KULTURHISTORISK
MUSEUM
UNIVERSITETET I OSLO
FORNMINNESEKSJONEN
Postboks 6762,
St. Olavs Plass
0130 Oslo

RAPPORT

ARKEOLOGISK UTGRAVNING

Bosetningsspor og Dyrkningsspor

Kleiver, 7/1, Vestby Kommune, Akershus

FELTLEDER: Michael Derrick
PROSJEKTLEDER: Jes Martens

Oslo 2009

KULTURHISTORISK MUSEUM
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Gårds-/ bruksnavn	G.nr./ b.nr.
Kleiver	7/1
Kommune	Fylke
Vestby	Akershus
Saksnavn	Kulturminnetype
Reguleringplan for Kleiver	Bosettningspor
Saksnummer (arkivnr. Kulturhistorisk museum)	Tiltakskode/ prosjektkode
2008/4290	756109 / 250232
Eier/ bruker, adresse	Tiltakshaver
Multi Vision Eiendom Vestby AS	Multi Vision Eiendom Vestby AS
Tidsrom for utgravning	M 711-kart/ UTM-koordinater/ Kartdatum
11.08.08-12.09.05	(23) UTM sone 33 (EUREF89/WGS84)
ØK-kart	ØK-koordinater
CO038-5-1	N: 6616264.25 Ø: 259646.93
A-nr.	C.nr.
2008/237	C56765
ID-nr (Askeladden)	Negativnr. (Kulturhistorisk museum)
111779, 112722, 112165, 112166	Cf 34000
Rapport ved:	Dato:
Michael Derrick	09.03.09
Saksbehandler:	Prosjektleder:
Jes Martens	Jes Martens

SAMMENDRAG

Gården Kleiver er lokalisert på åsen nordvest for Vestby sentrum i et landskap rikt på kulturminner. Det er flere gravfelt lokalisert til åsen datert primært til eldre jernalder. I perioden 11. august til 12. september ble et større område innen for reguleringsplan for Kleiver undersøkt, og det ble påvist spor etter bosetning, jordbruk (røyser og en geil) og en mulig gravhaug. Dateringene varierer fra tidlig jernalder til middelalder og nyere tid. Spor etter to bygninger antakelig fra middelalder samt en geil viser at den nordlige delen av området ble ryddet relativt tidlig mens den sydlige delen som frem til undersøkelsen var dekket av skog aldri har vært benyttet til jordbruk. I dette området fremkom det en kullmile og et antall røyser fra etterreformatorisk tid.

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ARCHAEOLOGICAL EXCAVATION REPORT

AN ARCHAEOLOGICAL EXCAVATION AT KLEIVER, GBNR. 7/1, VESTBY KOMMUNE, AKERSHUS FYLKE.

MICHAEL DERRICK

1. BACKGROUND

An evaluation of Kleiver farm 7/1 was undertaken by Akershus fylkeskommune, in advance of development at the site by Multi Vision Eiendom Vestby AS between 17.09.07 to the 1.11.07. A total of 27 postholes, 43 cooking pits, 2 hearths, 1 coal layer, 15 pits and possible clearance cairns, stone walls and graves were discovered (Gundersen, 2007). Permission was granted for archaeological investigation of the development area by Riksantikvaren, in a letter dated 4.6.08.

Lokalitet	Gnr /bnr	Type kulturminne	Antall strukturer/ fornminner
R112722	7/1	Boplasspor under dyrket mark	Enkeltliggende kokegrop.
R111779	7/1	Boplasspor under dyrket mark, dyrkningsspor og graver i skog	27 stolphull 43 kokegroper 2 ildsteder 1 kullag 15 groper/nedskjæringer 3 mulige gravminner 1 hus fundamnent/droveway 3 rydningsrøyser
R112166	7/1	Dyrkningsspor i skog	ikke omfattet av kulturminnelovens § 4
R112165	7/1	Dyrkningsspor i skog	ikke omfattet av kulturminnelovens § 4

2. STAFF AND TIMESCALE

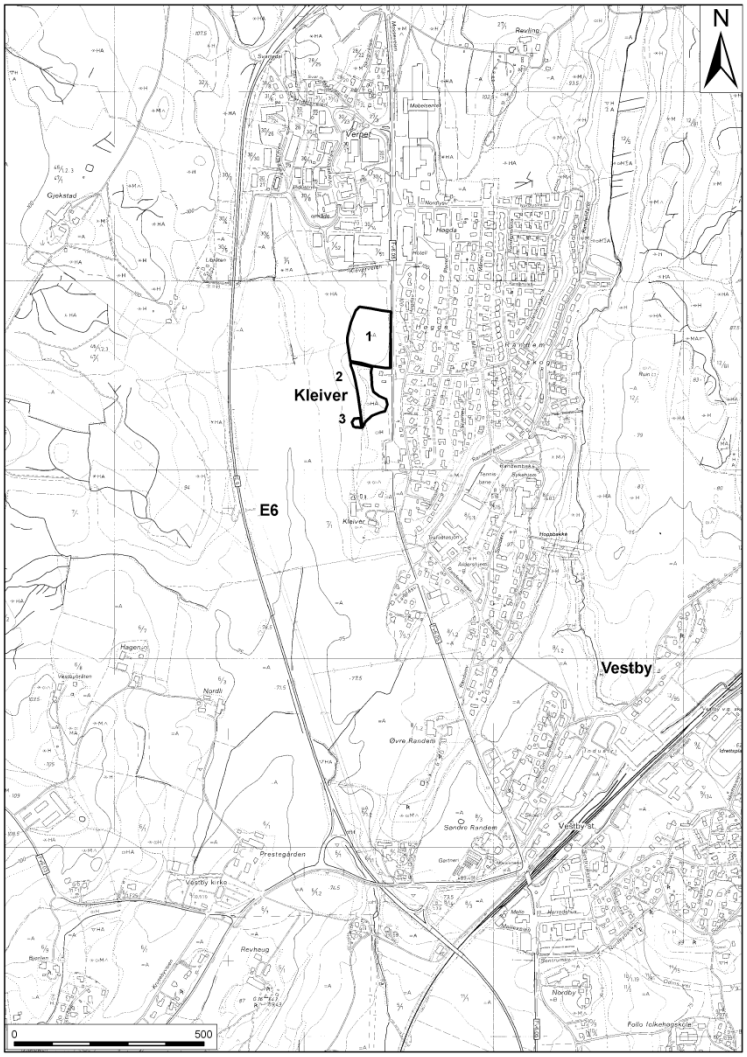
Name	Position	Period
Michael Derrick	Fieldleader	11.08.08-12.09.08
Jakob Johansson	Fieldleader 2	11.08.08-12.09.08
Monika Serafinska	assistant	11.08.08-12.09.08
Linda Engstrøm	assistant	11.08.08-07.09.08
Egil Marstein Bauer	assistant	18.08.08-12.09.08
Helene Russ	assistant	08.09.08-12.09.08
Morten Faanes	assistant	11.08.08-12.09.08
Ole Christian Aslaksen	GIS	11.08.08-12.09.08
Wilhelm Fronth	Metal Detector	11.08.08-15.08.08
Total work days		175 work days

3. PUBLIC VISITS

The site was located next to a main road so there were very few passing visitors. Ingar M. Gundersen and Linn Johannsson from Akershus Fylkeskommune were frequent visitors as too was Harald Stokken, the farmer who owned the land previously. Jes Martens visited the site on several occasions and once with Karl Kallhovd and Kathrine Stene on 03.09.08

4. LANDSCAPE- FINDS AND ARCHAEOLOGY

The development area was located 1 km north-west of Vestby between the E6 and Vestbyveien at a height of between 80 and 95m above sea level. The areas to the north and west (areas 1 and 3) comprised agricultural land which sloped westward towards the E6 while the south-eastern part of the development area



The Development Area

was forested and contained farm buildings (area 2). The underlying geology in areas 1 and 3 was yellow clay however there were patches of gravel and silt particularly in the forested area 3. The land contained a lot of groundwater and this was mirrored in the amount of land drains dug into the natural soil. Areas 1 and 3 were generally rock free however area 2 contained both natural rocks and

clearance cairns. These cairns are particularly significant in that the traces of these cleared stones may survive in areas 1 and 3 and could be confused with genuine archaeological cut features particularly if unexcavated.

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There is a great deal of archaeological activity dating from the Bronze Age to the medieval period in the immediate vicinity of Kleiver farm (see tables below). There are numerous grave monuments and also traces of early farming activity in the form of clearance cairns. A post reformation farm belonging to the local church (86118) also contained cooking pits (78848, 30615, 78849 and 78847) which may have been part of a larger cooking pit concentration in the area.

Kjente faste kulturminner i området				
Fornminne nr.	**Gård**	**Kulturminnetype**	**Datering**	**Tilstand**
76352	Hvitsten	Gravhaug	Jernalder?	Urørt
41682	Hvitsten	Gravhauger (2)	Jernalder?	Skadet
51385	Hvitsten	Gravhauger (2)	Jernalder?	Urørt
112165	Kleiver	Dyrkningsspor (røyser)	Etterreformatorisk	Skadet
112166	Kleiver	Dyrkningsspor (røyser)	Etterreformatorisk	Skadet
112722	Kleiver	Kokegrop	Bronsealder	Undersøkt
51298	Krom	Gravhauger (2)	Jernalder?	Urørt?
70047	Krom	Gravfelt (4 hauger)	Jernalder?	Urørt – delvist
58352	Krom	Gravhaug	Jernalder?	Urørt?
41690	Krom	Gravrøys	Bronse-/ Jernalder?	Urørt
29528	Krom	Dyrkningsspor (røyser)	Jern-/middelalder?	Urørt
111485	Pepperstad	Gravrøys?	Bronse-/Jernalder?	Skadet
21726	Randem nordre	Gravhaug	Jernalder?	Overpløyd
70045	Randem nordre	Gravfelt (28), Hustuft	Jernalder?	Urørt
54977	Randem søndre	Boplass	Eldre Jernalder	Undersøkt
11935	Rød nordre	Gravhaug	Jernalder?	Skadet
21324	Rød nordre	Gravhaug	Jernalder?	Urørt
unr	Rød nordre	Gravfelt (6 hauger 2 umarkerte graver)	Eldre Jernalder	Undersøkt
97205	Smedsrud	Kokegroper (2)	Jernalder?	Ikke opplyst
78848*	Vestby prestegård	Kokegrop	Jernalder?	Fjernet?
30615*	Vestby prestegård	Kokegrop	Jernalder?	Fjernet?
78849*	Vestby prestegård	Kokegrop	Jernalder?	Fjernet?
78847*	Vestby prestegård	Kokegroper (2)	Jernalder?	Fjernet?
69399	Vestby prestegård	Kirkegård	Middelalder	Skadet
85808	Vestby prestegård	Kirke	Middelalder	Fjernet
86118	Vestby prestegård	Prestegård	Etterreformatorisk	Fredet
* antakelig utgjør disse deler av en større lokalitet				
Source: Martens 2008				

Many stray finds have been recovered from farm land in and around Kleiver. Some finds such as the bronze fibulae from Rød nordre and the iron axe from Vestby rectory can probably be classed as grave goods while the remaining finds are indicative of settlement activity (Martens 2008). Among the other finds was a unique bronze chape from Kleiver farm dated to the medieval period (C2054) and a stone with a face carved onto its surface from Hvitsten. The latter was dated to the Pre-Roman Iron age period often associated with the veneration of the head and face (Johansen 1997, 217-218).

Kjente løse kulturminner fra området

Funnnr Khm	Gård	Gjenstandstype	Kontext	Datering
C34223	Hvitsten	Flinteflekke, retusjert	løsfunn	Eldre Steinalder
C10636	Hvitsten	Tynnnakket flintøks	løsfunn	Yngre Steinalder
C17226	Hvitsten	Skafthuløks	løsfunn	Bronsealder
Johansen 1997	Hvitsten	Stein med ansikt	løsfunn	Bronse/Jernalder?
C2054	Kleiver	Dopsko, bronse	løsfunn	Middelalder
C20475	Li (Libråten)	Tynnakket flintøks	løsfunn	Yngre Steinalder
C12270	Randem	Skafthuløks	løsfunn	Yngre Steinalder
Johansen 1997	Randem	Klåstein, kleber	løsfunn	Yngre Jernalder
Johansen 1997	Rød nordre	2 bronsespender	løsfunn	Eldre Jernalder
Johansen 1997	Skog	Skafthuløks	løsfunn	Yngre Steinalder
Johansen 1997	Vestby Prestegård	Slipestein, sandstein	løsfunn	Eldre Steinalder
Johansen 1997	Vestby Prestegård	Øks av jern	løsfunn	Yngre Jernalder

I tillegg kommer funnene fra de arkeologisk undersøkte gravene på Rød nordre og Hvitsten

Source: Martens 2008

There have only been a few archaeological investigations in the vicinity of Vestby. Most excavations were related to the construction of the E6 where in 1993 a total of 11 sites dating to the early Stone Age were investigated in the south part of the municipality (Rød søndre, Skøien nordre, Gjølstad and Knapstad). An Early Iron Age cemetery was discovered at Rød Søndre Vestby consisting of 6 barrows and two flat graves. Ten cremations were recovered from the mounds and the richest grave contained a set of fibulae, fragments of a decorated comb, bone hairpins, a spindle whorl, sherds of decorated pots, burnt bone and traces of bear claws (Berg, 1995; 1997). Two early Stone Age sites were investigated near Son in 2002.

At the end of the 19th-century a grave mound was excavated at Nordre Sundby and dated to the Roman Iron Age. In 1965 a bronze arrowhead was recovered from fields at Hvitsten and in 1982 a grave mound was investigated at Øvre Linnestad.

An archaeological investigation took place 1km to the south at Randem farm which unearthed a total of 250 structures. Of these structures nineteen were interpreted as cooking pits, two as clearance cairns and thirty-nine as postholes.

The activity dated to the Early Iron Age which compared well with the dates from Rød nordre grave field (Petterson, 2008). In August 2008 a rescue excavation was undertaken by Akershus Fylkeskommune and UKM to the east of Randem gård which uncovered cooking pits and a cultivation layer (Eggen, forthcoming).

5. EXCAVATION

5.1 AIMS AND PRIORITIES

The registration by Akershus fykeskommune indicated that the area had traces of activities from various periods of settlement, agricultural and burial activity (Gundersen 2007). On this basis a project plan was prepared (Martens 2008)

The aims of the excavation were:

Main Aims

- Identify structures and decide on their date and function. Look for connections between the structures and possible phases.
- Identification and defining of possible house remains and associated structures. Look for phases within the house and identify areas of specific activity such as entrances, hallway, living areas, animal enclosure, industrial activity and storage areas.
- Identification and documentation of other structural elements which may be connected with the farm (graves, boundaries, walls and pathways)
- What type of activity occurred in and around the farm area?
- Look for traces of specialized activity in the area
- How are the farm buildings organised in respect to each other and to other specialised activity in and around the yard?
- Was there continuous occupation of the area or does the archaeological activity show many separate phases of occupation and abandonment.
- Look for relations between the structures and know archaeological activity in the surrounding area.
- How is the farmland organised? Can we detect field patterns showing different agricultural activities?
- How intensively was the land used?
- Are the graves connected to the farm?
- Is there continuity between the surviving boundaries in the landscape and the archaeological structures and boundaries in the area?
- How are the farms arranged with respect to each other?
- Can you locate the related pathways?

