sem einhver gjóskulög eru á milli ? a? -lagsins og torfsins. Verulegar líkur ættu t.d. að vera á að finna gjóskulögin H-1158 og

[11] Heklulögin H-1158 og H-1104 eru líkast bæði til staðar á Mývatnssvæðinu (sjá greinarg. frá 1992).

H-1300, annað þeirra eða bæði.

Óreglur í jarðvegi

Í skurði sem liggur í A-V stefnu við norðurenda skálarústar voru skoðaðar óreglur í byggingu jarðvegsins og skýringa á þeim leitað. Ljóst er að þarna er um allsérstætt fyrirbæri að ræða. Hefur lagskiptingu jarðvegsins verið umturnað og snúa gjóskulög t.a.m. upp á rönd eða eru mjög hallandi. Er að sjá sem tungur af dökkum jarðvegi (með LNS) teygi sig upp í yngri lög sem er úr ljósari jarðvegi. Litaskipti í jarðveginum, rétt ofan við LNL, gerir að verkum að óreglurnar verða skýrari en ella. þessi litaskil koma vel fram í prufuholu í túni skammt frá skurðinum. Þau gjóskulög sem einkum hafa lent í þessum ? hremmingum? eru lög LNS og Heklulagið H-1158. Yngri gjóskulög liggja lárétt eða því sem næst þar fyrir ofan, s.s. H-1300 og ? a? -lagið. Gjóskulagið H-1300 liggur nokkuð bylgjótt yfir jarðvegstungunum og hefur því fallið á óslétt land og/eða raskast síðar. Af gjóskulögunum má nokkuð ráða í hvenær umrótið átti sér stað. Benda þau til að það hafi einkum orðið á milli þess sem gjóskulögin H-1158 og H-1300 féllu, á 12. og 13. öld. Sé þessi raunin er ljóst að um er að ræða atburð sem átti sér stað eftir að skálinn stóri var aflagður, sé gert ráð fyrir að það hafi verið um 1050 e.Kr. Við fyrstu sýn er ekki augljóst hvort hér sé um rask af mannavöldum að ræða eða náttúrufyrirbæri, eða jafnvel sambland af hvoru tveggja. Eftir nokkra yfirlegu og grúsk, könnun ritheimilda og skoðun ljósmynda, þykist ég nokkuð sannfærður um að umturnun jarðvegsins sé að mestu eða öllu leyti af náttúrulegum orsökum. Tel ég að frostlyfting sé meginorsökin. Frostlyfting í jarðvegi veldur þúfnamyndun hérlendis. Frostlyfting verður þar sem holklaki nær að myndast en myndun hans er háð samspili margra þátta, s.s. landslagi, jarðraka, loftslagi, gróðurfari og jarðvegsgerð. Á Íslandi eru kjöraðstæður til þúfnamyndunar, eins og dæmin sanna. Frostlyfting í jarðvegi hérlendis getur numið 20-50 sentimetrum. Þess má geta að breittar umhverfisaðstæður, s.s. breiting í landnýtingu og kaldara loftslag, getur komið af stað þúfnamyndun. Vert er að skoða nánar meintar frostverkanir við Hofstaði.

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Appendix 1.0: Illustrations

Figure 1.1 Location map

Figure 1.2 Site plan

Figure 2.1 Svæði D plan

Figure 2.2 Norðursnið í inngangi vestanmegin á Svæði D

Figure 2.3 Suðursnið í inngangi vestanmegin á Svæði D

Figure 2.4 Svæði D, Suðursnið

Figure 2.5 Test pit locations

Figure 3.1 Area E Plan

Figure 3.2 Area E Stratigraphic Matrix

Figure 3.3 Proposed excavation quadrants for Structure E-2

Figure 4.1 Area G Plan

Figure 5.1 Area D Microstratigraphy, section A-B

Figure 5.2 Area D Microstratigraphy, sections B-C & D-E

Figure 5.3 Area D Microstratigraphy, section C-F

Figure 5.4 Matrix of Microstratigraphy in Area D, Section D-E

Figure 6.1 Plan of the turf house at Þverá

Figure 6.2 Area A, Kitchen Floor

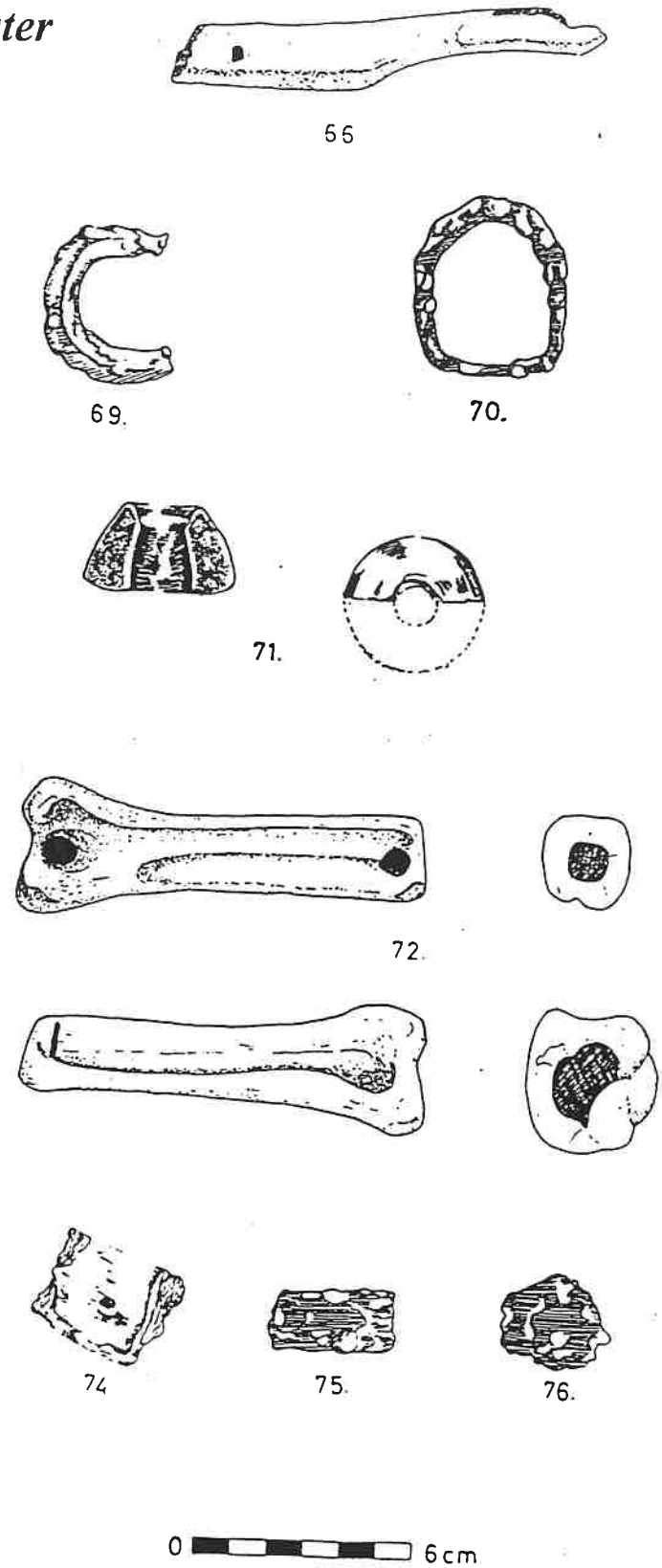
Figure 6.3 Area A, Adjacent to Hearth

Figure 6.4 Area B, E-W Transect Through the Byre

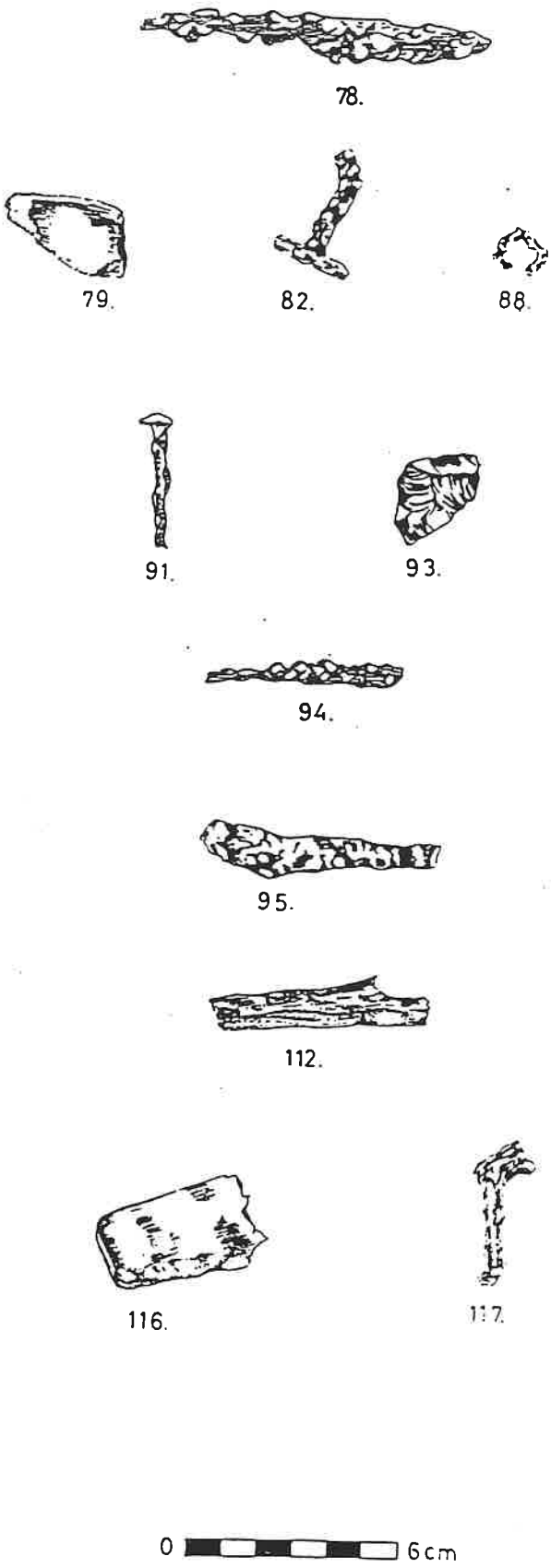
Figure 7.1 Mæld snið vegna gjóskulagarannsókna

Appendix 2.0: Finds Register

Find No.	*material*	*area*	*context*
65	ceramic		
66	bone	E	1002
67	Ceramic	E	1002
68	Ceramic	E	1002
69	Iron	E, south.	
70	Iron	E	1016
71	stone	D	21
72	Bone	D	C16
73	Iron	Test pit	C42
74	Stone	D	C16
75	Metal	G	C4
76	Iron	G	c4
77		G	C4
78	Iron	G	6d
79	stone	G	C5b
80	Bronze	G	C5b
81	Iron slag	G	
82	Iron	G	C6a
83	Iron	G	C5b
84	Iron	G	C5b
85	Iron, slag?	G	
86	Iron	G	C6i
87	Bone	G	C1
88	Iron	G	C4/ C5a
89	Stone	G	C6a
90	Iron	E	1016
91	Iron	G	C4



92	Stone	G	C5b
93	stone	E	1043
94	Iron	G	C5b
95	Iron	G	C4
96	Stone, crystal	G	C5b
97	Iron	G	C4
98	Iron	G	C4
99	Iron	G	
100	Iron	G	
101	Stone	G	C5b
102	Iron	G	C4
103	Iron	G	C5b
104	Iron	G	6h
105	Iron	G	6d
106	Iron	G	C4
107	Iron	G	C5b
108	Iron	G	C5b
109	Iron	G	C5b
110	Iron	E	1035
111	Iron	G	C4a
112	Stone	G	6k
113	Iron	G	6g
114	Iron	D	C22
115	Iron	E	1044
116	Stone	D	
117	Iron	D	C16
118	Horn	E	1045
119	Iron	D	
120	Steatite chip	D	22



Appendix 3.0: Samples Register

Sample no	*Context*	*Area*
B1 (bone sampl.)	C4	G
B2	1016	E
B3	1043	E
B4	1016	E
B5	1016	E
B6	1016	E
B7	C6d	G
B8	C6i	G
B9	Unstrat	G
B10	u/s	G
B11	C16	D
B12	C16	D
B13	1002	E
B14	1002	E
B15	1002	E
B16	1002	E
B17	1002	E
B18	1002	E
B19	C4	G
B20	1040	E
B21	C4	G
B22	6d	G
B23	C4	G
B24	C4	G
B25	C4	G
B26	6d	G
B27	C4	G
B28	6i	G
B29	C10	G
B30	6d	G
B31	6d	G
B32	6d	G
B33	C4	G
B34	C4	G
B35	u/s	G
B36	C4	G
B37	C4	G
B38	u/s	G
B39	C4	G
B40	C4	G
B41	C4	G
B42	C6i	G
B43	C6i	G
B44	C6f	G
B45	C4	G
B46	C6f	G
B47	C6f	G
B48	C4a	G
B49	C4	G
B50	C4a	G
B51	C6f	G
B52	C4	G
B53	C4	G
B54	C4	G
B55	C4	G
B56	C6k	G
B57	C4	G
B58	Unkn.	E
B59	C4	G
B60	C4	G
B61	C6j	G
B62	C4	G
B63	C4	G
B64	C4	G
B65	C6j	G
B66	C5a	G
B67	C4a	G

B68	C6k	G	B106	7e	G
B69	C6k	G	B107	C5b	G
B70	C6f	G	B108	1035	E
B71	C4	G	B109	6hk	G
B72	C4	G	B110	6hk	G
B73	C4	G	B111	6hk	G
B74	C4/C5a	G	B112	6hk	G
B75	C6f	G	B113	6hk	G
B76	C4	G	B114	5a	G
B77	C5a	G	B115	1016	E
B78	C4	G	B116	C4a	G
B79	unkn.	G	B117	6hk	G
B80	C5a	G	B118	C5b	G
B81	1041	E	B119	7e	G
B82	1043	E	B120	6d	G
B83	1002	E	B121	C6hk	G
B84	1042	E	B122	C5a	G
B85	C4a	G	B123	C7d	G
B86	C4a	G	B124	6hk	G
B87	C4a	G	B125	C4	G
B88	C6n	G	B126	6hk	G
B89	C6k/6h	G	B127	6kh	G
B90	C6k/6h	G	B128	C4	G
B91	C6k	G	B129	6hk	G
B92	C6k	G	B130	C5a	G
B93	C6k	G	B131	6j	G
B94	C6k	G	B132	7e	G
B95	C6i	G	B133	5a	G
B96	C5b	G	B134	7d	G
B97	C6g	G	B135	6d	G
B98	C4	G	B136	C4	G
B99	6g	G	B137	C50	D
B100	C6m	G	B138	1007(c)	E
B101	C6f	G	B139	C21	D
B102	C5b	G	B140	C22	D
B103	C5b	G	B141	C6j	G
B104	C6h-k	G	B142	C21	D
B105	C6h	G	B143	C21	unidentified

B144	1016	E
B145	C16	D
B146	C22	D
B147	1016	E
B148	C21	unidentified
B149	C2	F
B150	C21	unidentified
B151	1045	E
B152	1044	E
B153	C43	unidentified
B154	1044	E
B155	C21	D
B156	C2	Uncertain
B157	C16	D
B158	1043	E
B159	C16	D
B160	C21	unidentified
B161	C2	D
B162	C16	D
B163	1016	E
B164	1016	E
B165	C22	D
B166	unkn.	Unidentified
B167	unkn.	unidentified
B168	unkn.	Unidentified
B169	unkn.	Unidentified
B170	unkn.	Unidentified
B171	U/S	E
S1 (soil sample)	C6f	G
S2	C6f	G
S3	C6f	G
S4	C4/5a	G
S5	C4	G
S6	Top C7d	G
S7	C6f	G
S8	6j	G
S9	C6hk	G
S10	C6h/k	G
S11	C6d	G
S12	C6f	G
S13	C6h/k	G
S14	C6f	G
S15	6d	G
S16	C6h/k	G
S17	unkn.	Unidentif.
R1 (rock sampl.)	C5b	G
R2	unkn.	G
R3	C4	G
R4	C4a	G
R5	C4	G
R6	unkn.	unidentif.

Appendix 4.0 C-14 Bulk Sample List

Each of the following bulk samples contains bone, egg shell, charcoal and soil material.

Context	C-14 Sample Nos.	Status/Location
Area E, Layer C4	1	At Univ. of Stirling; pending funding
Area G, Layer C4	2	As above.
Area D, Layer C4	3	As above.

Soil Micromorphology and Bulk Soil Sample List

Sampling Location	Micromorphology Sample Nos.	Associated Bulk Sample Nos.	Status/Location
Area D: West section (Refer to section drawing 2)			
In situ landnam tephra sequence	Reference sample 1/1	11 (Pre-landnam silt loam) 12 (Post-landnam silt loam)	Thin sections are being manufactured at Univ. of Cambridge; bulk samples are at Stirling Univ. and will shortly go to Bristol for lipid analysis.
In situ prehistoric tephras: Hekla 3 Hekla 3-Hverfjall Landnam-C4	 Ref. 2/1 Ref. 2/2 Ref. 2/3	 13 (Layer C4)	
? Western doorway? : Threshold Mixed soil/turf ? fill? Interface between fill and context ___	Profile 1/1 Pr. 1/ 2, Pr. 1/3, Pr. 1/ 4 Pr. 1/5		

Area D: North section (drawing 3)			
Context 51 adjacent to west wall (includes truncated Hekla 3 below and mixed soil/turf ? fill? above)	Pr. 2/1, Pr. 2/2	Large monolith taken for micro-excavation	Thin sectioning and micro-excavation are taking place at Cambridge Univ;
Contexts 51 and 52 (refer to drawing ___ for microstratigraphy)	Pr. 3/1 Pr. 3/2 Pr. 3/3 Pr. ?	1 (Micro-layer 2a) 2 (Micro-layer 2b) 3 (Micro-layer 2c) 4 (Micro-layer 2d) 5 (Micro-layer 2e) 6 (Micro-layer 2f) 7 (Micro-layer 2g)	Micromorphology at Stirling; bulk samples are in Stirling Univ. and will shortly be going to Bristol for lipid analysis.
Context 51 (refer to drawing ___ for microstratigraphy)	Pr. 3/5 Pr. 4/1 Pr. 4/2 Pr. 4/3	10 (Micro-layer 3) 9 (Micro-layer 3) 8 (Micro-layer 4)	

Appendix 5.0 Þverá, 1997: Soil Micromorphology and Bulk Soil Sample List

Sampling Location	**Micromorphology Sample Nos.**	**Associated Bulk Sample Nos.**	**Status/Location**
Area A: Kitchen Floor (Refer to Section Drawing 1)	1/1 1/2 1/3	1 (Layer 2) 2 (Layer 3) 3 (Layer 4) 4 (Layer 1) 5 (Layer 2) 6 (Layer 4) 7 (Layer 1) 8 (Layer 4) 9 (Layer 5)	Thin sections are being manufactured at Univ. of Cambridge; bulk samples are at Univ. of Cambridge and will shortly go to Bristol for lipid analysis.
Area A: Adjacent to Hearth (Section drawing 2)	2/1	10 (Layer 1) 11 (Layer 2)	As above.
Area B: Byre (Section drawing 3) Floor west of drain Drain Feed bench Floor east of drain	 - - 3/1 3/2	 12 (Layer 1) 13 (Layer 2) 14 (Layer 3) 15 (Layer 4) 16 (Layer 5) 17 (Layer 6) 18 (Layer 7)	As above.

Appendix 6.0: Drawings Register

Drawing Code	Type	Scale	Area	Context	Grid squares
HST-97-E-101	PLAN	1:2O	E	1016	201/510
HST-97-E-102	PLAN	1:20	E	1016	206/510
HST-97-E-103	PLAN	1:20	E	1016	211/510
HST-97-D-104	PLAN	1:20	D	C22	205/481
HST-97-D-105	PLAN	1:20	D	21	205/481
HST-97-G-106	SECTION	1:10	G	4-7	217.53/469.85
HST-97-G-107	SECTION	1:10	G		
HST-97-G-108	SECTION	1:10	G		
HST-97-G-110	SECTION	1:10	G	5-8	220.38/457.85
HST-97-E-114	PLAN	1:20	E	1043	201/510
HST-97-E-115	PLAN	1:20	E	1043	206/510
HST-97-E-116	PLAN	1:20	E	1016	201/504
HST-97-E-117	PLAN	1:20	E	1041	211/510
HST-97-D-118	PLAN	1:20	D	C16	204/491
HST-97-D-119	PLAN	1:20	D	C21	206/489
HST-97-E-121	PLAN	1:20	E	1042	211/510
HST-97-E-122	PLAN	1:20	E	1035	206/510
HST-97-E-123	PLAN	1:20	E	1035	211/51
HST-97-D-124	PLAN	1:20	D	C43	206/488
HST-97-E-127	PLAN	1:20	E	1044	201/510
HST-97-E-128	PLAN	1:20	E	1015	211/510
HST-97-E-129	PLAN	1:20	E	1044	206/510
HST-97-E-130	PLAN	1:20	E	1045	211/510
HST-97-E-131	PLAN	1:20	E	1044	211/510
HST-97-E-132	PLAN	1:20	E	1016	211/507
HST-97-E-133	PLAN	1:20	E	1045	211/507
HST-97-E-134	PLAN	1:20	E	1046	211/510
HST-97-E-135	PLAN	1:20	E	1050	211/507
HST-97-T-136	PLAN	1:100	ALL	N/A	N/A
HST-97-Z-138	PLAN	1:100	D & E	N/A	N/A
HST-97-D-140	PLAN	1:20	D	C21	211/481
HST-97-D-141	PLAN	1:20	D	C16	205/500
HST-97-D-142	PLAN	1:20	D	C16	205/482
HST-97-D-143	PLAN	1:20	D	C21	211/486
HST-97-D-144	PLAN	1:20	D	C24	205/481

HST-97-D-145	SECTION	1:10	D	C22	205/481
HST-97-D-146	PLAN	1:20	D	C23	205/483
HST-97-D-147	PLAN	1:20	D	C27	211/486
HST-97-D-148	PLAN	1:20	D	C43	205/481
HST-97-D-149	PLAN	1:20	D	C43 to 52	207/488
HST-97-D-150	PLAN	1:20	D	C24	206/484
HST-97-D-151	PLAN	1:20	D	C24	206/489
HST-97-D-152	PLAN	1:20	D	C23	204/481
HST-97-D-153	PLAN	1:20	D	51/52	208/490
HST-97-D-154	SECTION	1:20	D	below	N/A
HST-97-G-155	PLAN	1:20	G	MULTI	215/465
HST-97-G-156	PLAN	1:20	G	MULTI	220/465
HST-97-E-157	PLAN	1:20	E	1052	211/510
HST-97-E-158	PLAN	1:20	E	1053	211/510
HST-97-D-159	SECTION	1:20	D	MULTI	N/A
HST-97-E-160	PLAN	1:20	E	MULTI	211/510
HST-97-E-160	PLAN	1:20	E	MULTI	201/510
HST-97-E-162	PLAN	1:20	E	MULTI	206/510
HST-97-E-163	PLAN	1:20	E	MULTI	211/507
HST-97-E-164	PLAN	1:20	E	1053	211/507

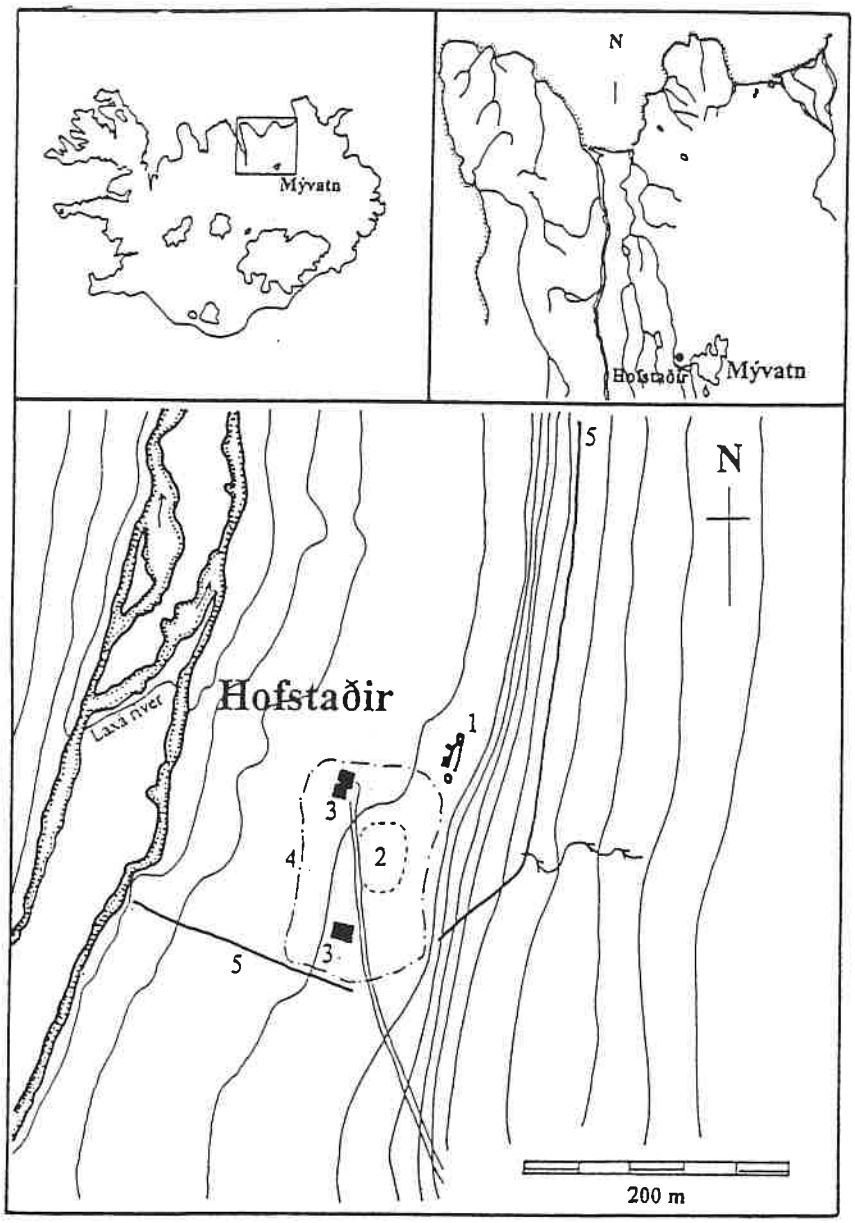
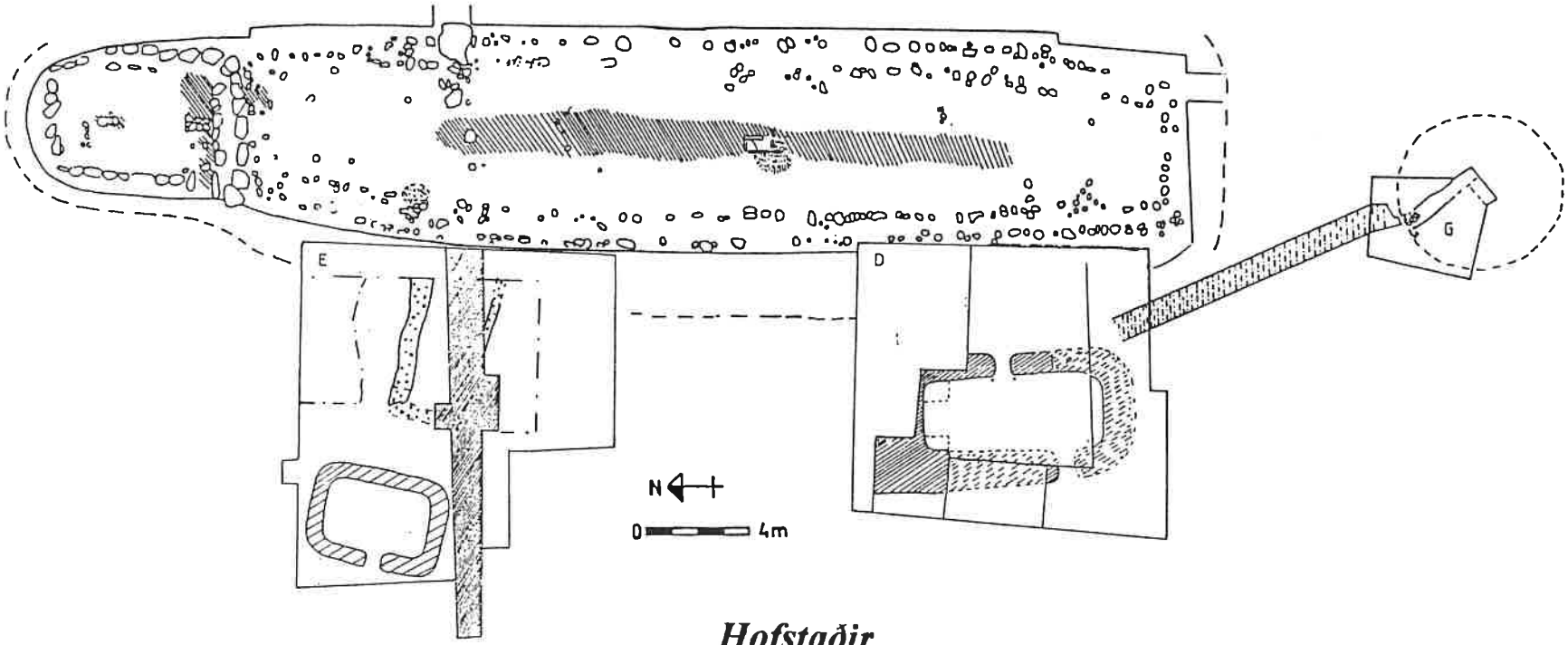