Other Aims

- How were the grave mounds constructed?
- What processes have occurred after the burial? (Robbing, plough damage etc.)

- Where in the landscape is the grave situated and is this significant?
- Is there earlier activity under the grave mound?
- Is it possible to detect ritual or other activities connected with the burial?
- Is there organisation evident within the grave field?
- How are the graves situated within the context of the farm and other archaeological activity?
- Does the location of the grave mound and the burial goods indicate the farm's level of status within the society?
- Identify the type of grave goods and their location within the grave.
- Are there any unmarked graves?

Area 2

- Is structure S.5 (F94-95) a droveway or a house foundation?
- What relationship has it to the farm in area 1?
- What relationship has it to its contemporary agricultural landscape and surroundings?
- What activity pre-dates the droveway?
- Is the terrace constructed and if so why?
- Are there fossilized field systems and boundaries evident in the landscape beneath mound S.1 (F92). And is it possible to recognise different types of land exploitation?

Area 3

A pit was found during evaluation (S.193 (F85)) in area 3 and was subsequently dated from 1260 to 1320 AD. This could indicate the presence of medieval settlement. A different approach was therefore required in order to pre-empt the discovery of preserved soils and occupation layers. Below are a series of questions specific to that area:

- Is there evidence for buildings from this phase?
- How good is the preservation of medieval deposits under the plough soil?
- Is there a house and if so is it possible to distinguish a ground plan?
- Are there certain methods which could be employed during evaluation to get a better understanding of such structures and if so how could we improve our method to ensure the best results?

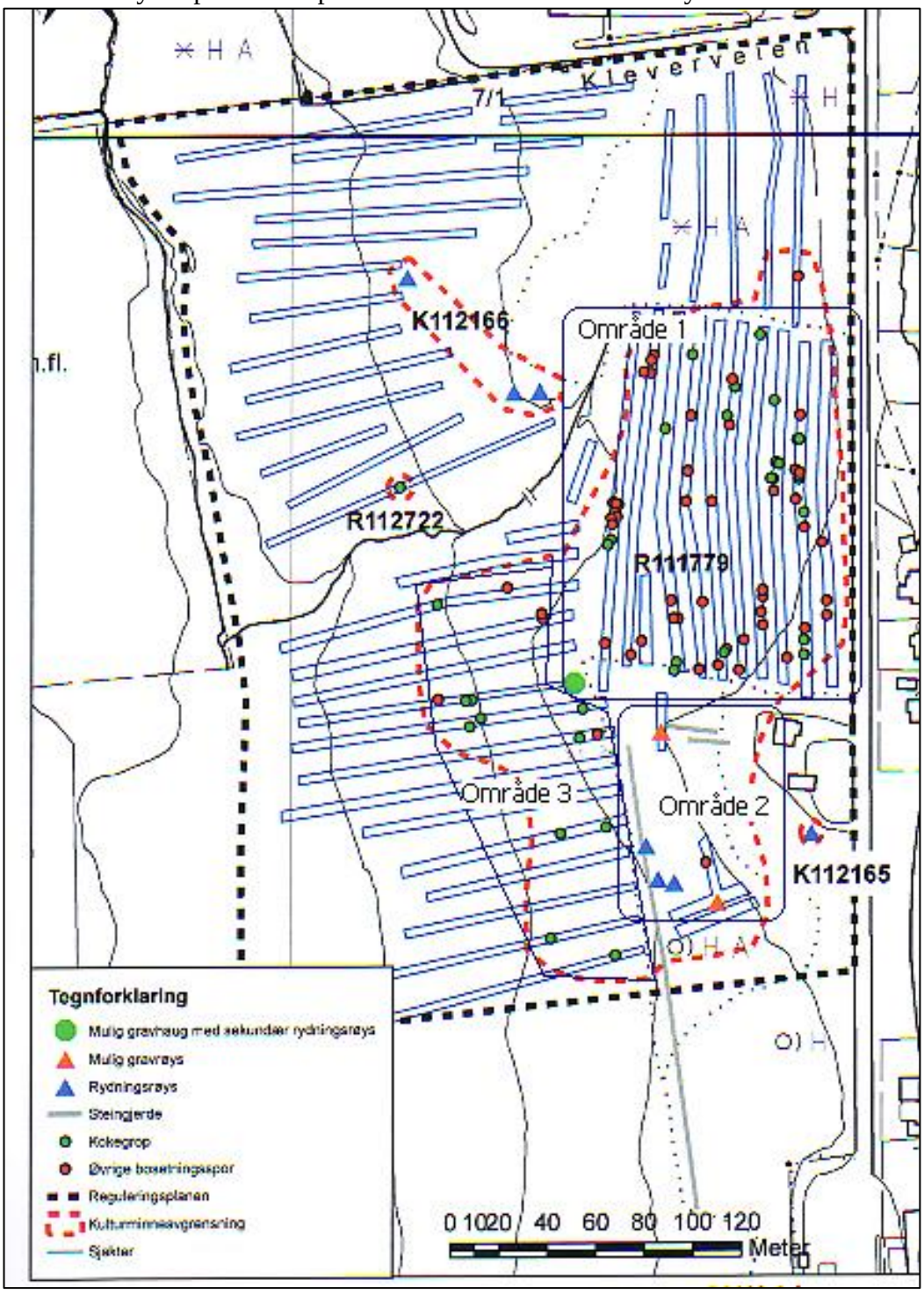
5.2 METHOD

The site was split into three areas during the evaluation. Area 1 comprised agricultural land and lay to the north of an area of woodland (area 2) while area 3 which was also agricultural land was situated immediately to the south-west of area 2.

A metal detector survey was conducted on areas 1 and 3 prior to the removal of soil. The reason for this was the discovery of a medieval bronze chape which could indicate high status settlement in the area. The metal detectorist first

walked the length of the field in a series of transects and then crossed them at right angles in order to maximise the find potential. If a signal was received the object was excavated, placed in a bag, pinned to the ground and its position was measured using the total station.

A series of pits and postholes were discovered in area 1 during evaluation which indicated the presence of a farm or settlement in the vicinity. It was decided to mechanically strip off the topsoil and subsoil in controlled layers.



Areas 1, 2 and 3 showing the evaluation trenches. After Martens 2008

Initially half of the area was to be uncovered in order to evaluate the type of structures and to see if there was evidence for buildings. If this proved to be the case then the remainder of the field would be stripped.

Two tracked excavators were employed for the majority of the time, one using a 2 meter bucket and the other a 1.5 meter bucket. The topsoil and subsoil were loaded into dumpers and taken along an access road which was built along the eastern boundary of area 1. The soil was then dumped in the neighbouring field which was evaluated and deemed to be of no archaeological interest.

A possible grave (s.1) was hand excavated in area 1 using the quadrant method of excavation.

Area 2 was heavily wooded and so tree felling was employed and most of the trees were removed from the area. The structures were cleaned and the smaller vegetation removed by hand in order to ensure minimum damage. The tracked excavator was used to cut a profile through the larger structures such as the cairns and the droveway.

The soil in area 3 was removed mechanically. Special precautions taken here in order to ensure that any medieval cultural layers were left intact and not removed by the digger. As a consequence the machining was slower and some hand digging was required.

All structures were hand cleaned and photographed and excavated structures were drawn in plan and profile. A total station was used to record the structures within the landscape however some of the cairns were hand drawn. Charcoal samples were taken from the excavated structures and pollen samples were taken from the base of the droveway, the cairns and the possible grave.

5.3 EXCAVATION PROGRESS

An initial 4 weeks was allocated for the excavation of the site with a proviso that an extension could be granted if the area proved to be archaeologically rich. It was decided 4 weeks was enough however an extra week was added with the agreement of the developer in order to compensate for the problems encountered at the outset of the excavation.

It was evident on arrival that the trees had not been removed from area 2. It therefore restricted the work which could be carried out in the area. The stripping of area 1 was delayed until the 2nd week as a thorough metal detector survey had to be carried out. Work in the first week was therefore restricted to some cleaning in area 2 and the excavation of possible burial mound (S.1). The tree felling machine arrived on the 12th August but broke down the following day. The work resumed and was finished on 15th August. One digging machine arrived on 18th August but no dumper. Eventually however, two machines and two dumpers were delivered and the work proceeded quickly. The excavation ended on 12th September.

5.4 PROBLEMS AND LIMITATIONS

Area 1

For the first few days a crop occupied areas 1 and 3, this affected the depth to which the metal detector could penetrate. When the crops were removed and the work resumed all metal objects recovered were found to be modern.

The weather played an important part in influencing the result. A period of heavy rain made the soil very moist and caused the tracked excavators and dumper trucks to sink deep into the ground. Damage was most evident however in area 2 as the tree felling machine was very large and sank into the topsoil. Some damage was unavoidable but was kept to a minimum by laying felled trees over the area so the machine could track over them. Occasionally Work would halt due to heavy rain as the dumpers would get stuck and were unable to remove the soil from the field.

After the initial machine stripping in area 1 there was considerable damage to the structures, from surface rain water and flooding. A series of drainage trenches were dug in order to drain the site. Structures were also damaged by a network of land drains which crossed the field. The droveway was damaged by tree roots and modern rubbish pits and modern clearance cairns littered the area covering older structures.

5.5 EXCAVATION

5.5.1 FINDS

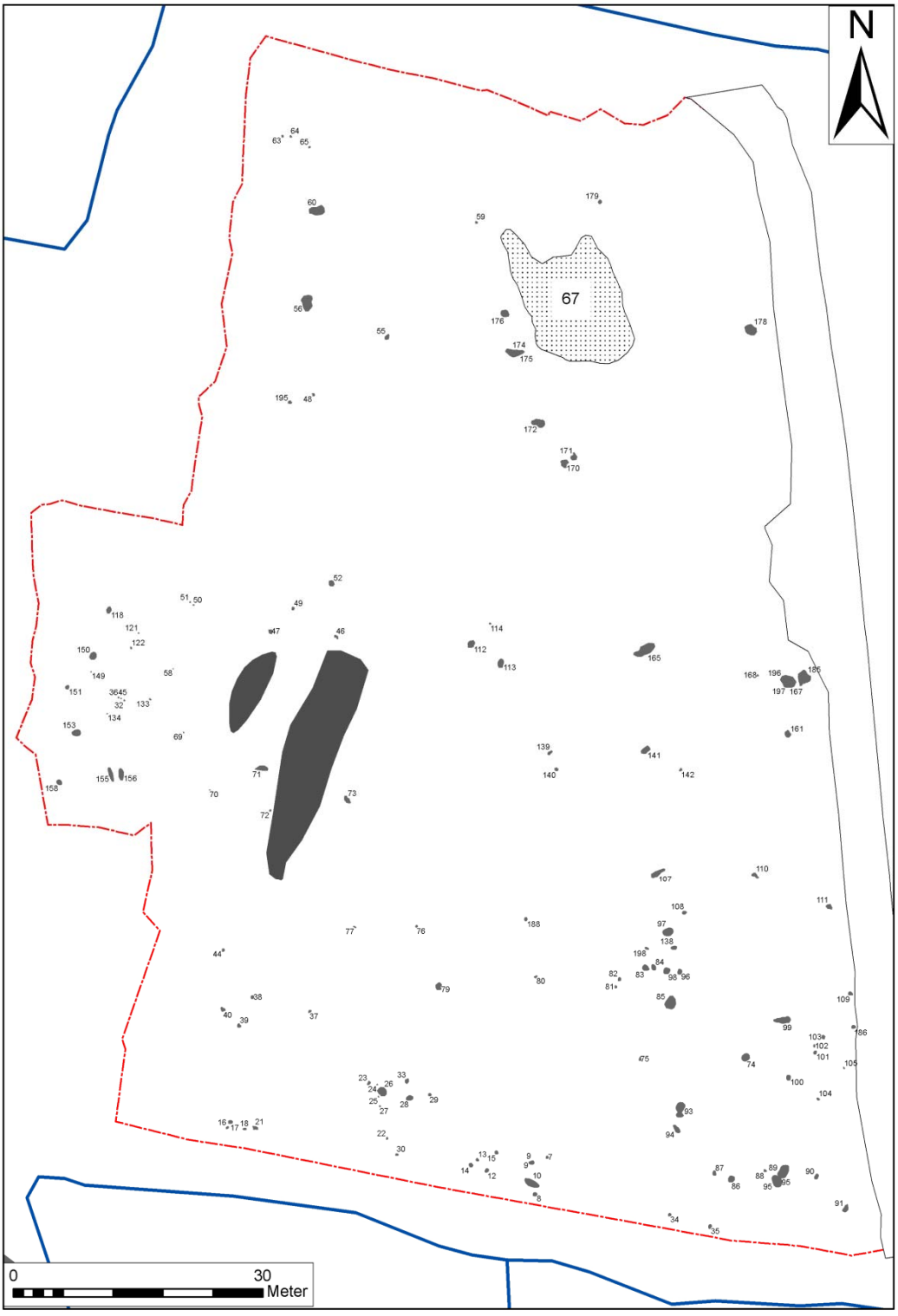
All metal detector finds were discarded as they appeared to be of modern date with the earliest find probably dating to the 19th-century.

Whetstone (C56765/1)
The whetstone was found in the north-west quadrant of the possible grave mound or clearance cairn (s.1). It comprises two broken parts and represents a fragment of a larger whetstone.

Whetstone (C56765/2)
This lay on top of posthole 35 and made from very fine grained slate. It has been greatly used and is broken at one end.

5.5.2 STRUCTURES

Area 1
A total of 187 structures were uncovered and 90 of these were excavated. A total of 56 structures were written off as modern or containing natural deposits while the remaining structures were interpreted as 88 post or stake holes, 27 pits, 9 cooking pits, 4 hearths, 1 grave mound / clearance cairn, 1 stone spread and 1 charcoal spread. Since the majority of the structures did not conform to any plan or system it was decided to investigate a representative sample rather than excavate all of them.



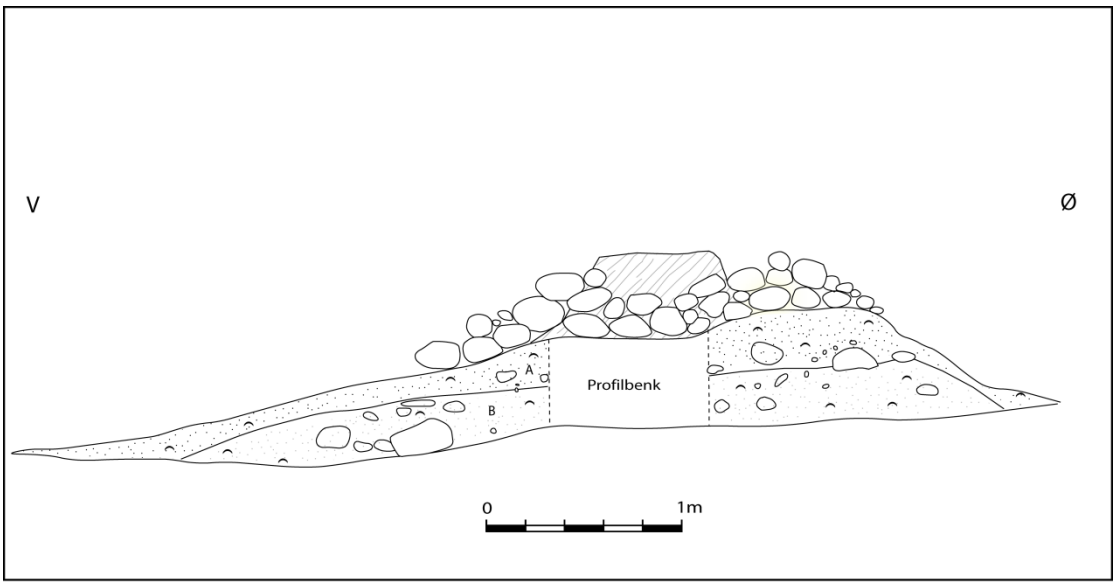
Area 1 Showing the structures

Grave mound / clearance cairn

A possible grave mound or clearance cairn (S.1) was located close to the north-western boundary of area 2. It was 1m in height, 5.30m wide and 6.30m in length. It consisted of a mound of stones ranging in size from 15-50cm in diameter, under which were two further layers. A tree grew in the centre of the mound.