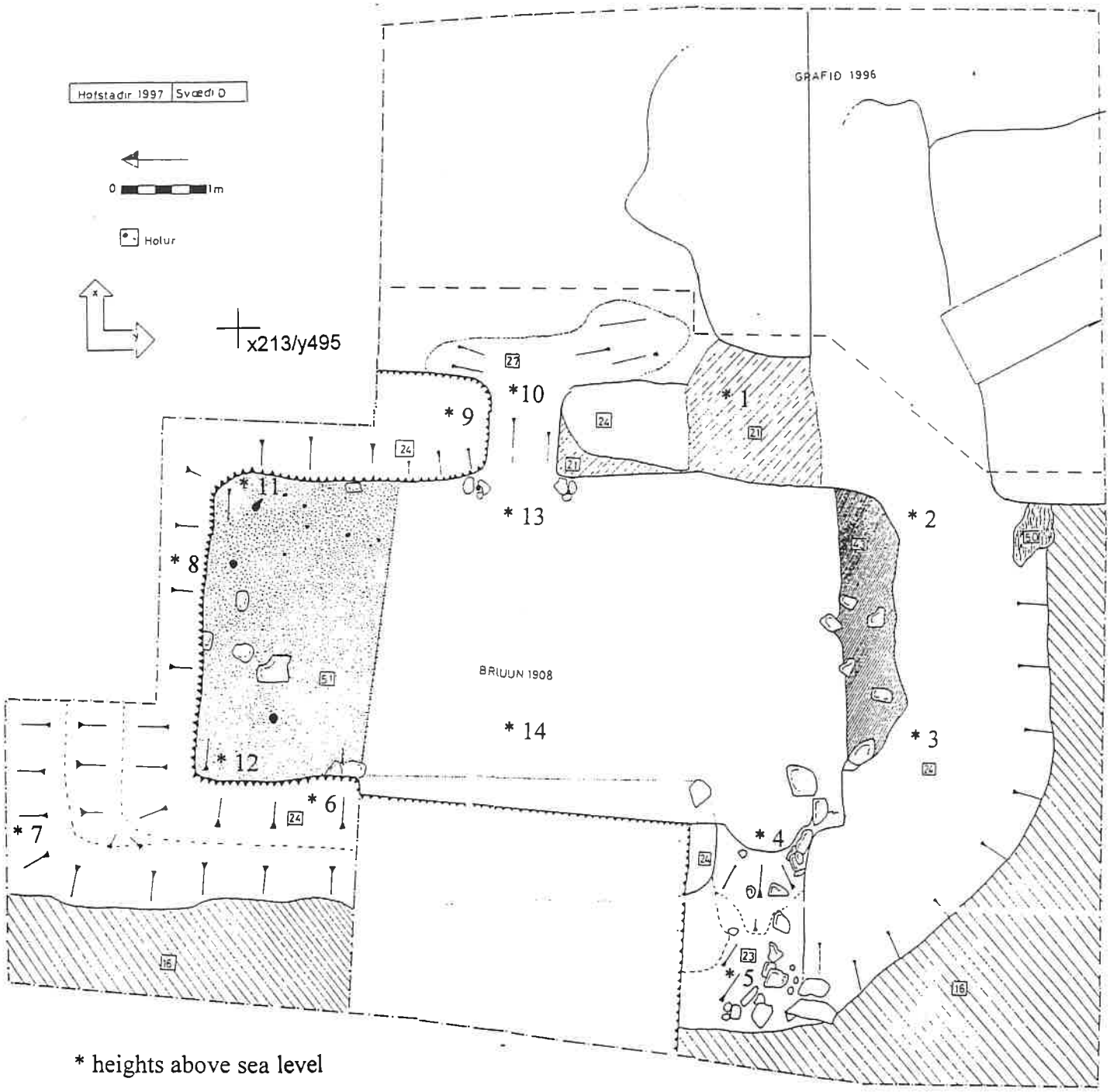
Fig. 1. *Location map. The farm of Hofstaðir, the site (1), site of late medieval and early modern farm (2), modern buildings (3), extent of home field in the 19th century (4), ancient turf wall enclosing the farm site (5).*

Figure 1.1 Location map



Hofstaðir

Figure 1.2 Site plan



* heights above sea level

1 250.65	8 251.36
2 250.12	9 250.64
3 250.02	10 251.07
4 249.83	11 250.03
5 250.02	12 250.16
6 250.44	13 249.88
7 250.26	14 249.80

Figure 2.1 Svæði D plan

Hofstaðir 1997

Norðursnið í inngangi vestanmegin
á svæði D.

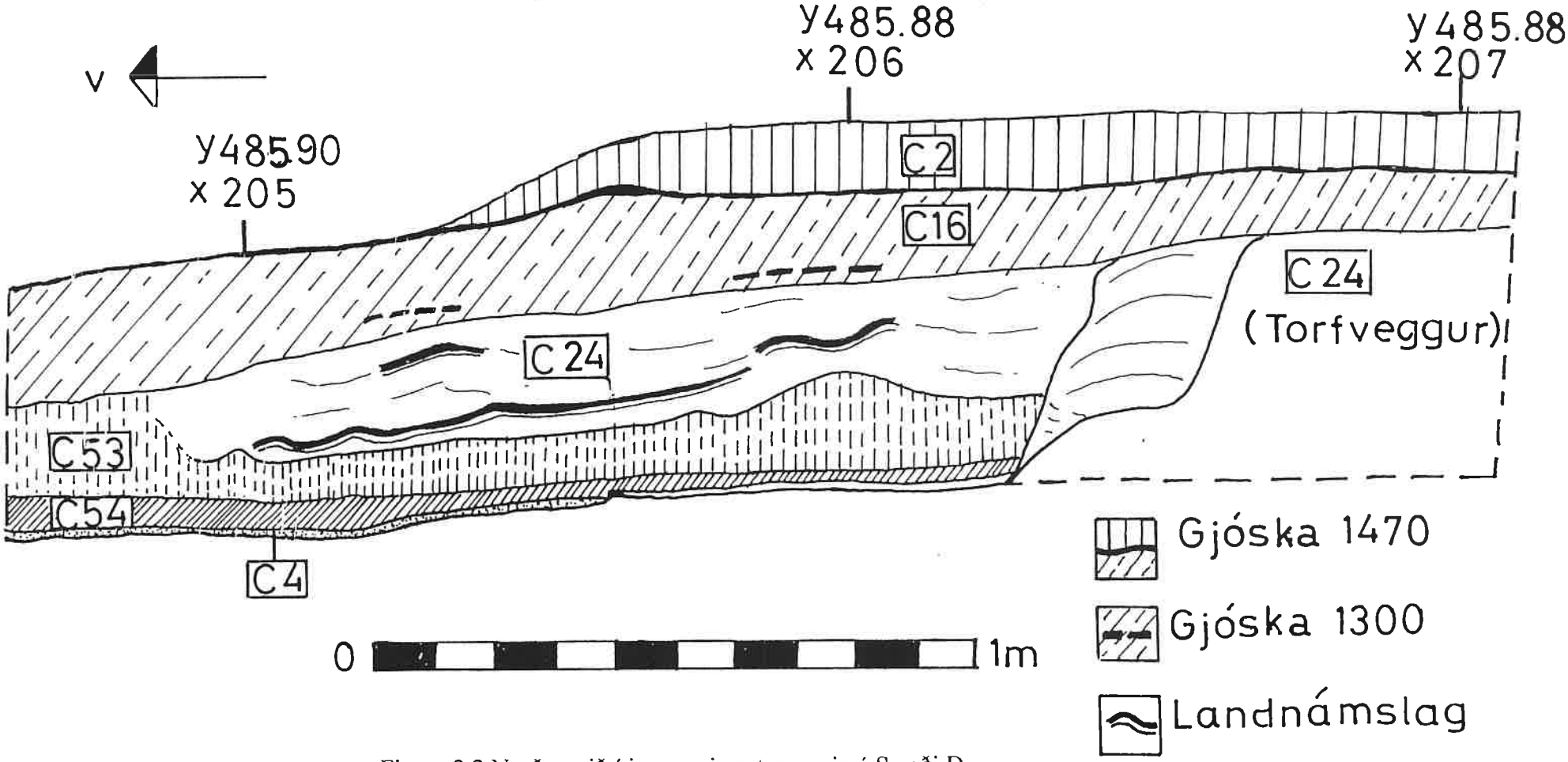


Figure 2.2 Norðursnið í inngangi vestanmegin á Svæði D

Hofstaðir 1997

Suðursnið í inngangi vestanmegin
á svæði D.

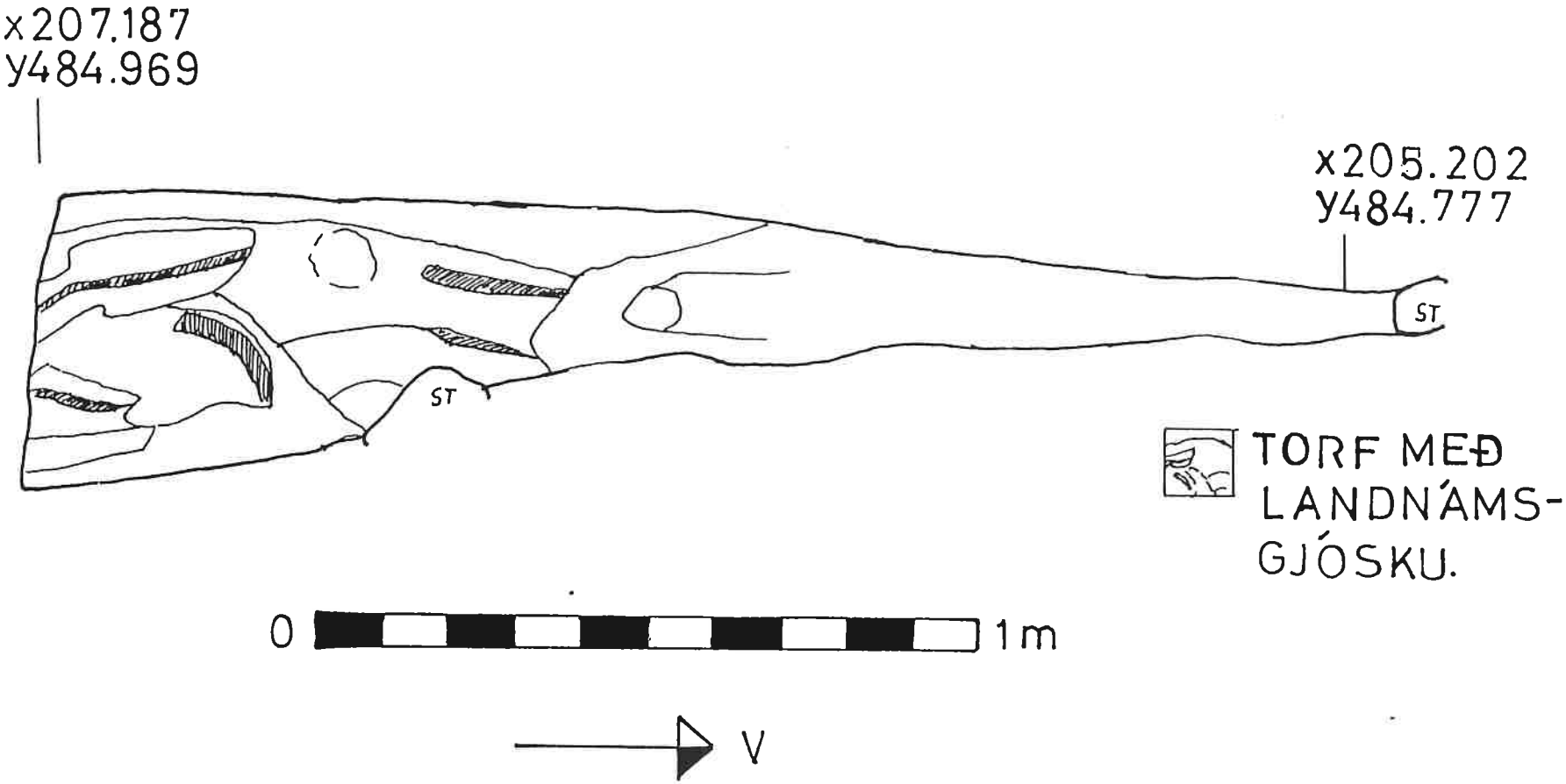


Figure 2.3 Suðursnið í inngangi vestanmegin á Svæði D

Hofstaðir 1997

Svæði D
Suðursnið

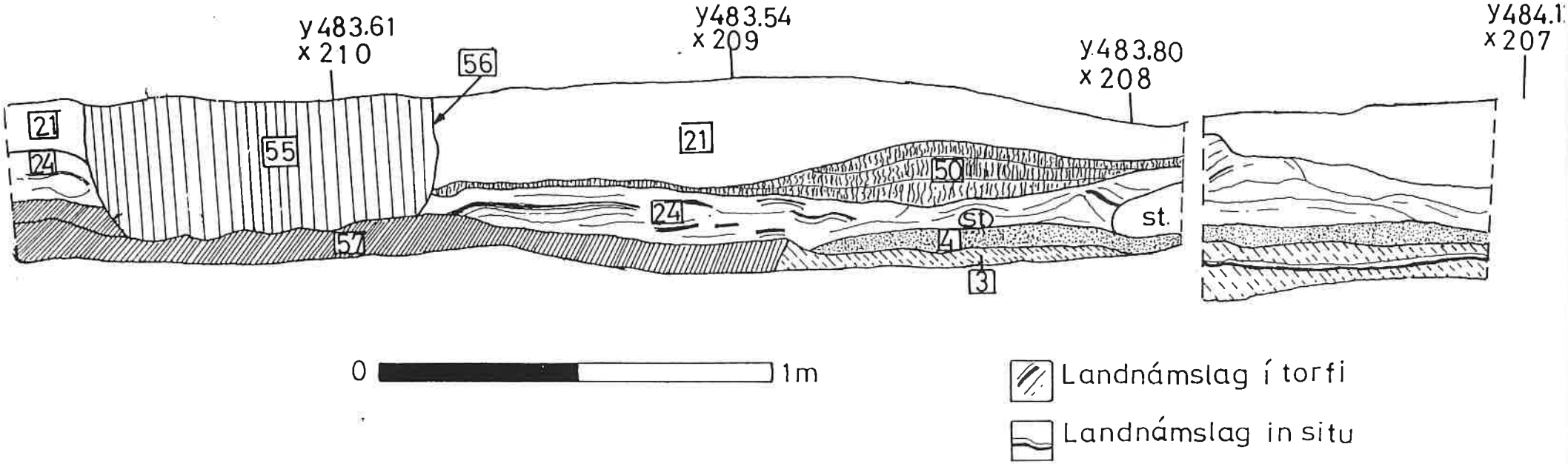


Figure 2.4 Svæði D, Suðursnið

Hofstaðir

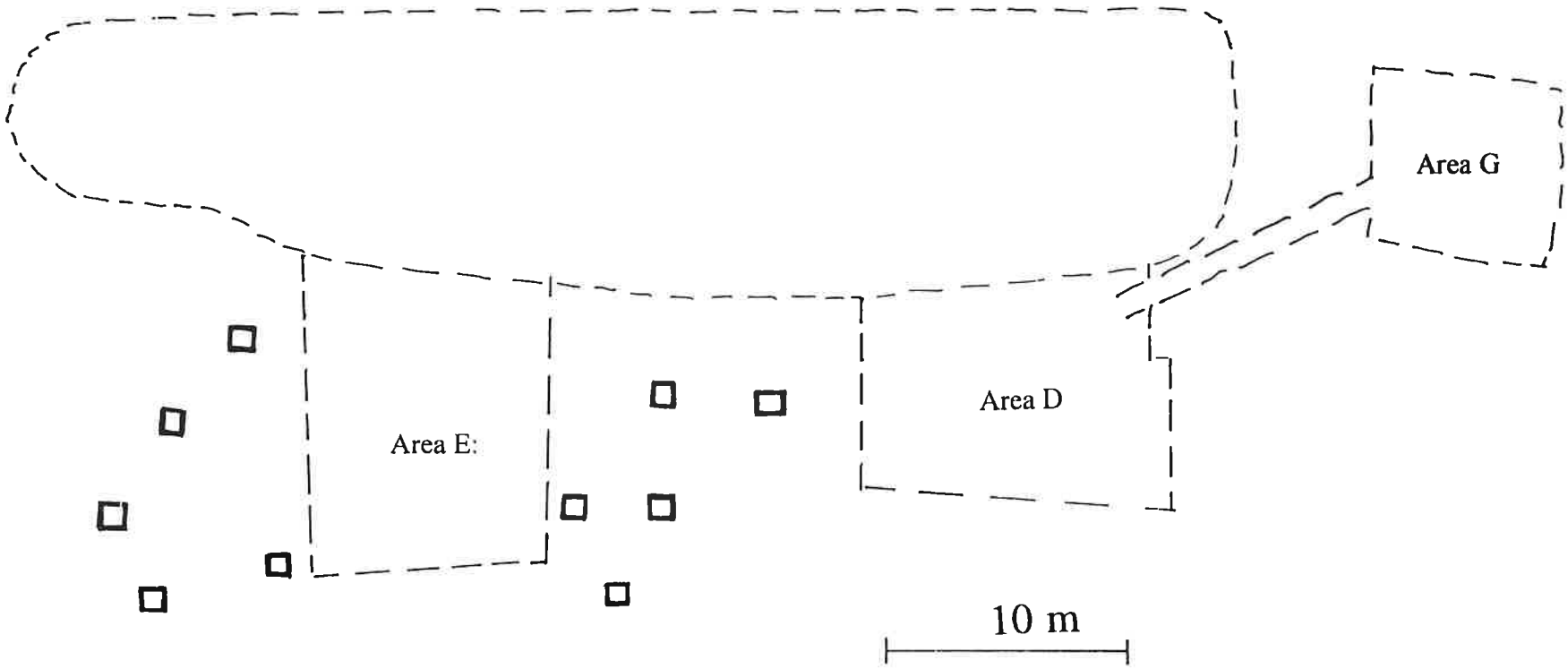


Figure 2.5 Test pit locations

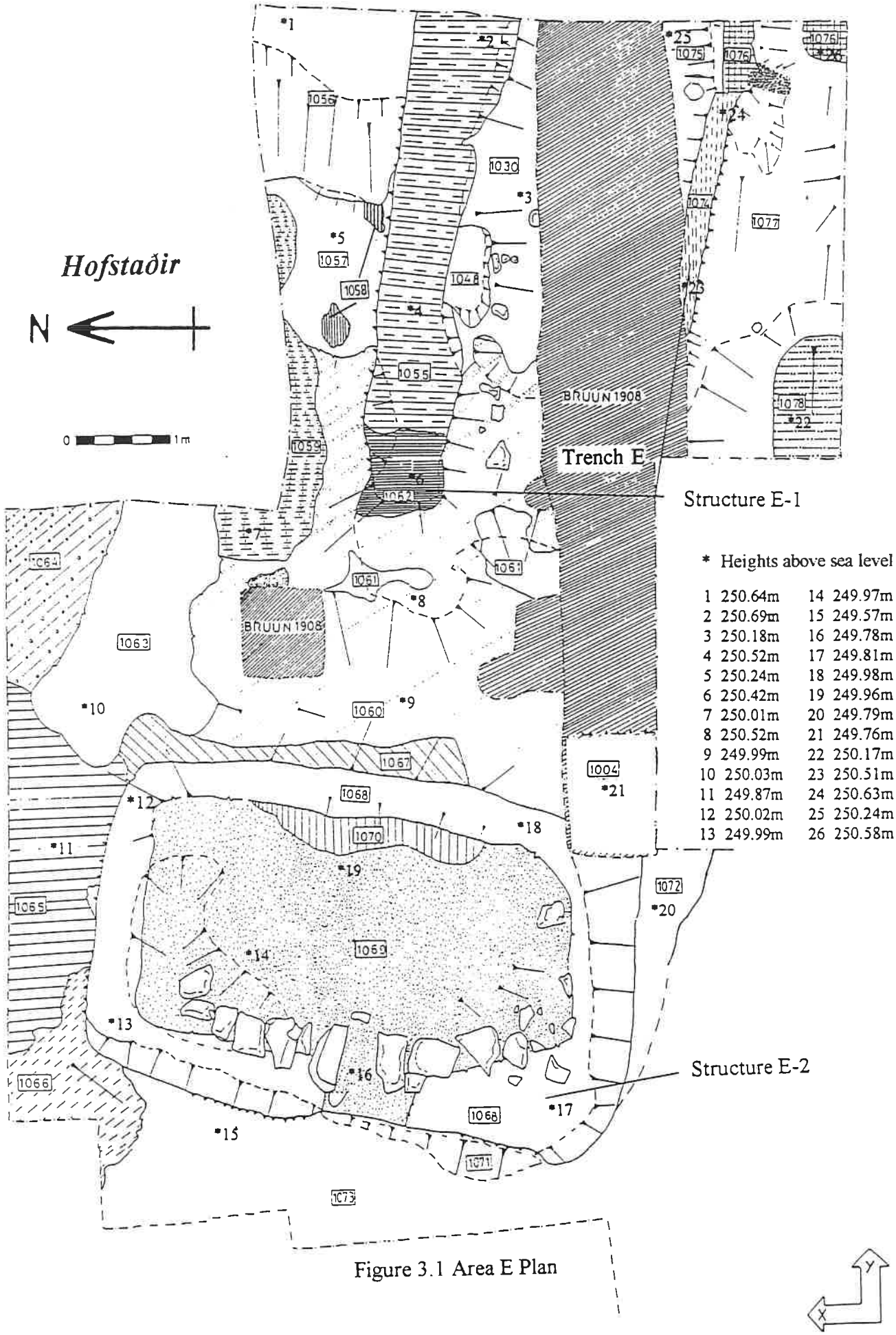


Figure 3.1 Area E Plan

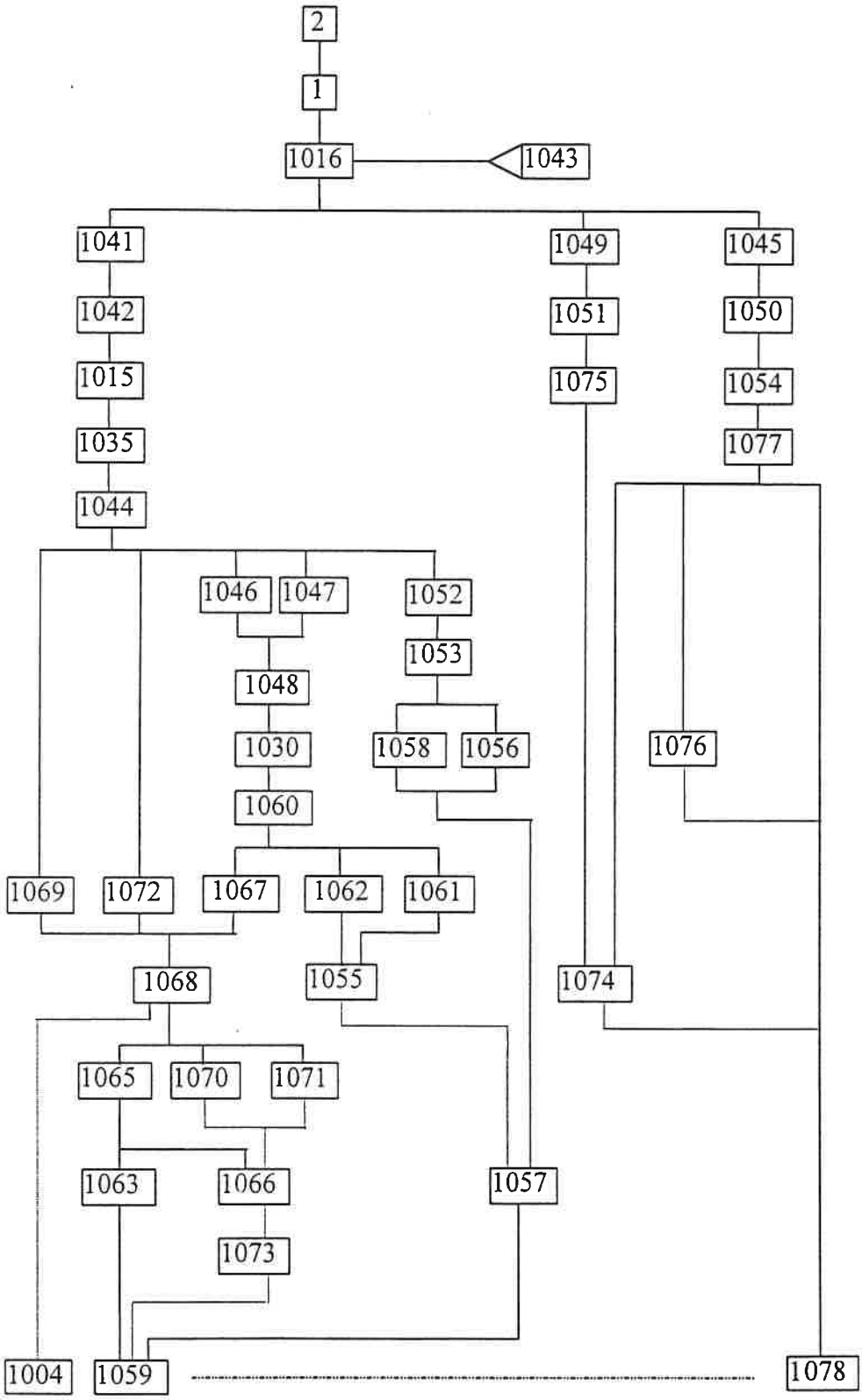


Figure 3.2 Area E Stratigraphic Matrix

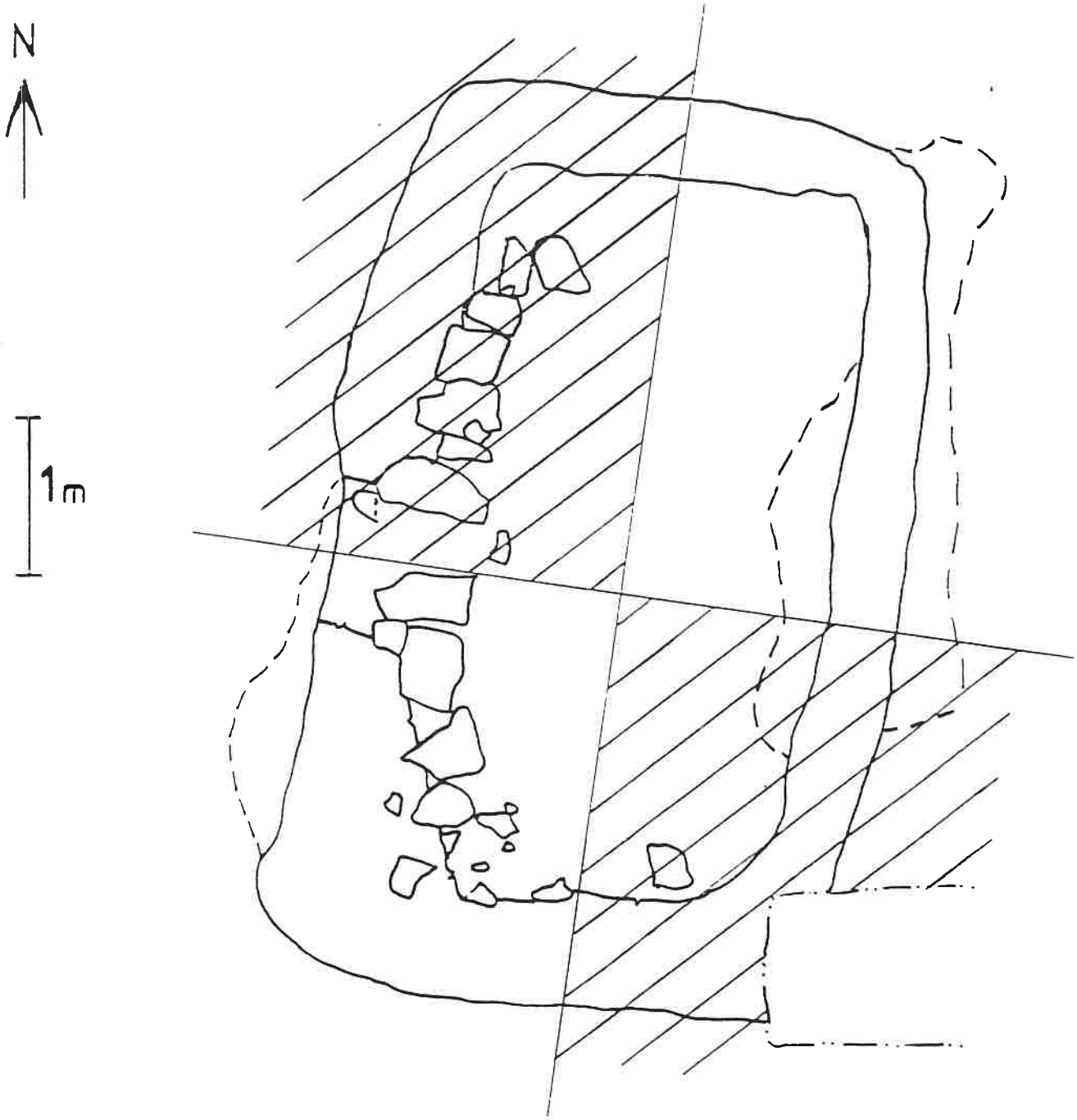


Figure 3.3 Proposed excavation quadrants for Structure E-2

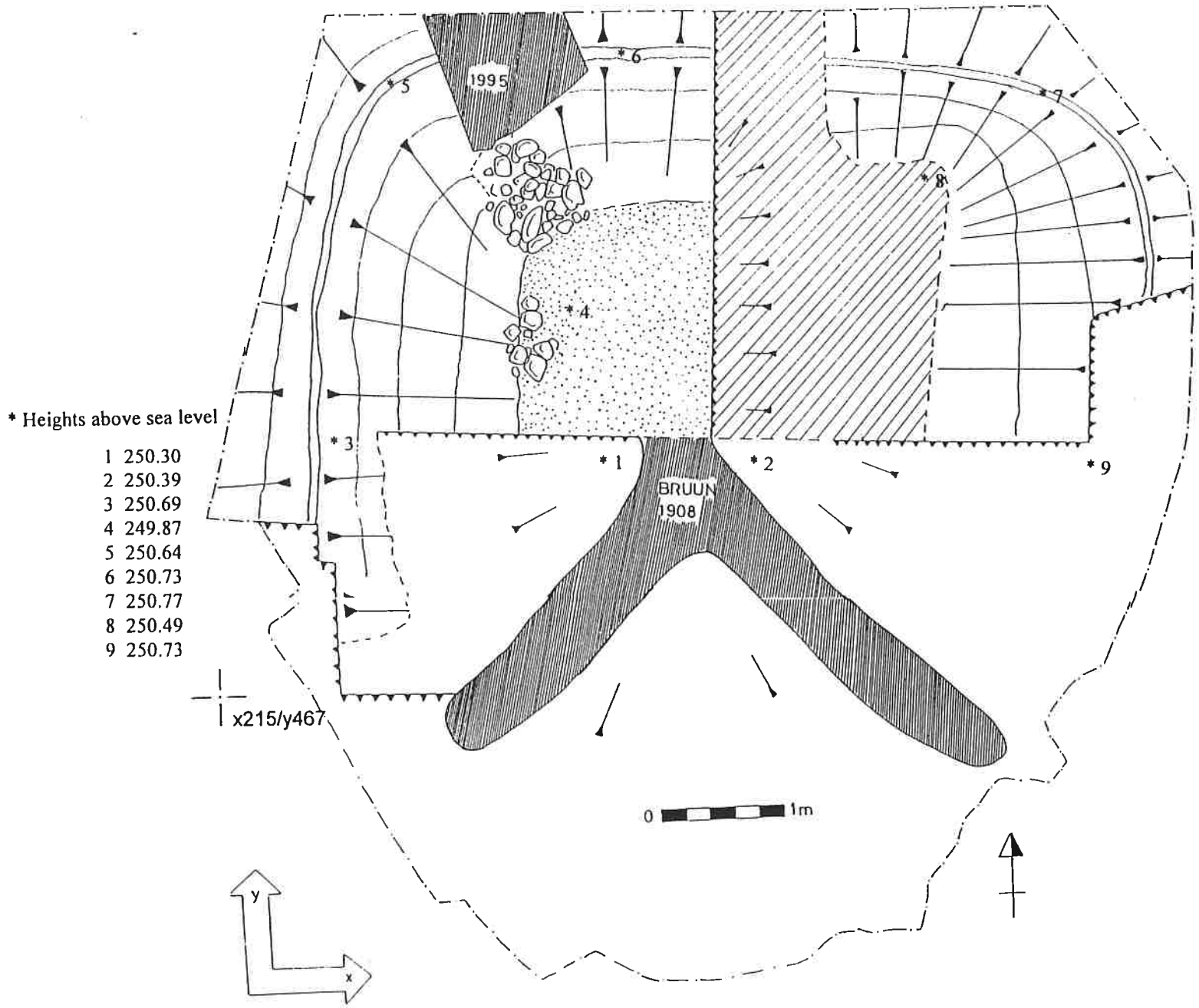
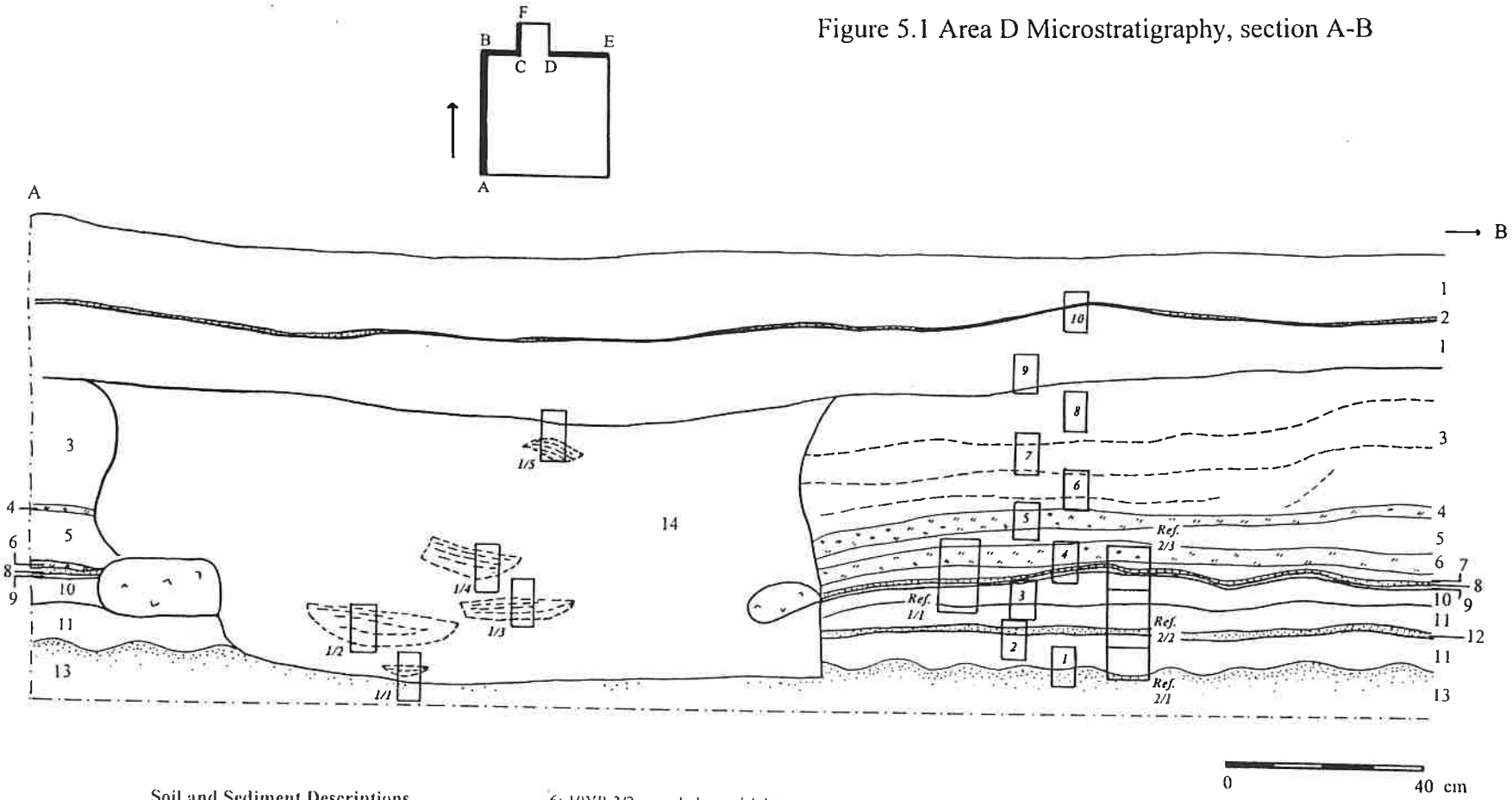


Figure 4.1 Area G Plan

Figure 5.1 Area D Microstratigraphy, section A-B



Soil and Sediment Descriptions

(Unless stated otherwise, textures are silt loam: interpretations are in *italics*)

1: 7.5YR 3/3 dark brown

2: 10YR 5/2 greyish brown very fine sand (Gjéska tephra; 1477 A.D.)

3: multi-laminated 2.5YR 2.5/3 very dusky red, 2.5YR 3/6 dark red, 2.5Y 3/3 dark olive brown, 7.5YR 5/3 brown, 7.5YR 3/3 dark brown, 5YR 5/6 yellowish red = *wall constructed with wet turf*

4: 10YR 3/2 very dark greyish brown mixed with peat ash = *sheet midden*

5: 7.5YR 3/3 dark brown

6: 10YR 3/2 very dark greyish brown, containing charcoal, small bone fragments and egg shell fragments = *sheet midden (C4)*

7: 7.5YR 3/3 dark brown

8: 2.5Y 3/3 dark olive brown fine sand (*Landnám* tephra; 871-2 A.D.)

9: 7.5YR 3/3 dark brown

10: 7.5YR 3/2 dark brown

11: 7.5YR 3/3 dark brown

12: 7.5YR 5/3 brown coarse sand (Hverfell tephra: *c* 2400 B.C.)

13: 10YR 4/6 dark yellowish brown silt undulating in 7.5YR 3/3 dark brown (Hekla 3 tephra: *c* 2800 B.C.)