Structure 1 Grave mound or clearance cairn.with Wilhelm Fronth metal detecting. Looking north. (Cf 34000_43)

A layer of grey-brown sand with some round and sub-angular pebbles (layer A) lay under the stones. Below this was a layer of light yellow-brown sand containing some small rounded pebbles (layer B). Two pieces of a broken whetstone were found together in this layer in the north-west quadrant at a depth of 42cm from the top of the mound. A spread of charcoal and grey orange burnt sand 46cm in diameter and 20cm deep (S.8) was found under the mound itself, this however may have been caused by root burning.

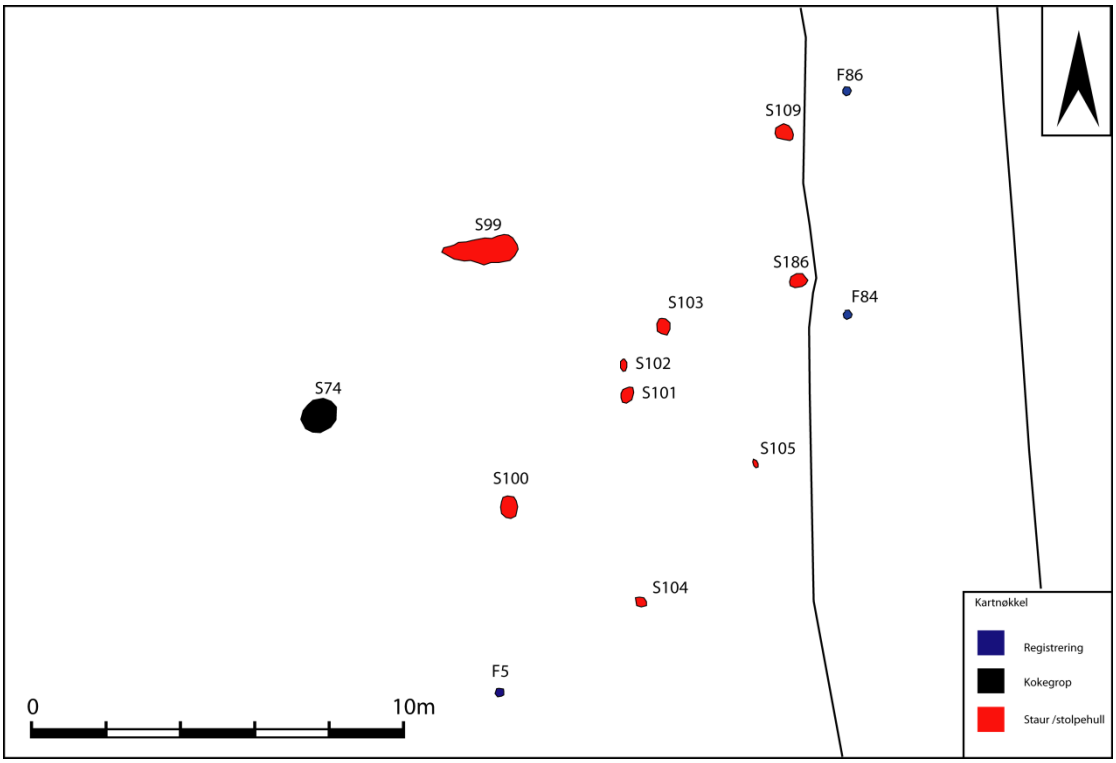


Structure 1 south facing profile

Farm Buildings

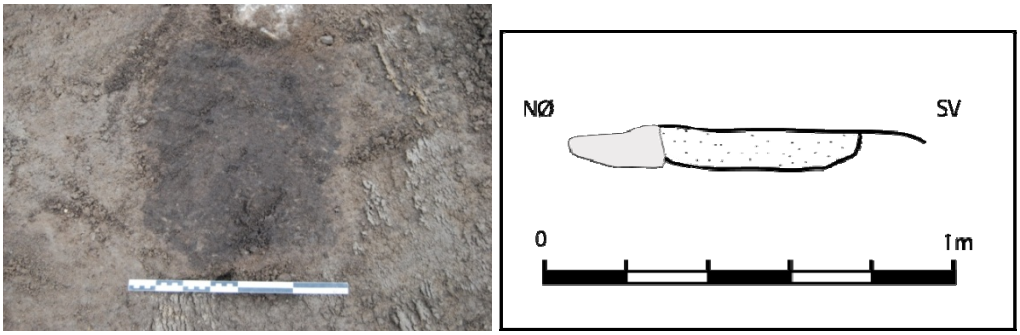
Building A: house or barn

In the south-east corner of area 1 was the remains of a possible farm building. The construction comprised 7 outer postholes and 1 possible internal posthole: F84, F86, S100, S101, S102, S103, S104 and S105. The building was oriented south-west / north-east and had an entrance on the north-west side. The distance between the two rows of postholes was 4.5m and the structure was truncated by the access road and by Vestbyveien to the west. Two postholes, F86 and S103 were excavated.

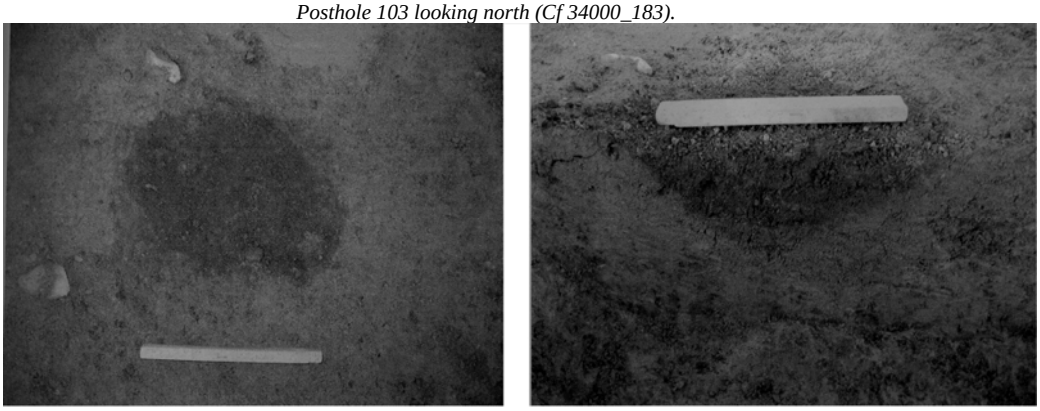


Building A

The north-west wall comprised 4 postholes. Posthole 100 was oval in plan and measured 67cm x 46cm and was filled with grey-brown clay silt and some small rounded pebbles. To the north-east of this were postholes 101, 102 and 103 the latter two may represent an entrance to the building. Postholes 101 and 102 were oval and 46cm x 34cm and 34cm x 17cm in dimensions respectively. They contained light-grey brown silt with charcoal flecks. Posthole 103 measured 49cm x 39cm, was 10cm in depth, had straight sides and a flat base. It contained dark brown-grey sand and a sill or packing stone.



Posthole 103 looking north (Cf 34000_183).



Posthole F86 (scanned from registration report)

The opposite wall comprised 2 postholes, S.104 and S.105 which were oval and contained dark-grey brown clay with charcoal flecks. They measured 29cm x 28cm and measured 24cm x 19cm respectively. Posthole 186 was located within the building, was oval in shape and measured 65cm x 49cm. It contained dark-grey brown clay silt mixed with light-grey yellow clay flecks. This may represent internal activity however it can also be from a different phase.

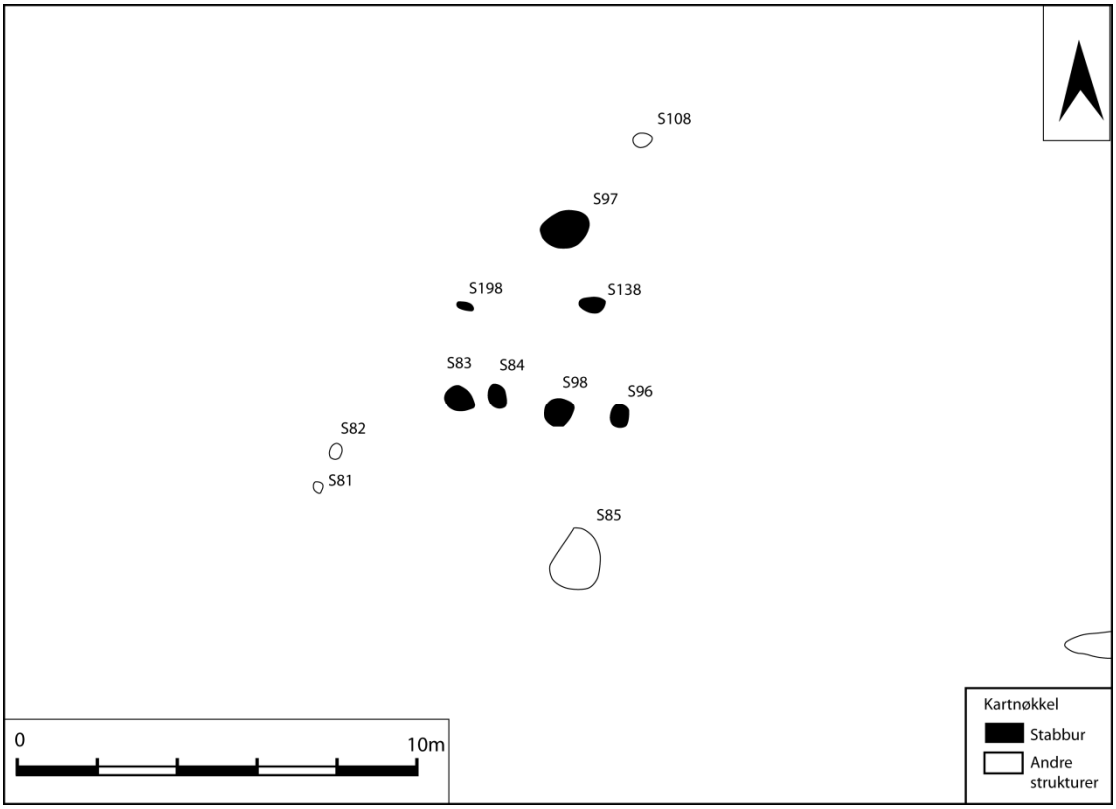
A pit and a posthole were found during the registration (F86 and F84). They fit the building plan but were located under the access road and were not investigated further during the excavation period. F86 was described as a posthole, 30cm x 25cm and was 16cm in depth. It was oval, had steep sides, a pointed base and contained dark-grey brown sand gravel and silt with some charcoal fragments (Gundersen, 2007).

The structure was post built and there were no signs of a ditch for a sill beam or foundation trench. It is possible that there was a stone foundation between the posts which has been destroyed during ploughing and stone clearing. The posts are arranged in pairs at the south-west end of the building (100/104 and 101/105) and may continue in the same manner under the access road. The building does not seem to have been substantial and the postholes are quite small and would have had a low weight baring capacity. It is possible that the remains could represent a farm outhouse building such as a byre or a barn which would not require sturdy walls and a strong roof.

Building B: Stabbur

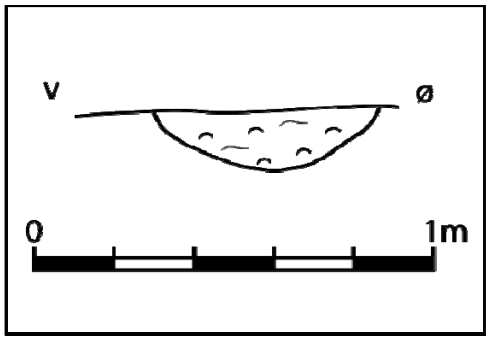
Twenty meters to the north-west of building A was a possible stabbur construction. It was aligned north-south and comprised 6 shallow pits and 1 possible drip gully.

Structures 83, 84, 96 and 98 comprise the back wall supports. These supports would have comprised shallow pits filled with stone onto which a wooden sill beam would have lain horizontally. The front of the building would have been supported by two vertical postsresting on the stone filled pits S138 and 198.

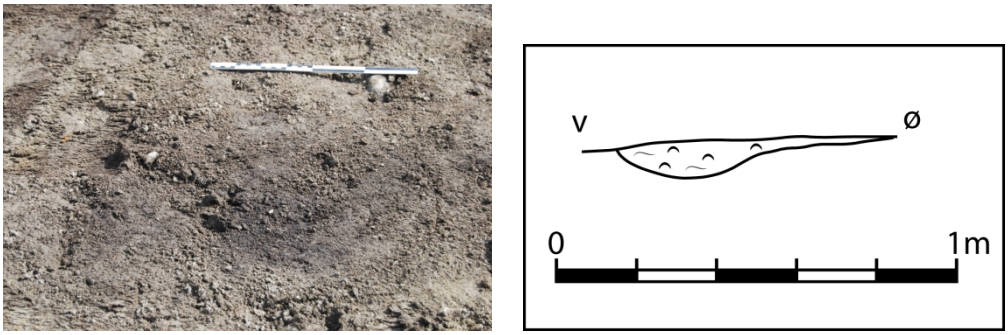


Building B

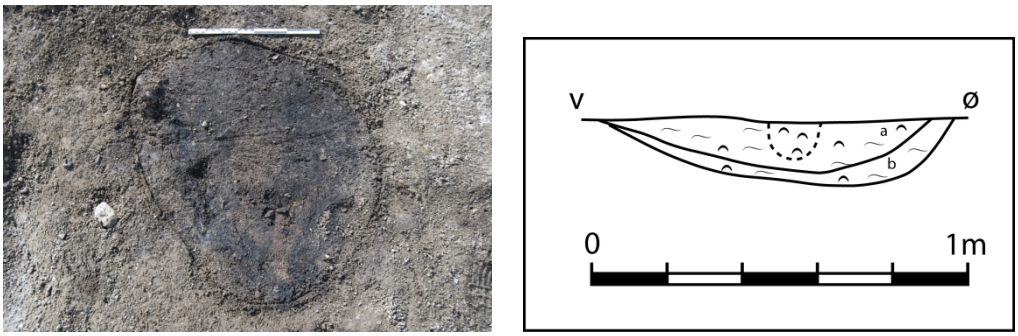
Structures 83 and 84 were 70cm x 53cm and 60cm x 50cm respectively and were 13cm and 7cm in depth. Both had 45 degree sides and a round base. Structure 96 also had 45 degree sides and a round base, measured 74cm x 55cm and was 15cm in depth. It contained a dark brown clay layer (a) which overlay dark-brown grey clay sand and some small rounded pebbles (b). Structure 98 measured 92cm x 82cm and was 7cm in depth and was filled with dark brown silt sand mixed with orange silt clay and brown silt sand.



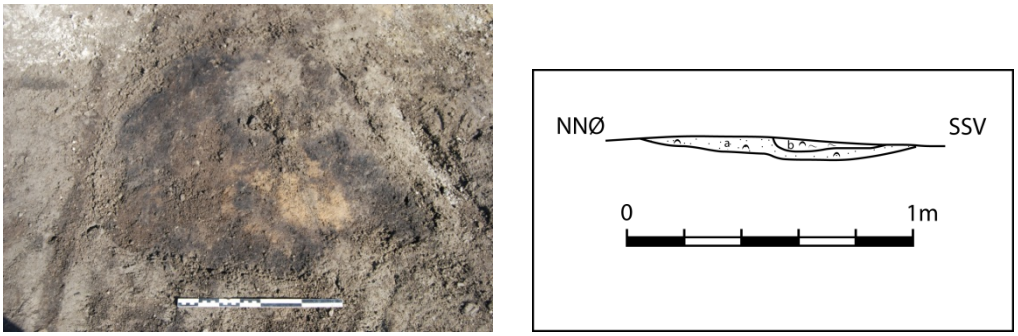
Pit 83, looking north (Cf 34000_161)



Pit 84, looking north (Cf 34000_162)

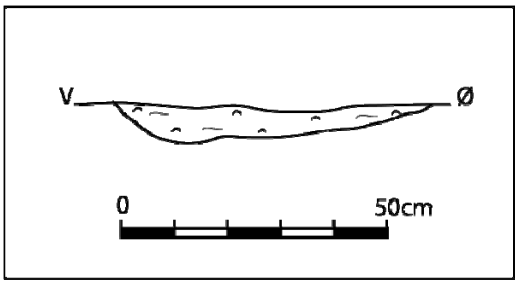


Pit 96, looking north (Cf34000_177)

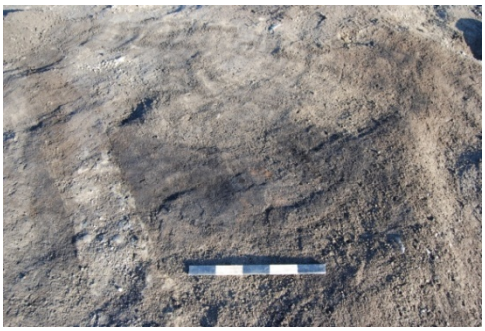


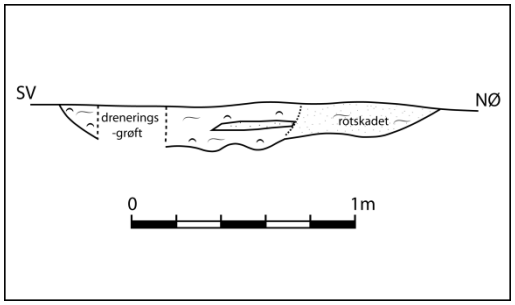
Pit 98, looking north (Cf 34000_179)

Structure 198 formed the north-west corner of the stabbur and measured 53cm x 33cm and was 6 cm in depth. It contained dark brown clay and had 45 degree sides and a flat base. Pit 138 completed the structure and measured 100cm x 84cm and was 20cm in depth. It contained compact dark-brown. A drip gully (S.97) lay immediately to the north of the stabbur and could represent an accumulation of rain water from the overhanging eaves of the building. The gully was irregular in plan, measured 150cm x 15cm and was 15cm deep. The base was irregular and the fill was a mix of dark grey fine sand (a) and light grey gravel sand with charcoal flecks (b).

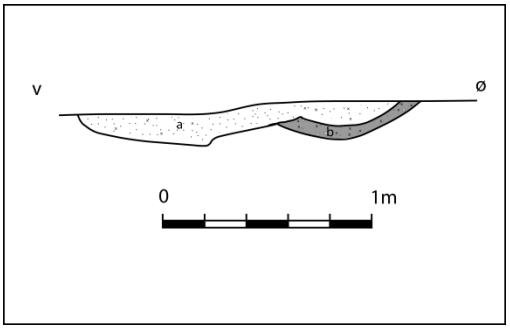


Pit 198 north facing (no photo)





Pit 138, facing north-west (Cf34000_218)

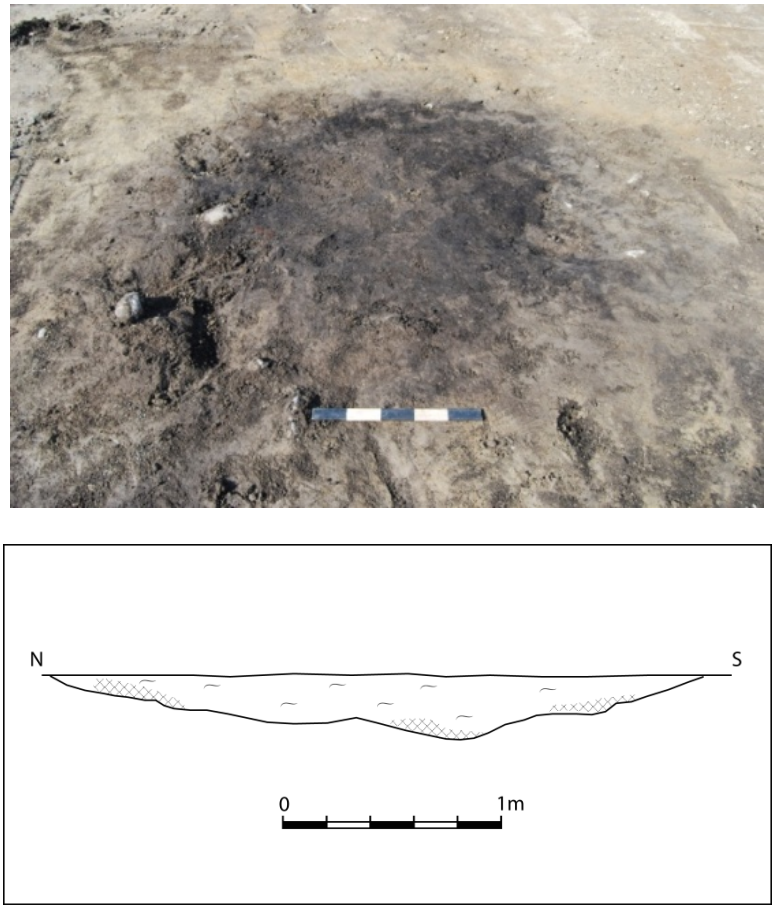


Drip gully 97, facing east (Cf 34000_178)

Cooking Pits and Hearths and Refuse Pits

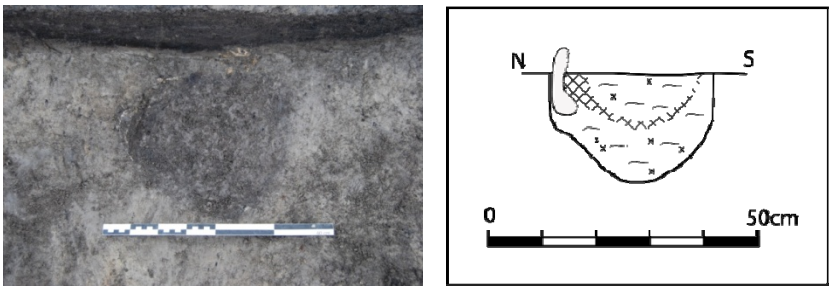
10 of the cooking pits and hearths were located towards the eastern boundary of field 1 while 3 were located on the western edge; a total of 5 cooking pits and 2 hearths were excavated. While no discernible pattern could be seen in the layout, it would seem the concentration favoured the eastern part of the field. The smallest cooking pit measured 99cm x 82cm (s.74) and the largest 264cm x 109cm (s.165) and they varied in depth from 8cm-19cm.

Structure 167 was 150cm in diameter and 15cm in depth. It had 45 degree angled sides and an undulating base. It contained grey-brown clay silt, frequent charcoal flecks and pebbles. An interrupted layer of charcoal lined the base of the pit.



Cooking pit 167, facing west (Cf 34000_248)

The absence of burnt stone may indicate extensive plough damage and we may be observing the base of a cooking pit. A posthole with straight sides and a round base (S.197) lay underneath this cooking pit. It was 30cm in diameter and 20cm deep and contained very fine brown clay with moderate charcoal flecks below which was a layer of brown-grey clay and charcoal flecks.



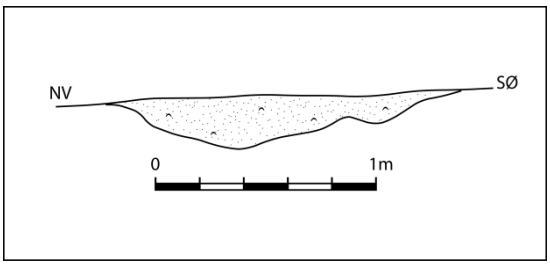
Posthole 197, facing east (Cf 34000_354)

Hearths

Four hearths were situated to the south-east of area 1. (S.79, 91, 93 and 95) They were generally round in plan and contained dark-grey silt, clay or silt-clay mixed with red brown silt or sand. Two hearths were excavated. Structure 93 had undulating sides was 182cm x 86cm in dimension and 18cm deep while Structure 95 was 160cm x 80cm and was 14cm in depth. The hearths like the cooking pits were shallow in depth probably due to ploughing.

Refuse pits

Twenty-seven of the structures were recorded as pits and ranged in size from 33cm x 20 (s.75) to 250cm x 50cm (S.155). They were shallow in depth (8-22cm) probably reflecting the amount of plough damage in the field. Other activity such as stone removal, animal burrowing and digging could also give the impression of manmade activity. A pit with steep sides and a rounded base was excavated at the north-west edge of field 1 and contained dark-grey silt sand with some small pebbles (s.178). It was 168cm in diameter and was 22cm deep.



Pit 17 facing south-east (Cf 34000_ 111)

Postholes

The remaining 79 postholes in area 1 may relate to field boundaries both ancient and modern however very few discernable patterns can be seen in the overall plan to identify such boundaries and so it is difficult to assign these structures a specific function. Plough erosion could also have affected the survival of similar structures which may have created discernable patterns in the field.

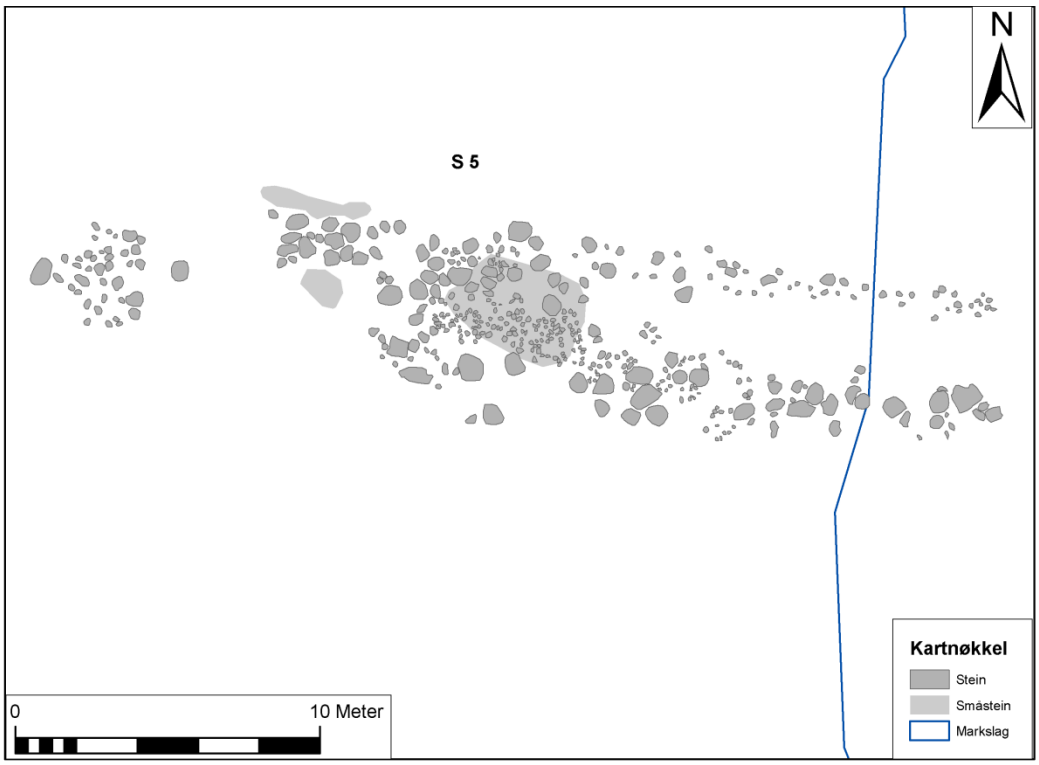
Area 2

Area 2 lay to the west of the smallholding and comprised woodland which was enclosed on the west by a wall (s.190). This area contained 5 clearance cairns (S.2, 177, 181, 182 and 183), a charcoal kiln (S.4) and a droveway or pathway (S.5). The presence of clearance cairns would suggest the area was not used for cultivation but rather has always been woodland. This is also be indicated by the presence of a charcoal kiln which would have required large quantities of wood for charcoal production.

Droveway

A linear structure comprising two parallel stone walls was observed during the evaluation (S.5). This structure was oriented east-west and situated on a low ridge west of the smallholding. The base of the northern wall comprised much smaller stones (10 x 15 x 29cm) than that of the southern wall (50 x 60 x 80cm). The larger stones in the southern wall may have been placed on the boundary during field clearance and so added to the structure. Some of the larger stones are contained within the droveway itself and could be a result of wall collapse or clearance after the structure has been abandoned. A concentration of smaller stones at the western end of the droveway may also be a result of wall collapse. The walls enclosed a deposit of brown gray clay sand (A). The droveway was 3.5m wide and 35m in length, originally however it would have been much longer.The start of the droveway would have been on higher land to the east of

the area where it ran towards lower lying pasture land in the west. A stone boundary wall (S.190) ran perpendicular to the droveway on its western extent.



Structure 5 The Droveway

Two profiles were dug through the droveway; the west facing profile is shown below. Under layer A was a layer of dark orange brown silt sand with some small stones (B) and a layer of dark orange sand (C). The deposits lay upon the natural bedrock. The raised appearance of the land upon which the droveway is situated is the result of natural geology and not a man-made platform.

Clearance cairns

Cairn 2 lay to the south-east of area 2, was rectangular in plan and comprised stone ranging in size from 10 x 10 x 15cm to 50 x 75 x 85cm which lay within grey-brown clay containing charcoal flecks. The structure was 5.22m x 3.38m and 35cm in height. Clearance cairn 177 was circular in plan and comprised stones ranging in size from 5 x 5 x 10cm to 40 x 50 x 60cm mixed with brown-grey sand clay containing charcoal flecks (see section below). It lay in the middle of area 1, measured 7.2m x 4.8m and was 42cm high.