14: mixed soil and small pieces of turf, colours as above (*infill of door*)

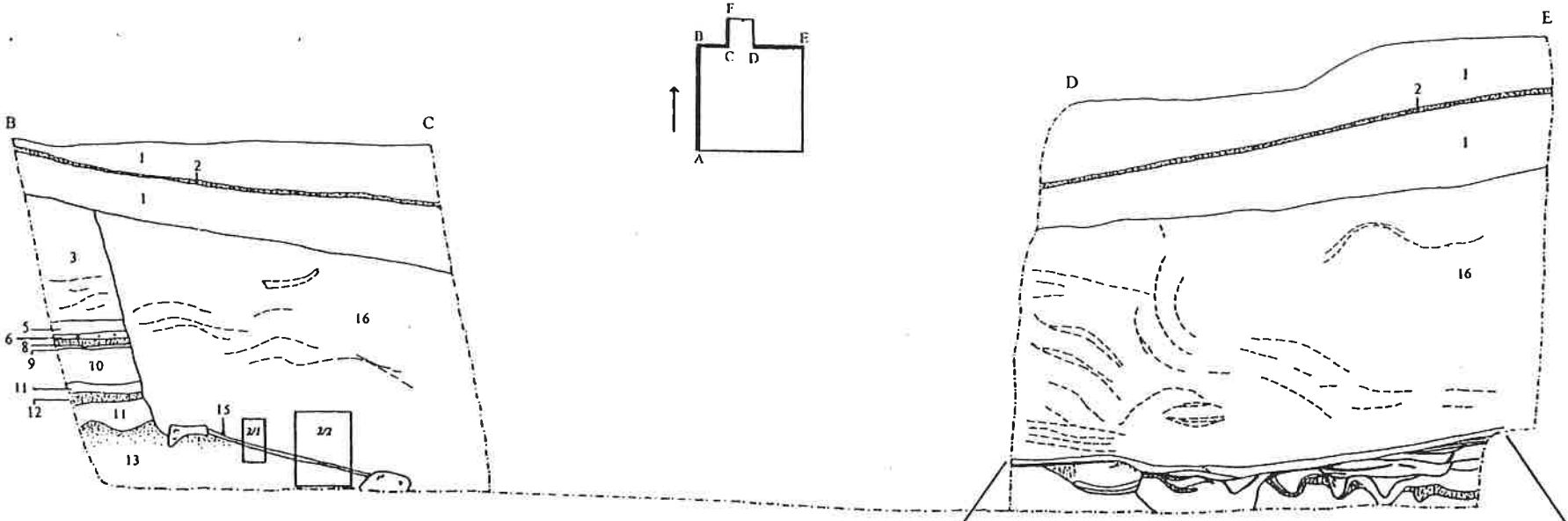
tephra layer

heterogeneous ashy layer (probable sheet midden)

black, compacted organic layer (probable floor)

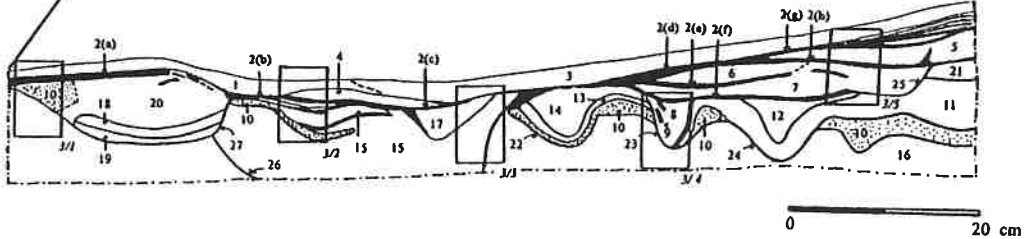
turf

stone



Soil and Sediment Descriptions
(Unless stated otherwise, textures are silt loam; interpretations are in *italics*)
1: 7.5YR 3/3 dark brown
2: 10YR 5/2 greyish brown very fine sand (Gjóska tephra; 1477 A.D.)
3: multi-laminated 2.5YR 2.5/3 very dusky red, 2.5YR 3/6 dark red, 2.5Y 3/3 dark olive brown, 7.5YR 5/3 brown, 7.5YR 3/3 dark brown, 5YR 5/6 yellowish red = *wall constructed with wet turf*
5: 7.5YR 3/3 dark brown
6: 10YR 3/2 very dark greyish brown, containing charcoal, small bone fragments and egg shell fragments = *sheet midden (C4)*
8: 2.5Y 3/3 dark olive brown fine sand (*Landnám* tephra; 871-2 A.D.)
9: 7.5YR 3/3 dark brown
10: 7.5YR 3/2 dark brown
11: 7.5YR 3/3 dark brown
12: 7.5YR 5/3 brown coarse sand (Hverfell tephra; *c.*2400 B.C.)
13: 10YR 4/6 dark yellowish brown silt undulating in 7.5YR 3/3 dark brown (Hekla 3 tephra; *c.*2800 B.C.)
15: multi-laminated 5YR 3/3 reddish brown and 3/4 reddish brown (Context 51)
16: mixed soil and pieces of turf; 7.5YR 3/2 dark brown, 7.5YR 3/3 dark brown, 2.4Y 3/3 dark olive brown fine sand (*post-abandonment house fill*)

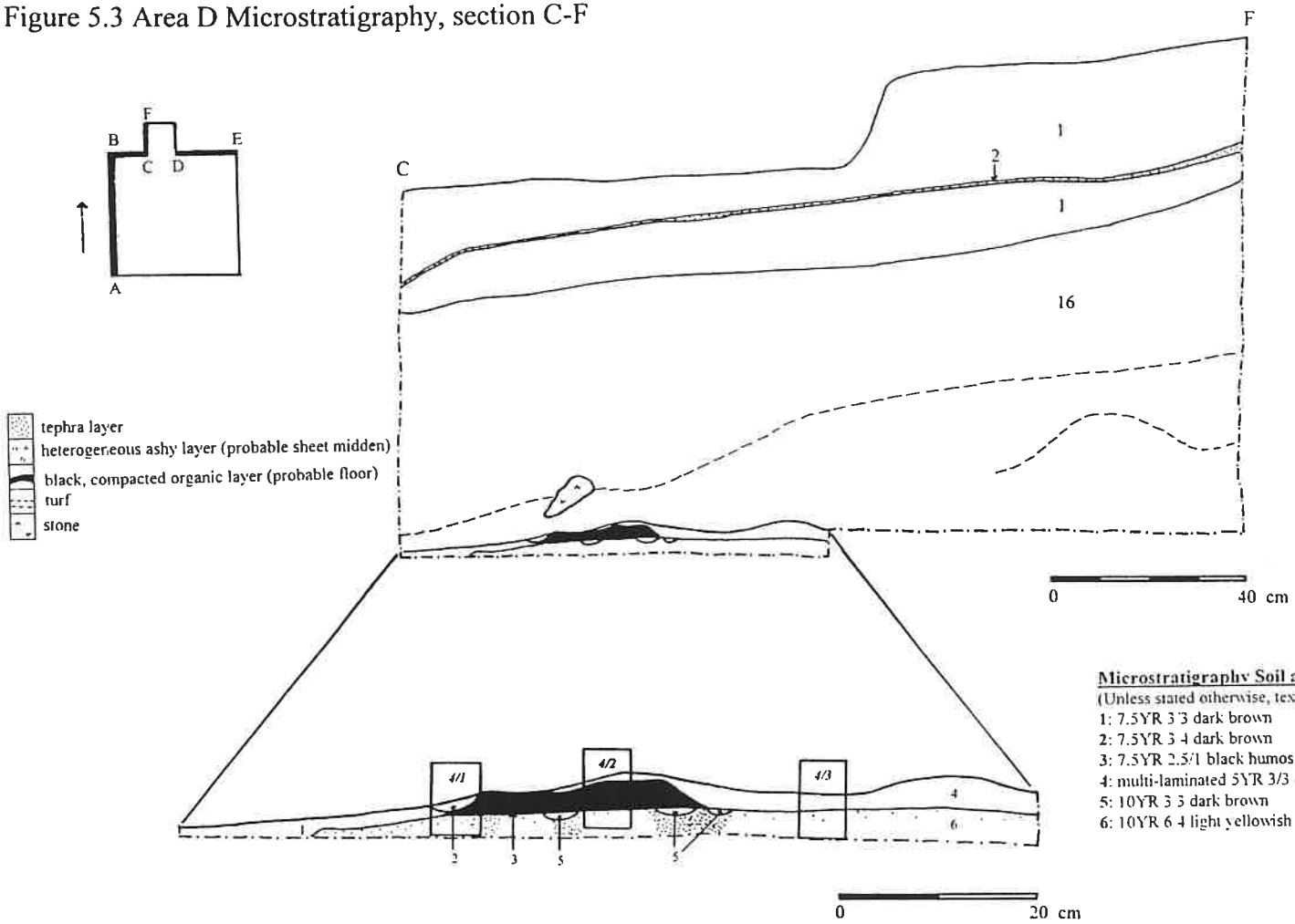
Microstratigraphy Soil and Sediment Descriptions
(Unless stated otherwise, textures are silt loam; interpretations are in *italics*)
1: 5YR 3/3 dark reddish brown (Context 51)
2: humos silt loam; 5YR 2.5/1 black = *floor* (Context 52)
3: multi-laminated (up to 4 layers); 5YR 3/3 dark reddish brown, 7.5YR 4/6 strong brown (Context 51)
4: 7.5YR 3/2 dark brown mixed with aggregates of 10YR 5/4 brown silt
5: 7.5YR 3/3 dark brown with 40% aggregates of 10YR 5/4 brown silt
6: 7.5YR 3/3 dark brown with *c.*8% aggregates of 10YR 5/4 brown silt
7: 7.5YR 3/3 dark brown mixed with 2% aggregates of 10YR 5/4 brown silt and 1% charcoal
8: 5YR 3/2 dark reddish brown
9: 10YR 3/2 very dark greyish brown
10: 10YR 6/4 light yellowish brown silt = *Hekla 3 tephra*
11: 7.5YR 3/3 dark brown and 7.5YR 3/2 dark brown
12: 7.5YR 3/4 dark brown
13: 7.5YR 3/2 dark brown
14: 7.5YR 3/3 dark brown and 5YR 3/3 dark reddish brown
15: 7.5YR 3/4 dark brown mixed with 5YR 3/4 dark reddish brown, 10% charcoal, 5% 10YR 6/4 light yellowish brown silt
16: 5YR 3/4 dark reddish brown
17: 10YR 3/2 very dark greyish brown with 3% charcoal
18: 2.5Y 3/3 dark olive brown fine sand } *turf containing the* Landnám *tephra sequence*
19: 7.5YR 3/3 dark brown }
20: 7.5YR 2.5/3 very dark brown
21: 7.5YR 3/4 dark brown
22: depression
23: depression
24: depression
25: cut of pit
26: cut of pit
27: cut of pit



tephra layer
heterogeneous ashy layer (probable sheet midden)
black, compacted organic layer (probable floor)
turf
stone

Figure 5.2 Area D Microstratigraphy, sections B-C & D-E

Figure 5.3 Area D Microstratigraphy, section C-F



Soil and Sediment Descriptions
(Unless stated otherwise, textures are silt loam; interpretations are in *italics*)
1: 7.5YR 3/3 dark brown
2: 10YR 5/2 greyish brown very fine sand (Gjóska tephra; 1477 A.D.)
16: mixed soil and pieces of turf; 7.5YR 3/2 dark brown, 7.5YR 3/3 dark brown, 2.4Y 3/3 dark olive brown fine sand (***post-abandonment house fill***)

Microstratigraphy Soil and Sediment Descriptions
(Unless stated otherwise, textures are silt loam; interpretations are in *italics*)
1: 7.5YR 3/3 dark brown
2: 7.5YR 3/4 dark brown
3: 7.5YR 2.5/1 black humos silt loam (horizontal bedding visible) = ***floor*** (Context 52)
4: multi-laminated 5YR 3/3 dark reddish brown and 5YR 3/4 dark reddish brown (Context 51)
5: 10YR 3/3 dark brown
6: 10YR 6/4 light yellowish brown silt (***Hekla 3 tephra***) undulating in 7.5YR 2.5/3 very dark brown

Figure 5.4 Matrix of Microstratigraphy in Area D, Section D-E

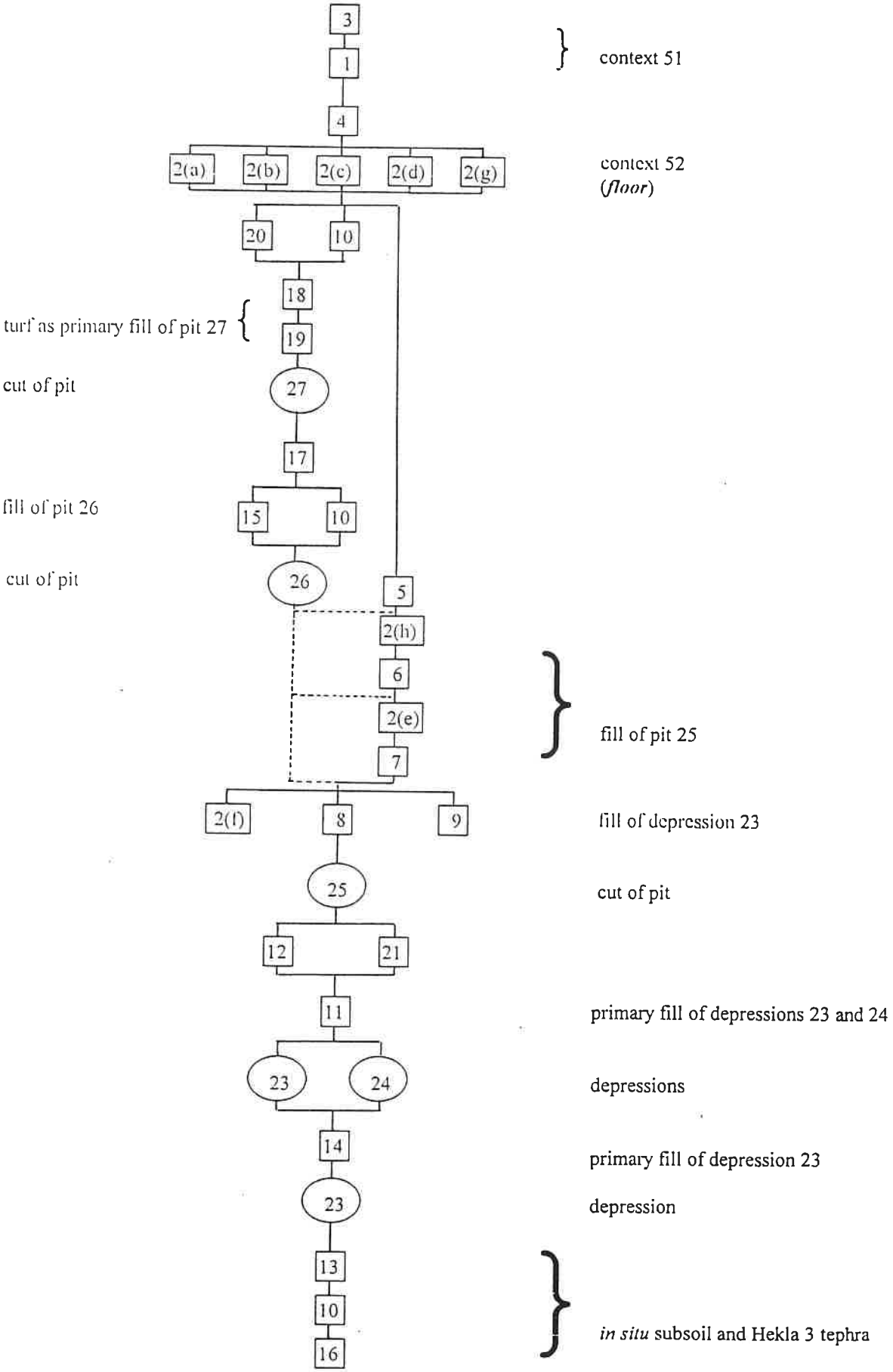


Figure 6.1 Plan of the turf house at Þverá

(Adapted from the plan in *Thverá - en islandsk torvegard* (1972). Kobenhavn: Alfred og Ole)