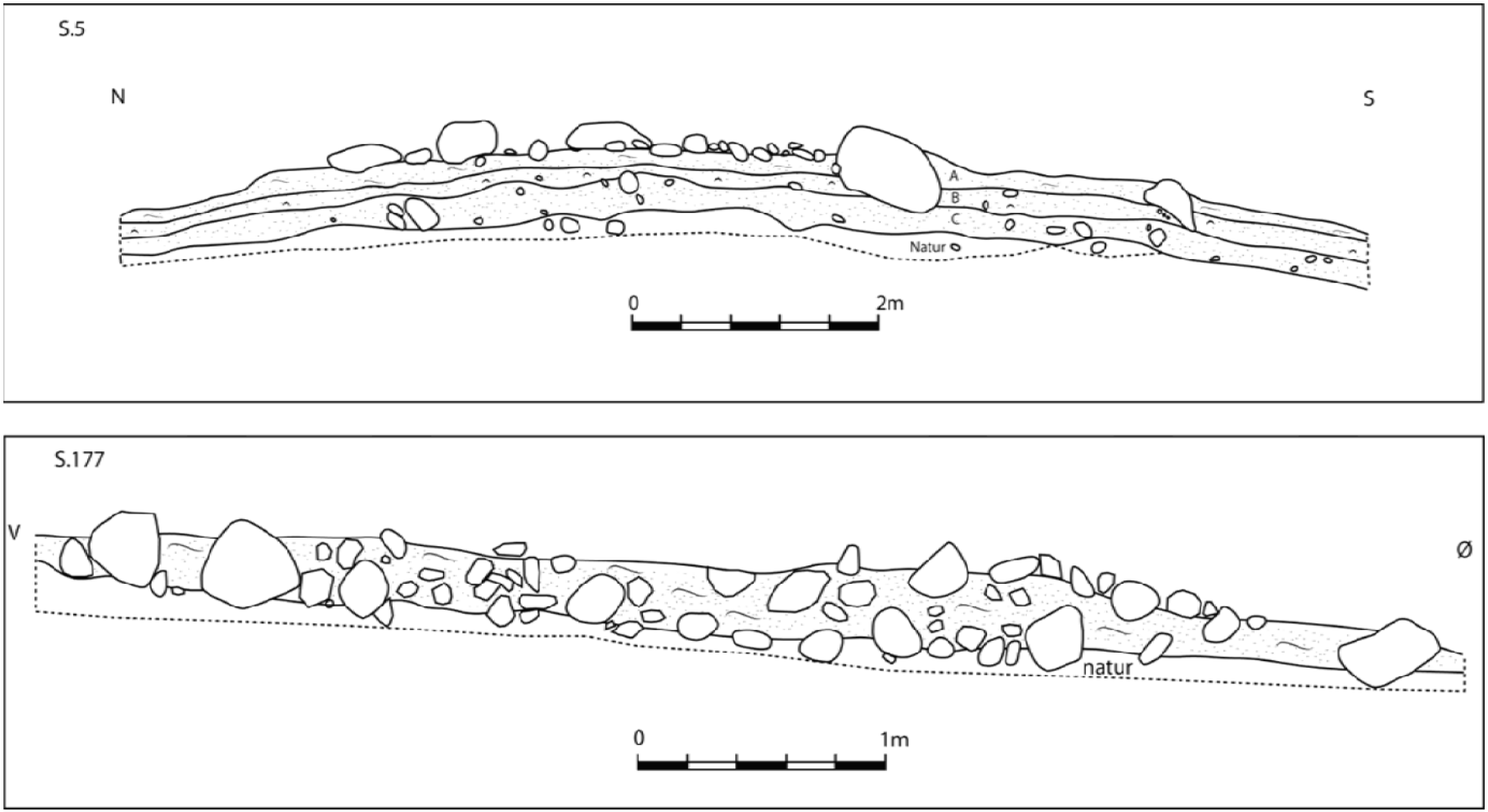
Cairn 182 was rectangular in plan and lay on the western boundary of area 2. It measured 5.3m x 4.6m, was 82cm in height and comprised stone (5 x 5 x 10cm to 60 x 75 x 75cm) mixed with dark brown humus and organic material. Two cairns (181 and 183) had a similar v-shaped plan and were situated towards the western boundary of area 2. Cairn 183 measured 7.26m x 3.68m and was 54cm in height. It contained stone ranging in dimension from 5 x 10 x 15 to 50cm x 70 x 75cm mixed with grey-brown sand clay layer containing charcoal flecks under which was a brown clay layer. Cairn 181 measured 8m x 6.6m and was 70cm

high. It comprised stone from 5 x 5 x 10cm to 75 x 90 x 100cm under which was a dark-brown clay silt layer and a brown silt clay layer. Cairns 181, 182 and 183 contained large boulders which would probably have required some form of machinery to remove them put them in a pile. This means that it is is likely that they are the result of modern stone clearance and not part of the earlier agricultural landscape.

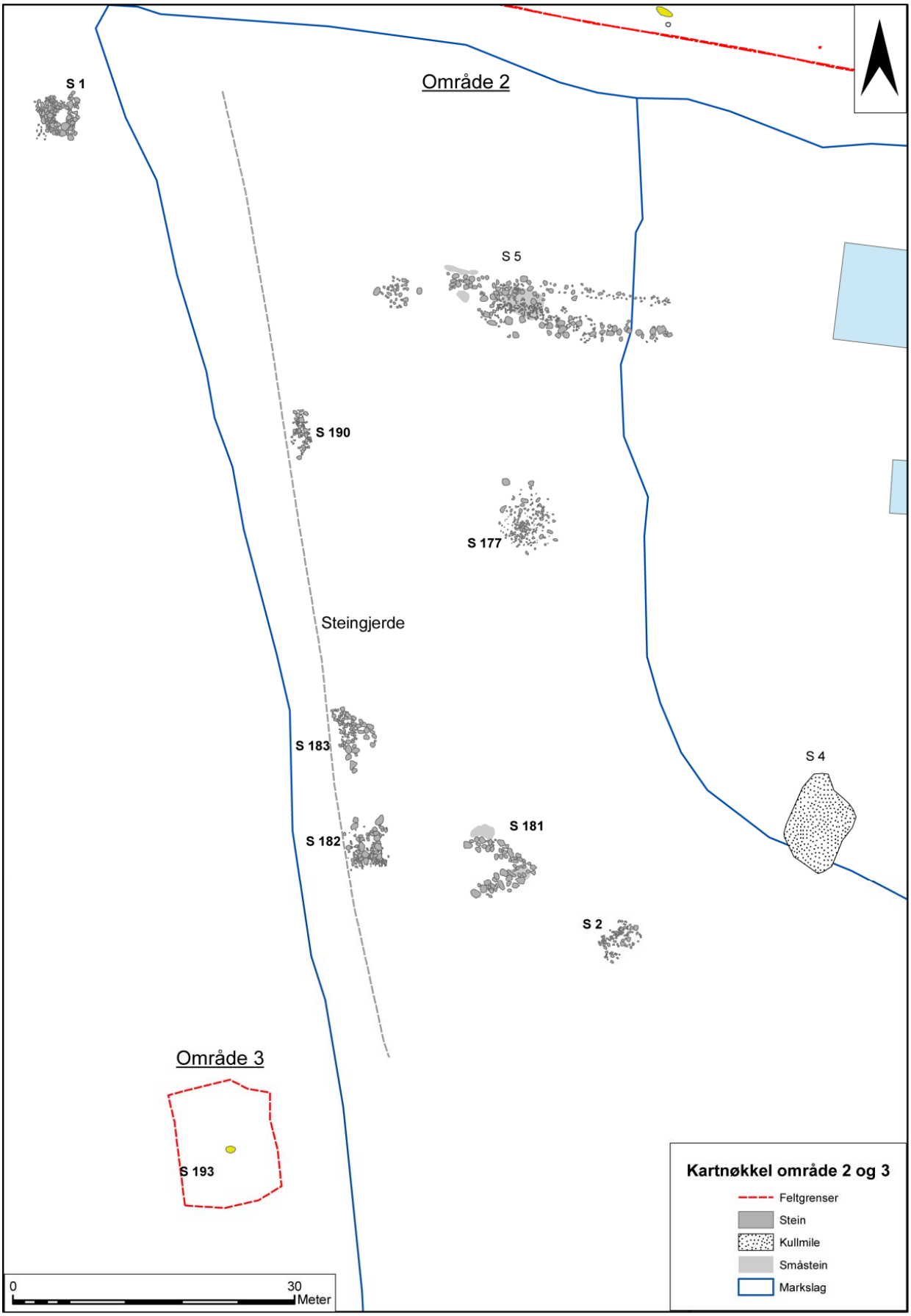
Boundary Wall

The base of a wall (S.190) formed the western boundary of area 2 and was oriented north-south. It was 193m in length and continued outside the development area towards the south. It ranged from 1 to 3 meters wide and was 193 meters in length. There were various openings in the wall some of which may represent access point however some may have occurred due to modern activity. A 6 meter section of wall was excavated at the northern end. This showed that only 32cm of the wall remained and that it sat directly upon a layer of dark brown clay and a layer of light-brown grey silt clay. The stones which comprised the wall ranged from 10 x 10 x 20cm to 45 x 55 x 60cm.

Base of stone wall S.190, facing north (Cf 34000_341)



Cross sections through S.5 (Droveway) and Clearance cairn 177



Area 2 and 3 Overview

Charcoal production area

A charcoal kiln (S.4) was observed to the east of area 2. The plan would originally have been circular however it was truncated by modern activity on its north and east extremities. A modern rubbish pit had also cut into the top of the kiln. The structure measured 9.5 x 8.5m and stood 1.22m in height. It comprised a thick layer of charcoal some of which were very large pieces. Under this was a layer of dark-brown sand silt containing charcoal flecks and a layer of burnt sand.

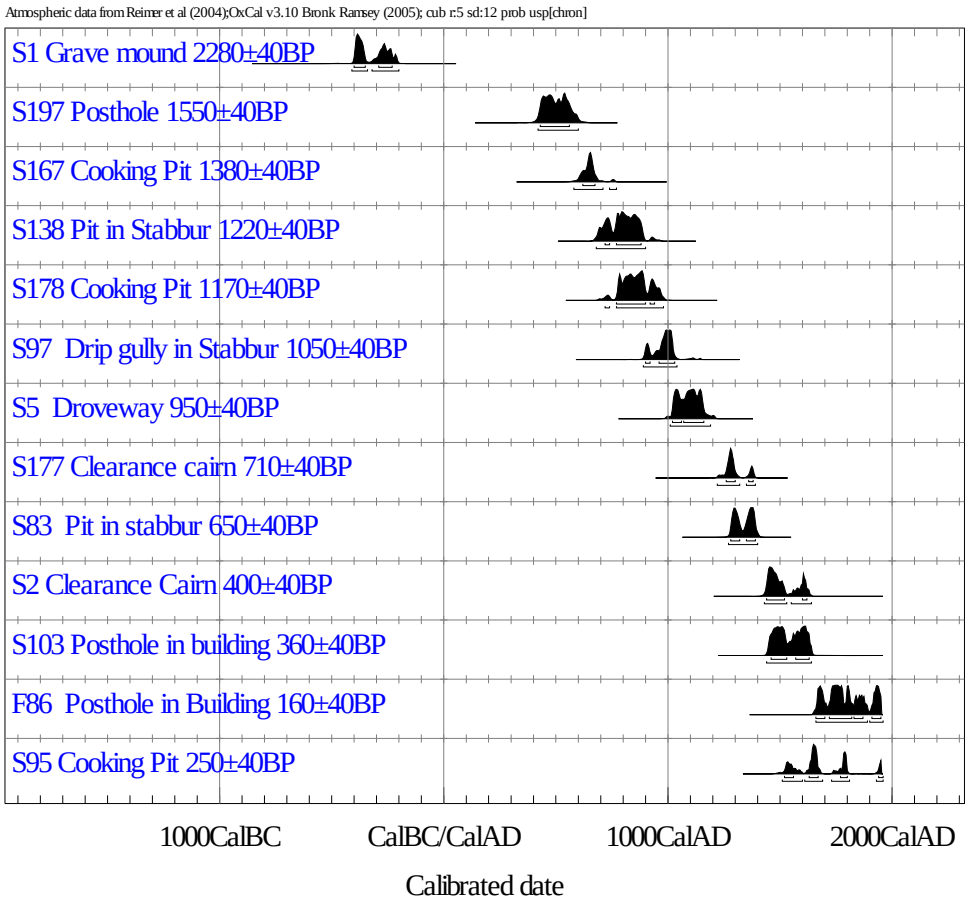
Area 3

Area 3 was situated near the south-west corner of area 2 and contained a pit which was found during the evaluation and was dated to between 1260 and 1320 AD. An area was stripped around the pit but no further archaeological activity was detected. This pit may relate to peripheral activity associated with the medieval farm.

Charcoal kiln, S.4, facing west (Cf34000_39)

5.5.3 DATING

Thirteen samples were sent to Beta Analytic Incorporated and the dates are shown below:



5.5.4 ANALYSIS

Fourteen samples were sent to Helge Høeg for species identification. See appendix for results. Thirteen charcoal samples were sent to Beta Analytic Inc. and the results are also contained in the appendix.

5.6 INTERPRETATION AND DISCUSSION

Pre-Roman Iron Age

The charcoal sample taken from layer A in burial mound (S.1), was dated to the pre-Roman Iron Age (BC 400-350 and 290-220). The dates compared well with the cemetery at Rød Søndre (Berg, 1995; 1997) and the structures found at the neighbouring farm of Randem (Petterson, 2008) which were dated to the Early Iron Age. Other farms such as Krom and Hvitsten also contain grave mounds dating to the Iron Age period.

The broken whetstone found in layer B may have been part of the grave goods originally buried in the mound. The absence of a grave could indicate that the mound has been severely damaged by plough, root and stone clearing. The concentration of burial monuments in the immediate vicinity (51 grave mounds or cairns) means that it is likely that structure 1 could have been part of a larger grave field which has now disappeared. It is possible that the ridge running north-south could have been the localising factor for the focus of the burial mounds. The graves at Randem are situated on the ridge to the south of Kleiver while the graves from Rød lie on the same ridge to the north. The ridge drops off towards the west and has an extensive overview of the surrounding area making it a desirable location for burial mounds.

Pre-Viking, Viking and Medieval Activity

It would appear from radiocarbon dates and from the surrounding archaeological finds and monuments that Kleiver has been exploited continuously throughout its history. Confirmation of this continuity is evident in the dating of the cooking pits which range in date from 640-760 AD (Cooking pit 167) to 780-1000 AD (S.178). Another possible cooking pit (95) was dated to between 1530 and 1950 AD and further demonstrates the continuity of land use. A posthole (S.197) which lay directly below cooking pit 167 produced a date range of 430 to 620 AD. This may suggest, albeit based on one dated structure, that the land was being utilized during the Migration period.

Two buildings in the south-east corner of area 1 indicate the presence of a farm during the medieval period. Building A was a post constructed building with a north-west facing entrance and Building B consisted of shallow cut pits which may have contained stone and formed the foundation for a stabbur.

Posthole 103 in building A was located near the entrance and contained a flat stone which could have been utilized as a sill upon which a door post was placed. This posthole was dated to between 1440 and 1630 AD. Further to the north-east on the same line of posts was posthole F86 which was dated to between 1660 and 1960 AD. The dispartity in dating could be attributed to the replacement of older rotting timbers and may reflect continual use of the building from the medieval through to the post-medieval period.

Building B lay to the north-west of building A and consisted of 6 pits and a possible drip gully and conformed to the plan of a stabbur which had 4 struts to the rear and two to the front with an eaves drip gully forming at the front of the structure. These pits may have contained stone onto which the struts of the stabbur rested. The stone may have been removed during ploughing and field clearance. Pit 138 formed the north-west corner and was dated to between 690 and 900 AD while pit 83 on the opposite corner was dated between 1260 and 1390 AD. The eaves drip gully was dated to between 970 and 1120 AD: As with building A the differences in dates could be due to renovation of the structure over a long time period or more likely due to pollution from earlier activity.

The dates obtained for both buildings give a wide date range which straddles the Viking and medieval periods. While the dating could be looked on as problematic it may also reflect the longevity of the farm at Kleiver. Placenames with a geographical origin such as Kleiver (steep hill or mountainside with a path) often have an ancient foundation and in this case Martinsen (1974) speculates that the name could have its origins in the Migration period. The farm itself was first mentioned in a document of ownership in 1302 thus indicating that it was well established by this time (*ibid*). It would seem likely then that the farm buildings could be of medieval origin with an earlier foundation possible.

The close proximity of the two buildings could indicate that they are part of the same farm. Building A could be a barn which was part of a series of farm buildings built around a central courtyard while building B could represent an outlying stabbur. The difference in dates however could indicate that the buildings are from different phases of the farm.

Forty-five meters to the south-east of the farm buildings lay a droveway. It was built on an outcrop of natural bedrock and the remaining section ran behind the modern farmhouse, perpendicular to Vestbyveien on an east-west orientation. A charcoal sample taken from the structure was dated from 1010 to 1170 AD. The function of a droveway is to control the movement of cattle from one part of the farm to the pasture land and back again. The droveway comprised 2 parallel walls positioned 5 meters apart. The structure terminated abruptly at the west end where it would have been likely that the walls would have flared out forming a funnel through which the cattle would have entered into the field. It is possible that this part of the droveway was damaged during field clearance; indeed a large clearance cairn comprising many tonnes of stone (21m x 5 m x 2.5m) covered the western end of the structure.

Under the modern stone cairn lay a wall (S.190) which ran perpendicular to the droveway for a distance of 193m. The wall formed a boundary between the forested area and farmland and possibly represented an older boundary which enclosed the pasture land. The droveway would have entered through a space in the wall probably located in the area of the modern cairn. Similar structures have been observed in Norway and have a long date date range from the Bronze Age to the Medieval Period. A droveway dated to the Roman Iron Age was found at Missingen (Bårdseth, 2007) while a droveway surveyed at Tangerud was similar in structure to that found at Vestby and also measured 5m in width (Lønaas, 2004). It is possible that the similarity in width may indicate an optimum distance for the safe and easy movement and control of cattle.

Further evidence for medieval and post-medieval agricultural activity was found in area 2 in the form of clearance cairns. These cairns can be ancient in date but can also indicate modern clearance. Their distribution can reflect field field boundaries while their position in the landscape may signify that the land was unfit for agricultural use.

All five cairns in area 2 were cut using a tracked excavator and were shown to be shallow in depth. They contained no evidence of burial or other ritual activity thus suggesting a purely agricultural function. Charcoal samples were taken

from cairn 177 which was dated to 1260-1310 and 1360-1380 AD and cairn 2 which was dated to 1430-1530 and 1560-1630 AD. These two cairns unlike 181, 182 and 183, lay under the modern surface and the charcoal was taken from earth between the tightly packed stones therefore these dates together with those from the droveway seem to indicate that this area was not used for agricultural purposes during the medieval period but was probably woodland. The presence of an undated charcoal kiln (S.4) nearby also seems indicates that the area was not utilised for farming in the post-medieval period.

6. CONCLUSION

Kleiver farm is set within a rich funerary landscape with grave mounds and cairns dating to the Bronze and Iron Age. The presence of a burial mound dated to between 400 and 220 BC confirms that Kleiver, like the nearby farm of Rød Søndre and Randem was an important area for burial in the Iron Age period. It is possible that it was part of a larger grave field which has vanished due to intensive farming of the land.

The presence of a posthole dating to the Migration period and a series of cooking pits from the Viking and later periods show continuity in land use and may suggest the area was exploited for ritualistic purposes rather than farming during the pre-medieval period.. No sign of settlement activity was found which dated to before the late Viking / Early Medieval period and settlement is likely to have been elsewhere possibly further to the east on the other side of Vestbyveien.

During the late Viking and early medieval period it would appear that a farm was established in the area. Two possible farm buildings, a stabbur and a barn, occupied the south-east corner of area 1. Two of the postholes in Building A dated to the late medieval and post-medieval period while Building B provided Viking and Medieval dates. It is likely that both these buildings relate to a medieval farmstead as there is other dated evidence of agricultural exploitation in the area at this time.

A droveway dated to the early medieval period runs from east to west just south of building A and two nearby clearance cairns provided medieval dates. The dwellings associated with the farm where not found. It is likely that these would have existed further to the east possibly close to the barn (building A) and near the droveway. The presence of a charcoal kiln and a pit dated to the post-medieval period shows that the area continued to thrive during this time.

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8. APPENDIX

8.1. STRUCTURE LIST

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-1	Rydningsrøys	Rund	JA	66		630	530	Buet	Flat	Røys var 1m høy og besto av stein (15-50cm i diameter) som lå på toppen av en gråbrun silt sand lag med noen stein og mye rotter (A) og lys gullbrun sand med noen små steiner (B). De fleste steinene lå oppe på haugen, men noen var delvis dekket av jordmassene. I midten av haugen vokste en stor bjørk. Det så på gravhaug ut men ingen grav ble funnet men en ødelagt brynstein var fant inne.
S-2	Rydningsrøys	Rektangulær	JA	35	0	522	338	Rette	Flat	Kvadratisk rydninsgrøys lagt av stein (10-50cm i diameter). Steinene lå på toppen av grå brun leire som var kanskje et gammelt dyrkningslag.
S-3	Avskrevet		NEI	0	0	0	0			
S-4	Kullmile	Rund	JA	122	0	950	850	Buet	Flat	Kullmile snittet av gravemaskin. Den har flere moderne forstyrrelser, en grøft og to avfallsgroper. Laget på topp av kullmile besto av brun sand silt med 90% kull og store kullbiter. Under dette var mørk brun sand silt med mye store kullbiter og et lag av rødbrent leire sand.
S-5	Geil	lineær	JA	20	0	1900	400	Rette	Flat	En stein lagt vei eller geil med små steiner i størrelse fra 10 til 20cm i diameter som ligger langs nord kanten og kan være en vegg fundament. Større steiner (fra 50-100cm) lå på sørsiden og kanskje relatert til steinrydning. Under steinen lå brungrå leire sand (A), mørk oransjebrun silt sand med noen små steiner (B) og mørk oransje sand(C).

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-6	Grop / nedgravning	Oval	JA	8	0	36	36	Buet	Flat	Brent oransje silt leire med stein biter.
S-7	Staur	Oval	JA	8		29	23			En staur fylte med brungrå leire og noen kullbiter
S-8	Kullspredt	Ujevn	JA	20	0	46	46	Skrå	Rund	Kompakt gråoransje sand leire kullspredt som lå under struktur 1.
S-9	Stolpehull	Ujevn	NEI	0	0	43	43			Løs gråbrun sand silt med noen kullbiter
S-10	Grop / nedgravning	Oval	JA	15	0	193	76	Skrå	Ujevn	gråbrun sand silt med rotter
S-11	Avskrevet		NEI	0	0	0	0			
S-12	Stolpehull	Oval	NEI	0	0	46	41			Lys gråbrun silt leire med små rund steiner
S-13	Stolpehull	Oval	NEI	0	0	37	31			Mørk gulgrå silt leire med noen kullflekker
S-14	Stolpehull	Oval	NEI	0	0	14	14			Lys gråbrun silt leire
S-15	Stolpehull	Oval	NEI	0	0	15	15			Lys gråbrun silt leire
S-16	Stolpehull	Oval	NEI	0	0	36	20			Lys gråbrun humus og få kullflekker
S-17	Stolpehull	Oval	NEI	0	0	49	38			Lys gråbrun humus og få kullflekker
S-18	Stolpehull	Oval	NEI	0	0	42	19			Lys grå silt
S-19	Avskrevet		NEI	0	0	0	0			
S-20	Avskrevet		NEI	0	0	0	0			
S-21	Stolpehull	Oval	NEI	0	0	72	41			Veldig myk leire silt med noen små steiner
S-22	Staur	Rund	JA	6	0	17	17	Skrå	Rund	Staur fylt med mørk brun silt.
S-23	Stolpehull	Oval	NEI	0	0	45	28			Gråbrun silt leire med få runde steiner
S-24	Stolpehull	Oval	JA	10	0	12	8	Ujevn	Flat	Mørk gråbrun leire sand blandet med rødbrun sand leire med noen kullflekker
S-25	Stolpehull	Oval	NEI	0	0	15	7			Gråbrun leire silt
S-26	Stolpehull	Oval	NEI	0	0	111	105			mørk grå fin silt, ganske ren
S-27	Stolpehull	Oval	NEI	0	0	17	12			Lys grågull silt leire
S-28	Stolpehull	Rund	NEI	0	0	76	59			Lys gråbrun silt leire med få kullflekker
S-29	Stolpehull	Rund	NEI	0	0	33	27			Lys gråbrun silt sand leire med få kullflekker
S-30	Stolpehull	Rund	NEI	0	0	33	22			Lys gråbrun silt sand leire med noen kullflekker
S-31	Avskrevet		NEI	0	0	0	0			

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-32	Stolpehull	Oval	NEI	0	0	39	35			Lys gråbrun silt leire med noen kullflekker
S-33	Stolpehull	Oval	NEI	0	0	58	39			Lys gråbrun silt leire med noen kullflekker
S-34	Stolpehull	Rund	NEI	0	0	32	32			kompakt gråbrun sand leire og rund steiner
S-35	Stolpehull	Rund	JA	10	0	45	34	Skrå	Rund	Brun silt leire. Brynestein funnet i overflate.
S-36	Stolpehull	Rund	NEI	0	0	30	23			Lys gråbrun silt leire med noen kullflekker
S-37	Stolpehull	Rund	NEI	0	0	38	22			Grå leire, veldig løs
S-38	Stolpehull	Rund	NEI	0	0	39	34			gråbrun silt leire med noen kullflekker
S-39	Stolpehull	Rund	NEI	0	0	37	44			gråbrun silt leire med noen kullflekker
S-40	Stolpehull	Rund	NEI	0	0	57	38			Mørk grå fine silt leire med noen kullbiter
S-41	Avskrevet		NEI	0	0	0	0			
S-42	Avskrevet		NEI	0	0	0	0			
S-43	Avskrevet		NEI	0	0	0	0			Gråbrun silt leire med noen kullflekker
S-44	Stolpehull	Rund	NEI	0	0	36	30			Lys gråbrun leire silt med noen rund steiner
S-45	Stolpehull	Rund	NEI	0	0	40	28			Lys gråbrun silt leire med noen kullflekker
S-46	Stolpehull	Rund	NEI	0	0	53	19			Gråbrun silt leire med noen kullflekker
S-47	Stolpehull	Rund	NEI	0	0	48	30			Lys gråbrun silt leire med noen kullflekker
S-48	Stolpehull	Rund	NEI	0	0	33	24			Mørk grå silt leire med skjørbrent steiner og kullflekker
S-49	Stolpehull	Rund	NEI	0	0	34	29			Lys gråbrun silt leire med noen små steiner
S-50	Stolpehull	Rund	NEI	0	0	33	25			Gullbrun blandet leire og humus
S-51	Stolpehull	Rund	NEI		0	33	25			Gullbrun blandet leire og humus
S-52	Stolpehull	Rund	NEI	0	0	67	57			Mørk grå brun leire silt med små runde steiner og kullbiter
S-53	Avskrevet		NEI	0	0	0	0			
S-54	Avskrevet		NEI	0	0	0	0			
S-55	Stolpehull	Oval	NEI	0	0	67	43			Gråbrun silt leire
S-56	Stolpehull	Oval	NEI	0	0	200	104			Gråbrun silt leire med noen kullbiter
S-57	Avskrevet		NEI	0	0	0	0			
S-58	Stolpehull	Oval	NEI	0	0	29	13			Mørk gråbrun silt leire med kullbiter
S-59	Stolpehull	Oval	NEI	0	0	27	26			Gråbrun silt leire med små runde steiner

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-60	Grop / nedgravning	Oval	NEI	0	0	186	96			Lys grå leire silt med noen små og medium runde steiner
S-61	Avskrevet		NEI	0	0	0	0			
S-62	Avskrevet		NEI	0	0	0	0			
S-63	Stolpehull	Oval	NEI	0	0	25	19			Lys gråbrun silt leire
S-64	Stolpehull	Oval	NEI	0	0	26	20			Lys gråbrun silt leire
S-65	Stolpehull	Oval	NEI	0	0	24	16			Gråbrun silt leire med små runde steiner
S-66	Avskrevet		NEI	0	0	0	0			
S-67	Steinspredt	Kvadratisk	NEI	0	0	1723	1117			Steinspredt kanskje en gjerde overflate. Steinene er sortert (10 x 10 x 8cm)
S-68	Avskrevet		NEI	0	0	0	0			
S-69	Stolpehull	Oval	NEI	0	0	30	22			Gråbrun silt leire med noen kullbiter
S-70	Stolpehull	Oval	NEI	0	0	35	22			Gråbrun silt leire med noen kullbiter
S-71	Stolpehull	Oval	NEI	0	0	154	49			Gråbrun silt leire med noen kullbiter
S-72	Stolpehull	Oval	NEI	0	0	25	22			Gråbrun silt leire
S-73	Stolpehull	Oval	NEI	0	0	100	49			Mørk gråbrun silt leire med få kullbiter
S-74	Kokegrop	Oval	NEI	0	0	99	82			Mørk grå silt med få kullbiter.
S-75	Grop / nedgravning	Oval	NEI	0	0	33	20			Lys brungrå silt leire med runde steiner
S-76	Stolpehull	Oval	NEI	0	0	27	21			Mørk grå silt leire med grus
S-77	Stolpehull	Oval	NEI	0	0	31	8			Mørk grå silt leire med grus
S-78	Avskrevet		NEI	0	0	0	0			
S-79	Ildsted	Oval	NEI	0	0	25	25			mørk grå silt leire med grus
S-80	Stolpehull	Rund	NEI	0	0	40	27			Lys grå kompakt leire
S-81	Stolpehull	Oval	NEI	0	0	43	31			Lys grå silt leire med noen små runde steiner
S-82	Stolpehull	Oval	NEI	0	0	44	36			Lys grå silt leire med noen små runde steiner
S-83	Grop	Oval	JA	13	0	70	53	Skrå	Rund	Mørk brun leire silt med noen små steiner og rot. Syllstein grop (uten stein)- stabbur
S-84	Grop	Oval	JA	7	0	60	50	Skrå	Rund	Mørk brun leire silt med noen små steiner. Syllstein grop (uten stein)- stabbur