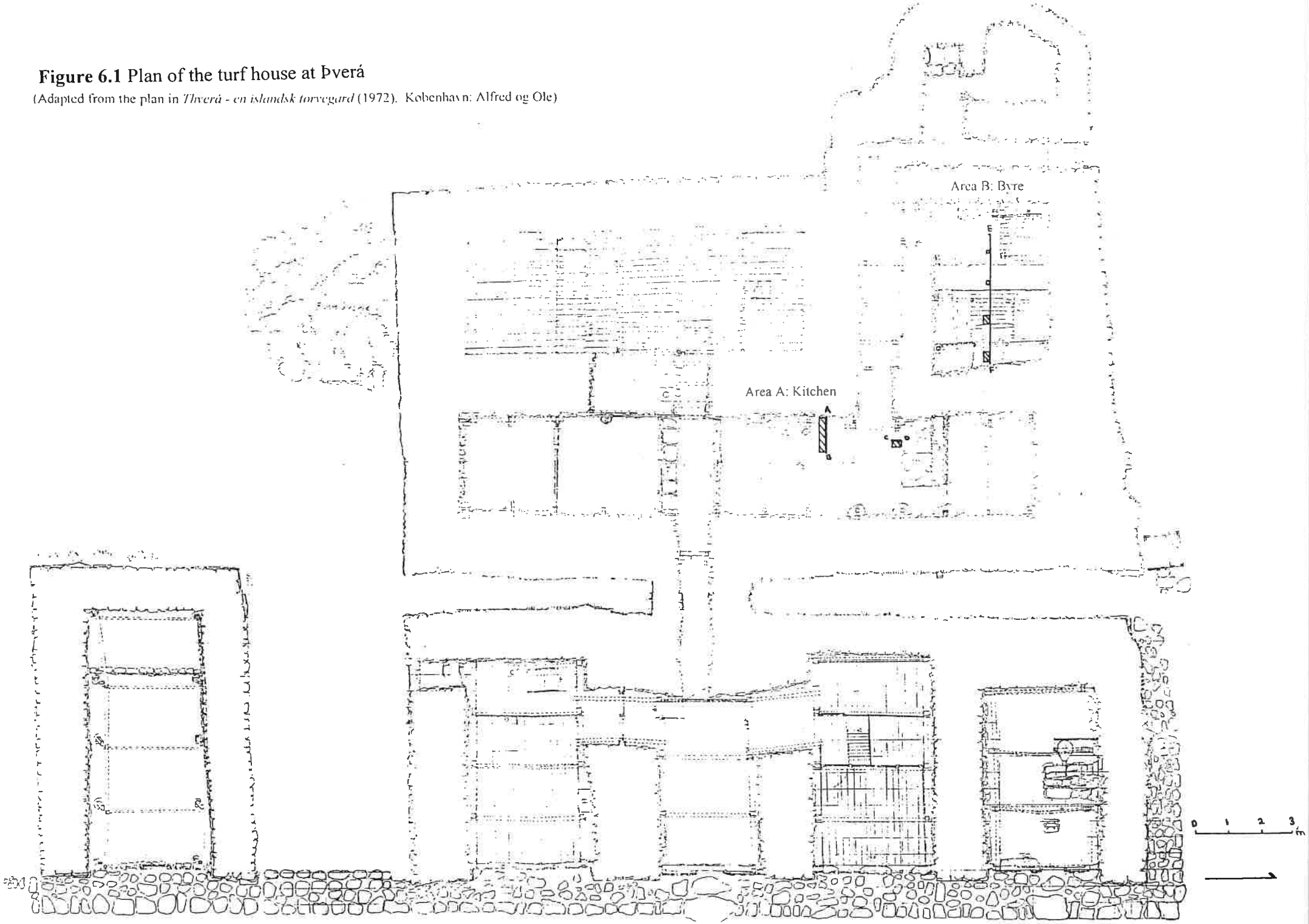
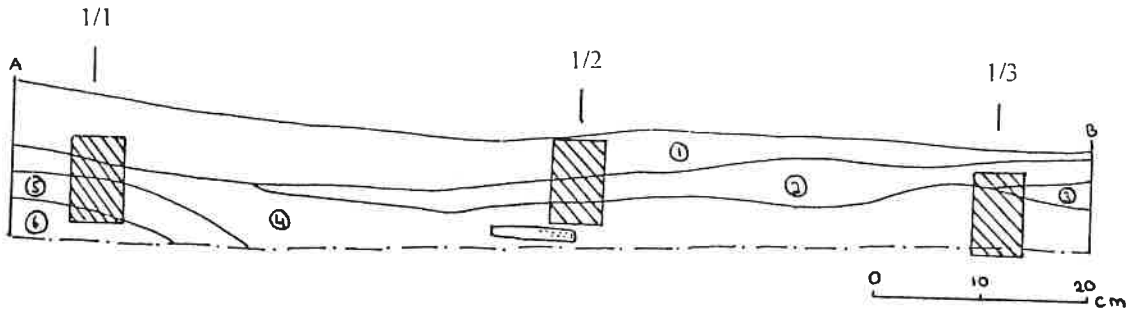


Figure 6.2 Area A, Kitchen Floor



Context Descriptions

1 - 7.5 YR 3/2; humose loam (ie. organic material is not entirely decomposed. Turf material.

2 - 5 YR 2.5/1; organic loam, ash, small bone fragments, charred organic material. Accumulated occupation debris on the kitchen floor.

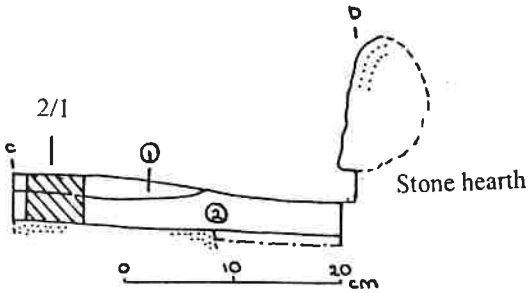
3 - 10 YR 4/2, with inclusions of 7.5 YR 4/6; silt. Peat ash.

4 - 7.5 YR 2.5/2; organic loam. Turf material making up the original floor surface.

5 - 10 YR 2/2; silt loam with organic component.

6 - 7.5 YR 2.5/3; silt loam with organic component.

Figure 6.3 Area A, Adjacent to Hearth

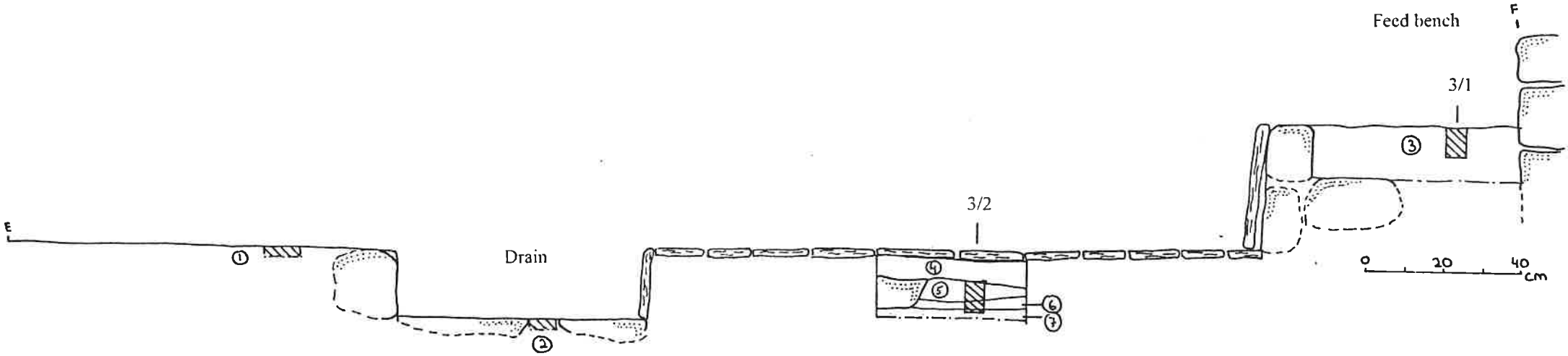


Context Descriptions

1 - 7.5 YR 3/3; humose loam. Turf material.

2 - 10 YR 4/1; charcoal and ash. Hearth rakeout/spill.

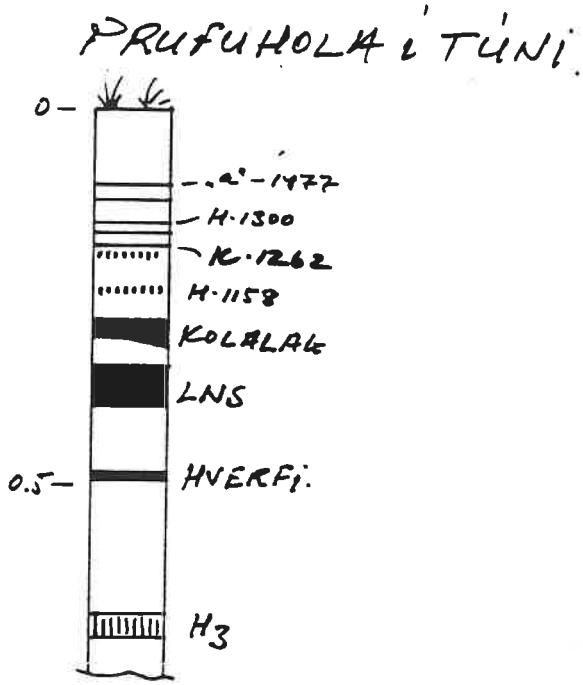
Figure 6.4 Area B, E-W Transect Through the Byre



Context Descriptions

1 - 10 YR 3/1; organic silt loam; very compacted; platy microstructure. Trampled by hooves.
2 - 7.5 YR 3/3; humose loam.
3 - 10 YR 3/3; peat. Turf material.
4 - 10 YR 3/3; peat. Turf material.
5 - 10 YR 3/1; coarse sand.
6 - 7.5 YR 3/2; organic silt loam. Old turf surface.
7 - Multi-coloured peat ash. Intrusion into farm mound?

	Hofsstaðir Í Mývatnssveit - Mæld snið -	T. M.Á.S. U. Y. S. 5/10'97.



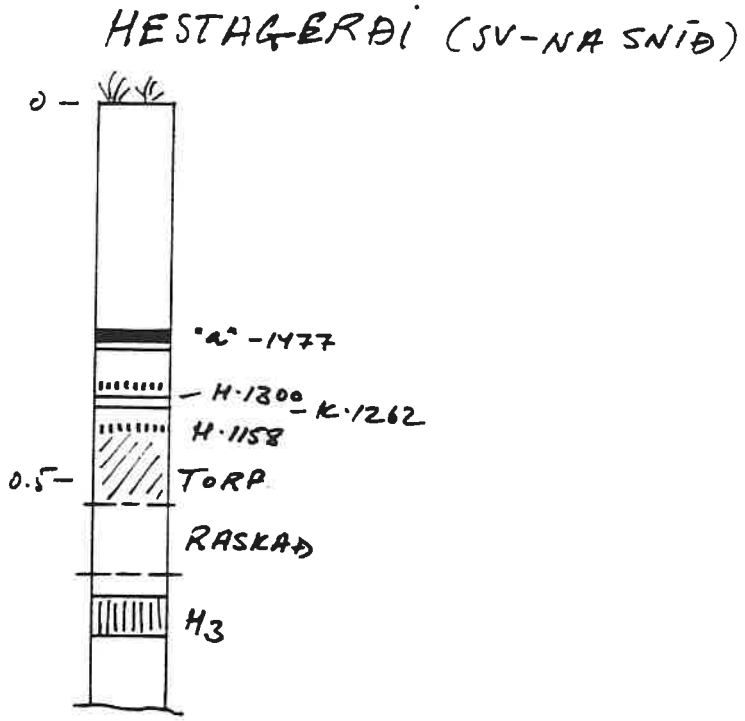
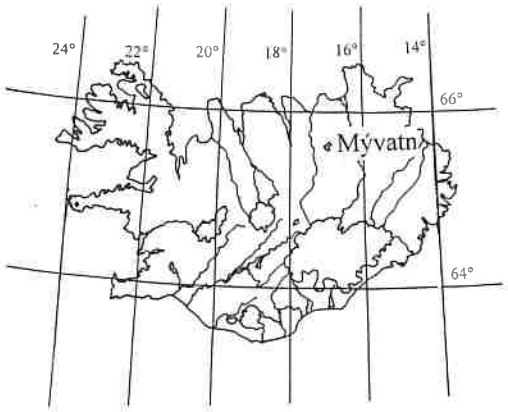
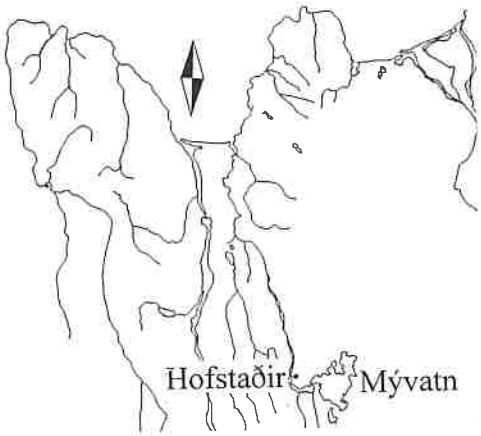