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-85	Stolpehull	Oval	JA	25	0	157	115	Skrå	Rund	Homogent rød brent sand lag som ligger over en blanding av brun leire, lysbrun sand og konsentrasjoner av kullstøv
S-86	Grop / nedgravning	Oval	NEI	0	0	71	71			gråbrun leire sand blandet med gull sand og grus
S-87	Grop / nedgravning	Oval	NEI	0	0	56	34			brungrå grov sand leire med kullbiter og små rund steiner
S-88	Grop / nedgravning	Oval	NEI	0	0	33	28			gråbrun sand leire med noen kullbiter
S-89	Kokegrop	Oval	JA	19	0	200	110	Skrå	Rund	Brun leire med kullstøv, kullbiter noen steiner 5-15cm-noen skjørbrent
S-90	Stolpehull	Oval	NEI	0	0	64	40			Mørk grå silt med runde steiner blandet med rødbrun silt
S-91	Ildsted	Oval	NEI	0	0	96	51			Mørk grå silt med runde steiner blandet med rødbrun silt
S-92	Avskrevet		NEI	0	0	0	0			
S-93	Ildsted	Ujevn	JA	18	0	182	86	Ujevn	Ujevn	Mørk grå leire fast kompakthet. Under dette er mørk brungrå sand leire, gråbrun leire sand med små steiner, mørk brungrå sand leire med trekull og lys oransjegrå leire sand.
S-94	Grop / nedgravning	Ujevn	JA	22	0	124	70	Skrå	Rund	Mørk grå silt med noen små runde steiner og større stein (0,18 x 0,12 x 0,10) blandet med rødbrun silt.
S-95	Ildsted	Ujevn	JA	14	0	160	80	Ujevn	Ujevn	mørk grå silt med runde steiner blandet med rødbrun silt.
S-96	Grop	Oval	JA	15	0	74	55	Skrå	Rund	Mørk brun kompakt leire sand (a) som ligger over mørk brungrå leire sand med noen små steiner (b). Syllstein grop (uten stein)- stabbur
S-97	Grop	Ujevn	JA	15	0	150	100	Buet	Rund	Mørk grå sand med kull blandet med lysere grå grus og sand. Avrensningsflekk- stabbur
S-98	Grop	Oval	JA	7	0	82	92	Ujevn	Ujevn	Mørk brun silt sand med små steiner blandet med oransje silt leire og brun silt sand. Syllstein grop (uten stein)- stabbur.
S-99	Stolpehull	Oval	NEI	0	0	204	70			mørk grå silt med 80% kullbiter og flekker

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-100	Stolpehull	Oval	NEI	0	0	67	46			gråbrun leire silt med få små runde steiner
S-101	Stolpehull	Oval	NEI	0	0	46	34			lys gråbrun silt med kullflekker
S-102	Stolpehull	Oval	NEI	0	0	34	17			lys gråbrun silt med kullflekker
S-103	Stolpehull	Oval	JA	10	0	49	39	Rette	Flat	Mørk brungrå sand
S-104	Stolpehull	Oval	NEI	0	0	29	28			mørk gråbrun silt leire med få kullflekker
S-105	Stolpehull	Oval	NEI	0	0	24	19			mørk gråbrun silt leire med få kullflekker
S-106	Grop / nedgravning	Oval	NEI	0	0	75	50			mørk grå leire silt med kullflekker (omtrent 25% av fyll) og noen små runde steiner
S-107	Stolpehull	Oval	NEI	0	0	183	51			gråbrun grov sand silt med noen steiner biter
S-108	Stolpehull	Oval	NEI	0	0	55	52			mørk gråbrun grov sand silt med få små runde steiner
S-109	Stolpehull	Oval	NEI	0	0	63	53			gråbrun leire silt
S-110	Grop / nedgravning	Oval	NEI	0	0	82	33			mørk grå silt med 30% kullbiter og noen små runde steiner
S-111	Grop / nedgravning	Oval	JA	6	0	70	62	Skrå	Flat	Mørk grå silt sand med noen brent stein og kullflekker
S-112	Stolpehull	Oval	NEI	0	0	97	74			Grå leire. Kanskje bare natur vasstrukken leire
S-113	Stolpehull	Oval	NEI	0	0	102	65			Grå leire. Kanskje bare natur vasstrukken leire
S-114	Staur	Oval	NEI	0	0	23	16			Grå leire. Kanskje bare natur vasstrukken leire eller en staur
S-115	Avskrevet		NEI	0	0	0	0			
S-116	Avskrevet		NEI	0	0	0	0			
S-117	Avskrevet		NEI	0	0	0	0			
S-118	Kokegrop	Oval	JA	11	0	214	100	Skrå	Flat	Mørk brun grå silt leire med mye kullbiter og skjobrent stein som ligger over mørk gråbrun silt leire også med stein.
S-119	Avskrevet		NEI	0	0	0	0			
S-120	Avskrevet		NEI	0	0	0	0			
S-121	Stolpehull	Oval	NEI	0	0	29	25			lys gråbrun silt leire med få kullflekker
S-122	Stolpehull	Oval	NEI	0	0	47	28			mørk brungrå leire silt med få kullflekker og små til medium runde steiner

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-123	Avskrevet		NEI	0	0	0	0			
S-124	Avskrevet		NEI	0	0	0	0			
S-125	Avskrevet		NEI	0	0	0	0			
S-126	Avskrevet		NEI	0	0	0	0			
S-127	Avskrevet		NEI	0	0	0	0			
S-128	Avskrevet		NEI	0	0	0	0			
S-129	Avskrevet		NEI	0	0	0	0			
S-130	Avskrevet		NEI	0	0	0	0			
S-131	Avskrevet		NEI	0	0	0	0			
S-132	Avskrevet		NEI	0	0	0	0			
S-133	Stolpehull	Oval	NEI	0	0	58	30			lys brun leire silt med kullflekker
S-134	Staur	Oval	NEI	0	0	12	8			Lys gulgrå leire silt med få små steiner.
S-135	Staur	Oval	NEI	0	0	12	8			staur med gråbrun silt leire
S-136	Avskrevet		NEI	0	0	0	0			
S-137	Avskrevet		NEI	0	0	0	0			
S-138	Grop / nedgravning	Ujevn	JA	20	0	220	90	Skrå	Ujevn	Løs mørk brun leire silt med små steiner som ligger over løs mørk brun leire sand. Kanskje et stabbursetting
S-139	Stolpehull	Oval	NEI	0	0	63	27			gråbrun silt leire med noen ubrent steiner
S-140	Staur	Oval	NEI	0	0	43	38			Staur fylte med kompakt blågrå leire
S-141	Grop / nedgravning	Oval	JA	21	0	140	72	Skrå	Ujevn	Brungrå leire sand med noen trekull som ligger over en blandet av brungrå leire sand og grus
S-142	Staur	Oval	NEI	0	0	34	20			Staur fylte med grå leire
S-143	Avskrevet		NEI	0	0	0	0			
S-144	Avskrevet		NEI	0	0	0	0			
S-145	Avskrevet		NEI	0	0	0	0			
S-146	Avskrevet		NEI	0	0	0	0			
S-147	Avskrevet		NEI	0	0	0	0			
S-148	Avskrevet		NEI	0	0	0	0			
S-149	Staur	Oval	NEI	0	0	16	12			Lys gråbrun leire silt

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-150	Kokegrop	Rund	NEI	0	0	100	100			Mørk brungrå leire silt med noen kullbiter, grus og noen skjøbrent stein
S-151	Grop / nedgravning	Oval	NEI	0	0	54	45			Lys gråbrun leire silt med få kullflekker. Er lik 131
S-152	Avskrevet		NEI	0	0	0	0			
S-153	Kokegrop	Oval	JA	8	0	230	70	Skrå	Ujevn	Mørk grå silt leire med noen skjøbrent steiner og en bit lite kullbiter. Kanskje bunn av kokegrop
S-154	Avskrevet		NEI	0	0	0	0			
S-155	Grop / nedgravning	Oval	JA	12	0	250	50	Ujevn	Ujevn	Grå silt leire med noen steiner som ligger over grå silt leire med noen stein og kullflekker.
S-156	Grop / nedgravning	Oval	NEI	0	0	173	67			Mørk brungrå leire silt med noen kullbiter og grus.
S-157	Avskrevet		NEI	0	0	0	0			
S-158	Stolpehull	Rund	JA	9	60	60	60	Skrå	Rund	Mørk grå silt leire med noen små steiner
S-159	Avskrevet		NEI	0	0	0	0			
S-160	Avskrevet		NEI	0	0	0	0			
S-161	Grop / nedgravning	Oval	NEI	0	0	84	66			Mørk grå silt leire med noen kullflekker
S-162	Avskrevet		NEI	0	0	0	0			
S-163	Avskrevet		NEI	0	0	0	0			
S-164	Avskrevet		NEI	0	0	0	0			
S-165	Kokegrop	Oval	NEI	0	0	264	109			grå silt med medium runde skjøbrent steiner og få kullflekker
S-166	Avskrevet		NEI	0	0	0	0			
S-167	Kokegrop	Rund	JA	15	0	150	150	Skrå	Ujevn	Gråbrun leire, mye kullstøv og kullbiter, noen små steiner, ikke skjøbrent så kanskje et ilsted?
S-168	Staur	Oval	NEI	0	0	20	19			lys grå silt leire blandet med gulloransje natur leire
S-169	Avskrevet		NEI	0	0	0	0			
S-170	Grop / nedgravning	Oval	JA	12	0	86	80			Mørk grå silt blandet med rød brent sand, noen små steiner og kullflekker.
S-171	Grop / nedgravning	Oval	NEI	0	0	89	77			Mørk grå silt med mange kullbiter og 2 steiner (12 x 10 x 10cm)

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-172	Grop / nedgravning	Oval	NEI	0	0	156	80			mørk gråbrun leire silt med noen kull og leireflekker og små steiner
S-173	Avskrevet		NEI	0	0	0	0			
S-174	Grop / nedgravning	Oval	JA	19	0	200	86	Rette	Flat	Mørk brungrå sand leire med stein
S-175	Stolpehull	Oval	NEI	0	0	44	32			mørk gråbrun silt med få små runde steiner
S-176	Kokegrop	Oval	NEI	0	0	100	88			Mørk grå silt leire med grus og skjøbrent stein
S-177	Rydningsrøys	Rund	JA	42	0	720	480	Ujevn	Flat	Steinsamlingen er omgitt av brungrå sand leire. Laget er en lite kompakt og meget homogent i hele området. Steinene varierer i størrelse fra 5 til 60cm.
S-178	Grop / nedgravning	Oval	JA	22	168	168	168	Skrå	Ujevn	Mørk grå silt sand med noen små steiner
S-179	Stolpehull	Rund	NEI	0	0	47	38			mørk gråbrun silt leire med runde steiner
S-180	Avskrevet		NEI	0	0	0	0			
S-181	Rydningsrøys	Rund	NEI	0	0	0	0			Same som 184
S-182	Rydningsrøys	Ujevn	JA	0	0	530	460	Buet	Flat	Røyset besto av stein som varierer i størrelse fra 5 til 75 cm i diameter. Større steinene lå midt på haug mens små steiner lå på kanten av haugen. Steinene lå på en mørk brun skogsjørd med mye organisk materiale og brun silt leire.
S-183	Rydningsrøys	V-shaped	JA	54	0	726	368	Rette	Flat	V-form rydningsrøys som besto av stein i størrelse fra 5-75cm. Steinene sitter på gråbrun sand leire med mye organiske materiale inne og noen kullbiter, kanskje skogsjord. Under dette er et brunt leire lag.
S-184	Rydningsrøys	tV-shaped	JA	70	0	800	660	Ujevn	Flat	V-form rydningsrøys med stein i størrelse fra 5cm til 100cm i diameter. Steinene lå på mørk brun leire silt og kompakt brun silt leire lag.

Struktur-nummer	Struktur	Form i Flate	Snittet	Dybde i profil	Diameter	Lengde	Bredde	Sider i profil	Bunn i profil	Beskrivelse
S-185	Kokegrop	Rund	JA	14	0	210	153	Skrå	Flat	Mørk grå silt med 50-60% kullflekker og biter blandet med brun leire. Noen ubrent og skjørbrent steiner.
S-186	Stolpehull	Oval	NEI	0	0	65	49			mørk gråbrun leire silt blandet med lys grågul leireflekker
S-187	Avskrevet		NEI	0	0	0	0			
S-188	Staur	Oval	NEI	0	0	42	36			Lys grå kompakt leire
S-189	Avskrevet		NEI	0	0	0	0			
S-190	Steingjerde	Lineær	JA	32	0	580	300	Rette	Flat	Steingjerde, med stein på størrelse 10-60cm som lå på mørk brun leire silt med mange steiner og lys brungrå silt leire. Steinene lå ikke spesielt tettpakket uten ganske spredd. Steingjerde forsetter i sør og i nord stopper den. Bare 5,80m del av gjerdet var tegnet.
S-191	Avskrevet		NEI	0	0	0	0			
S-192	Avskrevet	Oval	NEI	0	0	0	0			Del av geilen
S-193	Grop / nedgravning	Oval	JA	18	0	130	80	Skrå	Ujevn	Mørk grå leire med små steiner, brent leire og kullflekker.
S-194	Staur	Oval	NEI	0	0	10	8			Staur-gråbrun silt leire
S-195	Stolpehull	Oval	NEI	0	28	28	0			Staur-gråbrun silt leire
S-196	Stolpehull	Oval	NEI	0	0	28	28			Veldig fin og kompakt gråbrun leire med noen kullbiter. Under dette ligger en brungrå leire lag med noen kullbiter
S-197	Stolpehull	Rund	JA	20	0	30	30	Buet	Rund	Brun veldig fin og kompakt leire med noen kullbiter som ligger over brungrå leire med kullbiter og skoningsstein.
S-198	Stolpehull	Ujevn	JA	6	0	53	33	Skrå	Flat	Kompakt mørk brun leire. Syllstein grop (uten stein)-stabbur

8.2. FINDS AND SAMPLES

C56765/1-69

Dyrkningsspor/Boplassfunn fra **middelalder** fra KLEIVER (7 /1), VESTBY K., AKERSHUS.

En ny Bauhausfabrikk med parkering skal bygges på Kleiver gård av Multi Vision Eindom Vestby AS. Akershus fylkeskommunne registrerte området i tidsrommet17.09 og 01.11.2007. De fant 27 stolpehull, 43 kokegroper, 2 ilsteder, 1 kullag, 15 groper, 3 mulige gravminner, 3 steingjerder og 3 rydningsrøyser (R-111779). To groper F14 og F85 bledatert til 1460-1660 e.Kr. og 1260-1320 e.Kr. En kokegrop ble datert til 840-780 f.Kr (R112722). Fire rydningsrøyser ble også registert på lokaliteten (R-nummer: K112165 og K112166). KHM gjennomførte en utgravning 11.08 til 12.09.08 og det ble funnet 1 mulig grav eller rydningsrøys, 6 rydningsrøys, 1 geil/vei, 1 steinggjerde, 1 kullmile, 23 groper, 92 stolpehull/staur, 9 mulig ilsteder og 8 kokegroper.