Figure 7.1 Mæld snið vegna gjóskulagarannsókna

1:10


24°
22°
20°
18°
16°
14°
66°
64°
Mývatn


Hofstaðir
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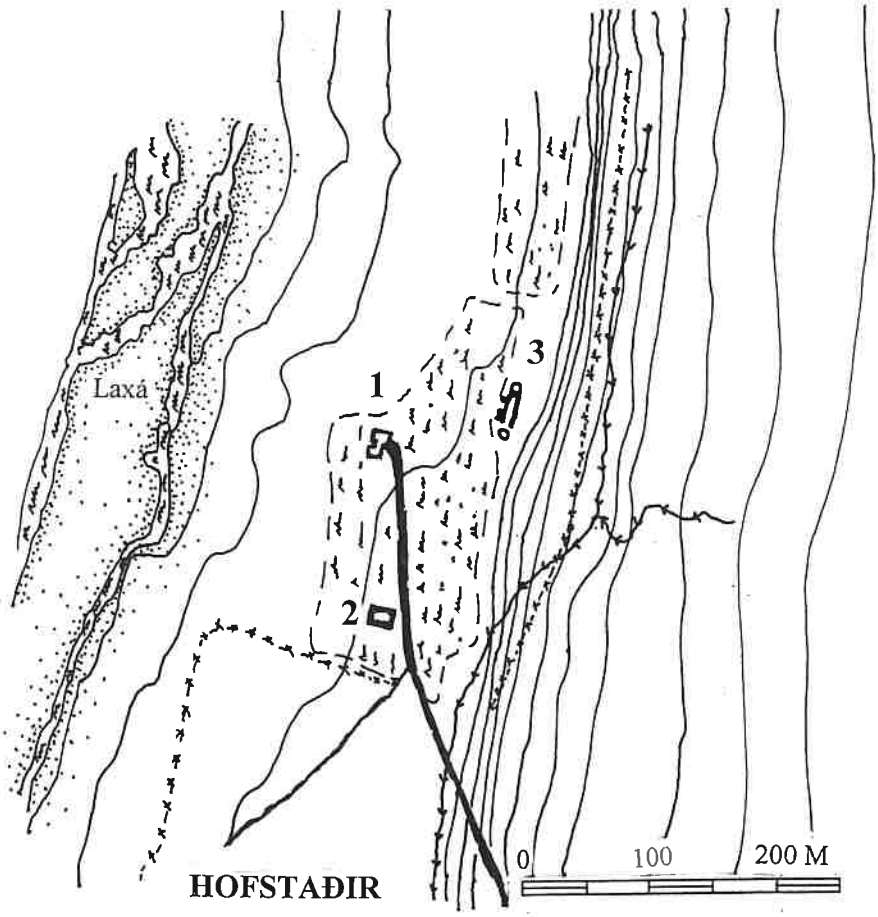
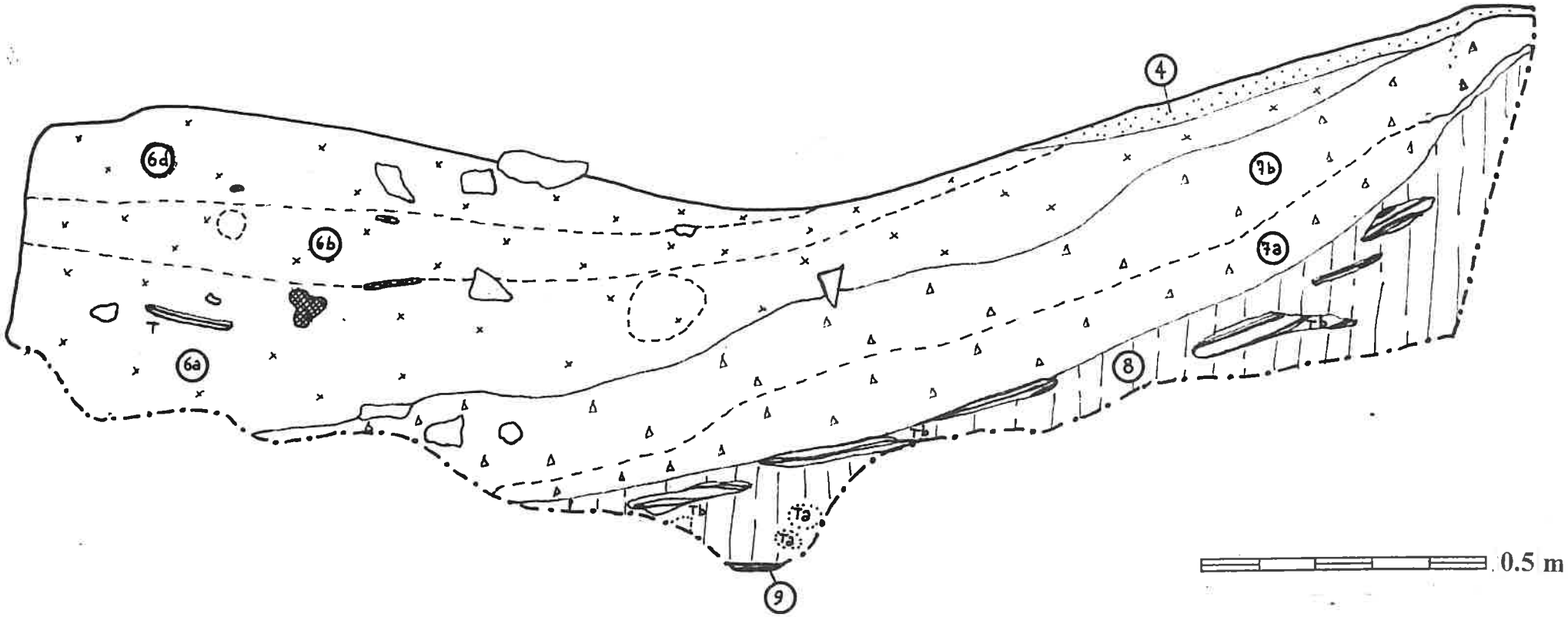
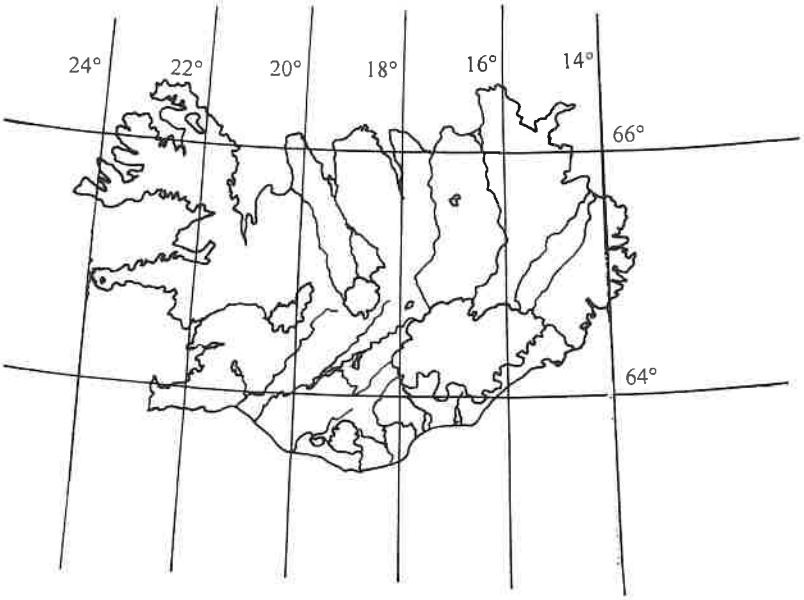

Laxá
1
2
3
HOFSTAÐIR
0
100
200 M


4
6d
6b
6a
T
7b
7a
Tb
8
Tb
Tb
Ta
Ta
9
0.5 m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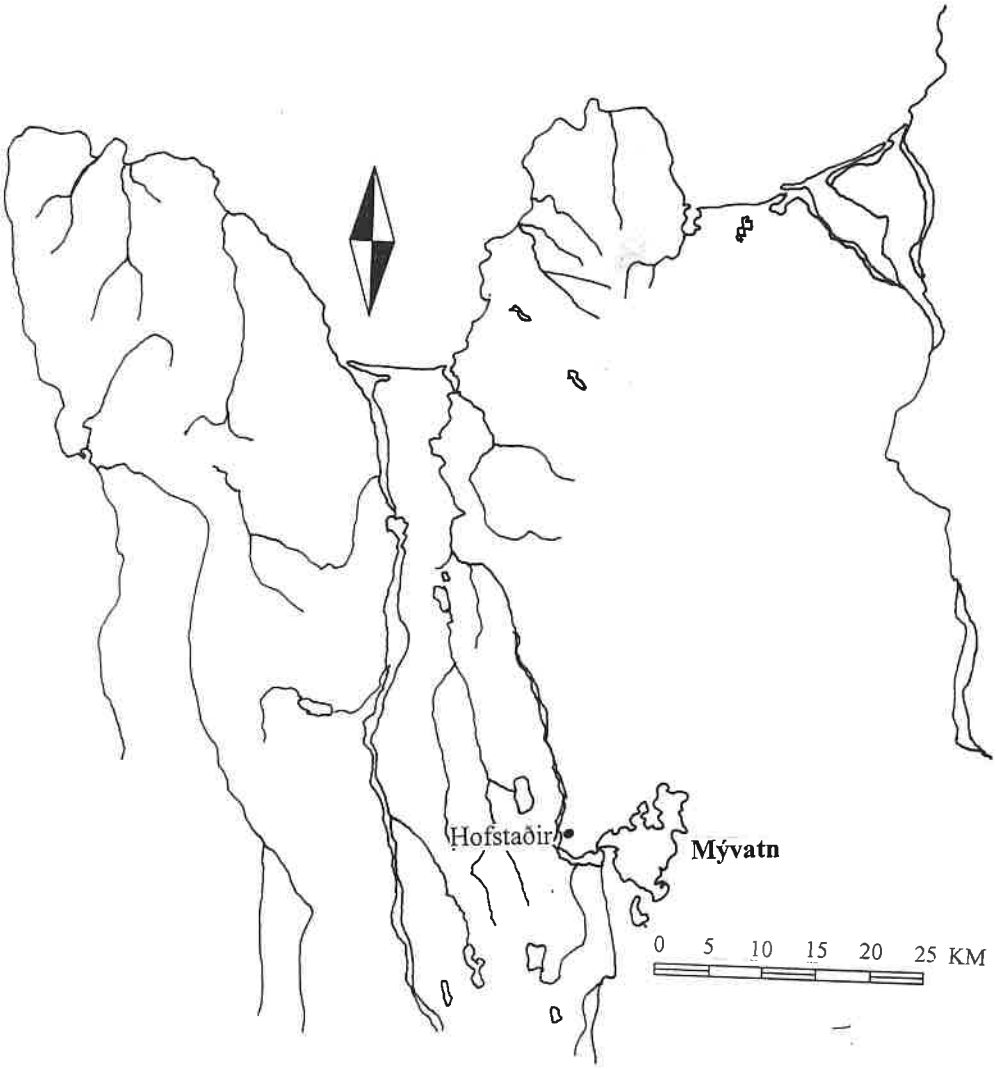
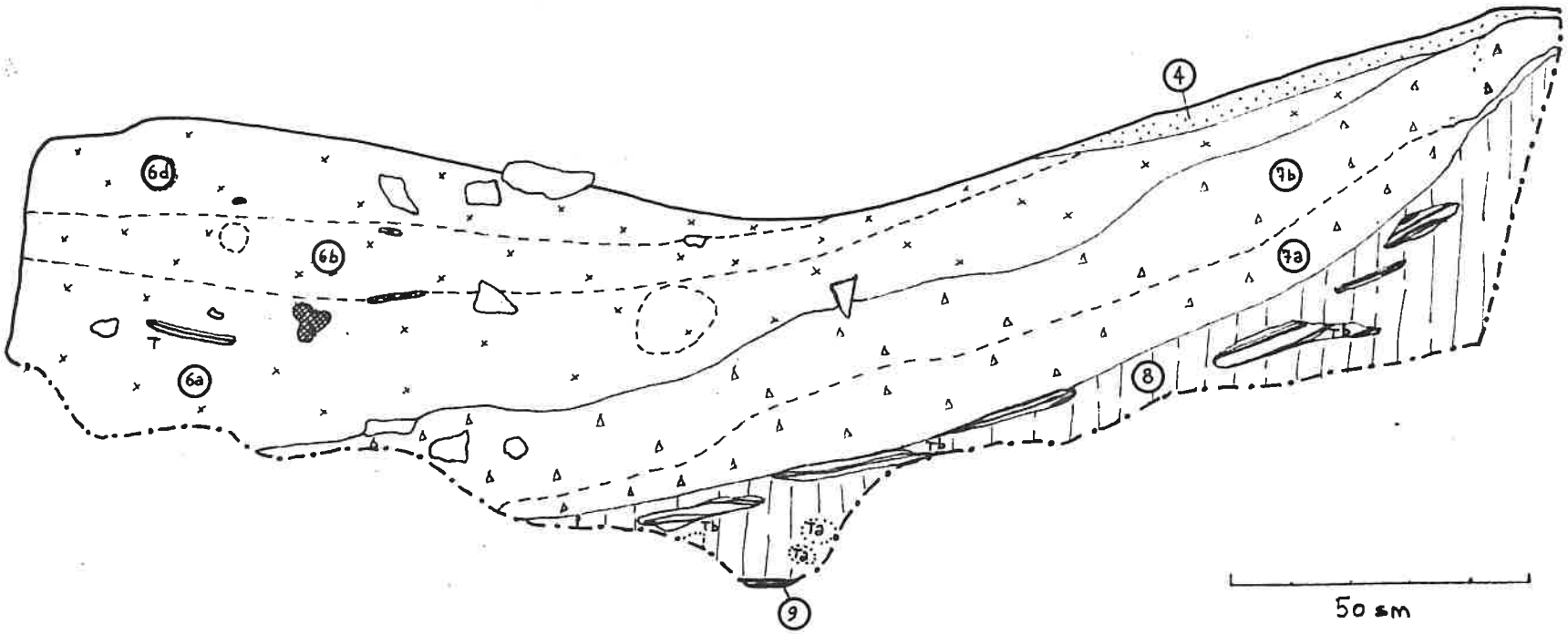

Hofstaðir
Mývatn
0 5 10 15 20 25 KM



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