Prøvene ble vedartbastemt av Helge I. Høeg og datert ved Beta (i Derrick 2009)

1) **bryne** av stein *Antall fragmenter:* 2
To fragmenter av en halv del brynestein som var funnet i S.1 en rydningsrøys eller grav. Måles er for komplet gjenstander.
Mål: L: 5,5 cm. *B:* 3,5 cm. *T:* 0,8 cm.
Strukturnr: 1 Rydningsrøys eller gravhaug. Funn iblant massene under stein.
2) **bryne** av stein
En brukte fragment av en håndbryne lagt av skifer. Hoved mineraler er glimmer og kvarts
Mål: L: 9,7 cm. *B:* 2,6 cm. *T:* 0,8 cm.
Strukturnr: 35 Det lå på overflate av en stolpehull.
3) **slagg**
Fra F39 grop. Fra registrering.

Kullprøver

4) Fra S.95 Kokegrop. Vekt: 1,3g. Prøven er vedartsbestemt av Helge I. Høeg til pinus og betula. Prøven er radiologisk datert til 240+/-40 BP, 1530-1560,1630-1680 ,1740-1800 og 1940-1950 AD (Beta-250018). Kullprøve fra makroprøve 24- 2 poser- pinus: 0,8g og diverse: 0,5g.
5) Fra S.1 gravhaug. Vekt: 0,3g. Prøven er vedartsbestemt av Helge I. Høeg til betula. Prøven er radiologisk datert til 2290+/-40 BP, 400-350 og 290-220 BC (Beta-250024). Kullprøve fra Makro 1- 2 poser - betula: 0,2g og diverse: 0,1g.
6) Fra S.178 grop. Vekt: 0,2g. Prøven er vedartsbestemt av Helge I. Høeg til betula. Prøven er radiologisk datert til 1130+/-40 BP, 780-1000 AD (Beta-250020). Kullprøve fra Makro 14, en pose - diverse: 0,2g. Kullprøven var brukte ved datering-ikke i arkiven .
7) Fra S.167 kokegrop. Vekt: 1,7g. Prøven er vedartsbestemt av Helge I. Høeg til quercus, corylus, betula og pinus. Prøven er radiologisk datert til 1350+/-40 BP, 640-710 og 750-760 AD (Beta-250025). Kullprøve fra makroprøve 20 - tre poser - betula og corylus: 1,2g, pinus og quercus: 0,2g og diverse: 0,3g.
8) Fra S.197 Stolpehull. Vekt: 0,7g. Prøven er vedartsbestemt av Helge I. Høeg til pinus, betula og corylus. Prøven er radiologisk datert til 1520+/-40 BP, 430-620 AD (Beta-250022).Kullprøve fra makroprøve 21- Tre poser - pinus: 0,1g, betula og corylus: 0,4g og diverse: 0,2g.
9) Fra S.138 Stolpehull. Vekt: 0,6g. Prøven er vedartsbestemt av Helge I. Høeg til

betula og corylus. Prøven er radiologisk datert til 1210+/-40 BP, 690-900 AD (Beta-250018). Kullprøve fra makroprøve 24- To poser - betula og corylus: 0,1g og diverse: 0,5g.
10) Fra S.83 Stolpehull. Vekt: 0,5g. Prøven er vedartsbestemt av Helge I. Høeg til pinus og betula. Prøven er radiologisk datert til 700+/-40 BP, 1260-1310 og 1360-1390 AD (Beta-250028). Kullprøve fra makroprøve 28. Tre poser- pinus: 0,3g, betula: 0,1g, diverse: 0,1g.
11) Fra S.177 Rydningsrøys. Vekt: <0,1g. Prøven er vedartsbestemt av Helge I. Høeg til quercus og pinus. Prøven er radiologisk datert til 710+/-40 BP, 1260-1310 og 1360-1380 AD (Beta-250023). Kullprøve fra makroprøve 34. En pose- quercus: < 0,1g.
12) Fra S.5 Geil eller vei. *Vekt:* 0,4g. Prøven er vedartsbestemt av Helge I. Høeg til quercus, betula og pinus. Prøven er radiologisk datert til 950+/-40 BP, 1010-1170 AD (Beta-250021). Kullprøve fra makroprøve 44. To poser- pinus: 0,2g og quercus: 0,2g.
13) Fra S.2 rydningrøys. *Vekt:* 0,6g. Prøven er vedartsbestemt av Helge I. Høeg til pinus, betula og corylus. Prøven er radiologisk datert til 400+/-40 BP, 1430-1530 og 1560-1630 AD (Beta-250019). Kullprøve fra makroprøve 34. To poser - pinus: 0,2g og diverse: 0,4g.
14) Fra S.97 Grøft. *Vekt:* 1,1g. Prøven er vedartsbestemt av Helge I. Høeg til betula, corylus, salix og populus. Prøven er radiologisk datert til 1020+/-40 BP, 970-1040 og 1100-1120 AD (Beta-250026).Kullprøve fra makroprøve 30. En pose - betula, corylus, salix/populus: 1,1g.
15) Fra F50 stolpehull. *Vekt:* 1,0g. Kullprøve fra registrering. En pose- diverse art: 1g
16) Fra F42 Stolpehull. *Vekt:* 0,1g. Kullprøve fra registrering- En pose- diverse art: 0,1g.
17) Fra S.185 Kokegrop. *Vekt:* 0,4g. Prøven er vedartsbestemt av Helge I. Høeg til betula og quercus. Kullprøve fra makroprøve 42. Tre poser- betula: 0,1g, quercus: 0,1g og diverse: 0,2g. Ikke sendt til datering.
18) Fra F43 Kokegrop. *Vekt:* 12g. Kullprøve fra registrering. En pose- diverse art: 12g.
19) Fra S.84 Grop. *Vekt:* 0,1g. Kullprøve fra makroprøve 29. Ikke sendt til datering.
20) Fra S.89 Kokegrop. *Vekt:* 0,2g. Kullprøve fra makroprøve 23. Ikke sendt til datering.
21) Fra S.111 stolpehull. *Vekt:* 0,4g. Kullprøve fra makroprøve 25. Ikke sendt til datering.
22) Fra S.183 rydningsrøys. *Vekt:* 0,2g. Kullprøve fra makroprøve 37. Ikke sendt til datering.
23) Fra S.4 Kullmile. *Vekt:* 4,5g. Kullprøve fra makroprøve 41. Ikke sendt til datering.
24) Fra S.103 Stolpehull. *Vekt:* 0,2g. Prøven er vedartsbestemt av Helge I. Høeg til pinus. Prøven er radiologisk datert til 390 +/- 40 BP, 1440-1540 og 1540-1630 AD (Beta-253958). Kullprøve fra makroprøve 22.
25) Fra S.10 Grop.*Vekt:* 2,3g. Kullprøve fra makroprøve 2. Ikke sendt til datering.
26) Fra S.98 stolpehull. *Vekt:* 0,4g. Kullprøve fra makroprøve 32. Ikke sendt til datering.
27) Fra S.153 Stolpehull. *Vekt:* 0,4g. Kullprøve fra makroprøve 13. Ikke sendt til datering.
28) Fra F86 Stolpehull. *Vekt:* 1,0g. Prøven er vedartsbestemt av Helge I. Høeg til betula og pinus. Prøven er radiologisk datert til 390 +/- 40 BP, 1660-1960 AD (Beta-253957) Prøve fra registrering.
29) Fra F.1 Stolpehull. *Vekt:* 2,0g. Kullprøve F1 fra registrering

30) Fra F.53 stolpehull. *Vekt:* 2,5g. Kullprøve fra registrering- 2 poser- 1g og 1,5g - merket koks.
31) Fra F.81 kokegrop.*Vekt:* 11g. Kullprøve fra registrering.
32) Fra F.59 Grøft. *Vekt:* 11g. Kullprøve fra registrering.
33) Fra F.77 Kokegrop. *Vekt:* 2g. Kullprøve fra registrering.
34) Fra F.28 Stolpehull. *Vekt:* 2g. Kullprøve fra registrering.
35) Fra F.3 Stolpehull. *Vekt:* 1,0g. Kullprøve fra registrering.
36) Fra F.78 stolpehull. *Vekt:* 1,1g. Kullprøve fra registrering. To poser- KP1: 1g og KP2: 0,1g.
Strukturnr: F78 Ilsted
37) Fra F.41 Stolpehull. *Vekt:* 1g. Kullprøve fra registrering.
38) Fra S.84 Ilsted. *Vekt:* 0,2g. Makroprøve 29. Ikke sendt til analyses.
39) Fra S.183 rydningsrøys. *Vekt:* 4,3g. Makroprøve 37. Ikke sendt til analyses.
40) Fra S96 Kokegrop. *Vekt:* 7g. Makroprøve 31. Ikke sendt til analyses
41) Fra S.97 Ilsted. *Vekt:* 0,2g. Makroprøve 30. Ikke sendt til analyses.
42) Fra S.198 stolpehull. *Vekt:* <0,1g. Makroprøve 33. Ikke sendt til analyses.
43) Fra S.185 Kokegrop. *Vekt:* 0,3g. Makroprøve 42. Ikke sendt til analyses.
44) Fra S.83 Ilsted. *Vekt:* 0,6g. Makroprøve 28. Ikke sendt til analyses.
45) Fra S.89 Kokegrop. *Vekt:* 0,9g. Makroprøve 23. Ikke sendt til analyses.
46) Fra S.95 Ilsted. *Vekt:* 2,4g. Makroprøve 24. Ikke sendt til analyses.
47) Fra S.193 Grop. *Vekt:* 0,1g. Makroprøve 8. Ikke sendt til analyses.
48) Fra S.153 Kokegrop. *Vekt:* 0,2g. Makroprøve 13. Ikke sendt til analyses.
49) Fra S.103 Stolpehull. *Vekt:* 0,3g. Makroprøve 22. Ikke sendt til analyses
50) Fra S.178 Kokegrop. *Vekt:* < 0,1g. Makroprøve 29. Ikke sendt til analyses
51) Fra S.98 Kokegrop. *Vekt:* 0,3g. Makroprøve 32. Ikke sendt til analyses.
52) Fra S.1 Gravhaug. *Vekt:* 19,5g. Makroprøve 6. Ikke sendt til analyses.
53) Fra S.167 Kokegrop. *Vekt:* 0,2g. Makroprøve 20. Ikke sendt til analyses.
54) Fra S.2 Rydningsrøys. *Vekt:* 1,1g. Makroprøve 34. Ikke sendt til analyses.
55) Fra S.138 Grop. *Vekt:* 0,6g. Makroprøve 27. Ikke sendt til analyses.
56) Fra S.5 Geil. *Vekt:* 2,8g. Makroprøve 44. Ikke sendt til analyses.
57) Fra S.182 Rydningsrøys. *Vekt:* 3,4g. Makroprøve 36. Ikke sendt til analyses.
58) Fra S.6 Grop. *Vekt:* 11,9g. Makroprøve 1. Ikke sendt til analyses.
59) Fra S.177 Rydningsrøys. *Vekt:* 2,4g. Makroprøve 35. Ikke sendt til analyses.
60) Fra S.184 Rydningsrøys. *Vekt:* 1,5g. Makroprøve 38. Ikke sendt til analyses.
61) Fra S.197 Stolpehull. *Vekt:* <0,1g. Makroprøve 21. Ikke sendt til analyses.
62) Fra S.85 Stolpehull. *Vekt:* 0,2g. Makroprøve 26. Ikke sendt til analyses.
63) Fra S.4 Kullmile. *Vekt:* 13,5g. Makroprøve 41. Ikke sendt til analyses.

Pollenprøver

64) Fra S.1 Gravhaug, Profil 5. Pollenprøve 3. Serie a-c
65) Fra S.182 Rydningsrøys, Profil 15. Pollenprøve 16. Serie a-c.
66) Fra S.5 Geil, Profil 17. Pollenprøve 15. Serie a-d.
67) Fra S.190 Steingjerde, Profil 12. Pollenprøve 19. Serie a-d
68) Fra S.183 Rydningsrøys, Profil 49. Pollenprøve 17. Serie a-d.
69) Fra S.177 Rydningsrøys, Profil 13. Pollenprøve 18. Serie a-c.

Orienteringsoppgave: Kleiver ligger 1km nordvest for Vestby mellom Vestbyveien (den gamle E6) og nåværende E6. Området ligger på østsiden av et nord-sørgående dalstrøk, og det er relativt store høydeforskjeller mellom de høyeste og de laveste liggende deler av området (fra 80-95 m.o.h.)

Kartreferanse: ØK, Projeksjon:(23) EU89-UTM; Sone 33, *N:* 6616264.25 *Ø:* 259646.93
LokalitetsID: 111779/112165/112166/112722

Litteratur:

Ingar M. Gundersen: 2007: Rapport fra registrering av automatisk fredete kulturminner i forbindelse med regulering av Kleiver, gbnr. 7/1 Vestby kommune, Akershus fylkeskommune

Derrick, Michael 2009: An archaeological excavation at Kleiver gbnr. 7/1, Vestby kommune, Akershus fylke. UKM, Universitetet i Oslo.

KULLPRØVE LISTE							
Kullprøve Nr.	**Struktur Nr.**	**Struktur type**	**C-Nr.**	**Vekt**	**Vedartbestemt**	**C14-dat.**	**Kommentar**
1	1	Gravhaug	C56765/5	0,3g	Betula	400-350 f.Kr og 290 -220 f.Kr	Kullprøve fra Makroprøve 1
2	10	Grop	C56765/25	4,5g			Ikke sendt til datering
13	153	Stolpehull	C56765/27	0,1g			Kullprøve fra Makroprøve 13. Ikke sendt til datering
14	178	Grop	C56765/6	0,2g	Betula	780-1000 e.Kr	Kullprøve fra Makroprøve 14
20	167	Kokegrop	C56765/7	1,7g	Quercus, Pinus, Betula og Corylus	640-710 e.Kr og 750-760 e.Kr	Kullprøve fra Makroprøve 20
21	197	Stolpehull	C56765/8	0,7g	Pinus,Betula og Corylus	430-620 e.Kr	Kullprøve fra Makroprøve 21
22	103	Stolpehull	C56765/24	0,2g	Pinus	1440-1540 e.Kr. 1540-1630 e.Kr	Kullprøve fra Makroprøve 22. Ikke sendt til datering
23	89	Kokegrop	C56765/20	0,2g			Kullprøve fra Makroprøve 23. Ikke sendt til datering
24	95	Kokegrop	C56765/4	1,3g	Pinus	1530-1560 e.Kr,1630-1680 e.Kr, 1740-1800 e.Kr og 1940-1950 e.Kr	Kullprøve fra Makroprøve 24
25	111	Stolpehull	C56765/21	2,3g			Ikke sendt til datering
27	138	Stolpehull i stabbur	C56765/9	0,6g	Betula og corylus	690-900 e.Kr	Kullprøve fra Makroprøve 27
28	83	Stolpehull i stabbur	C56765/10	0,5g	Pinus og Betula	1260-1310 e.Kr og 1360-1390 e.Kr	Kullprøve fra Makroprøve 28
29	84	Ilsted	C56765/19	0,1g			Kullprøve fra Makroprøve 29. Ikke sendt til datering
30	97	Grøft	C56765/14	2,5g	Betula, Corylus, Salix og Populus	970-1040 e.Kr og 1100 to 1120 e.Kr	Kullprøve fra Makroprøve 30
32	98	Stolpehull	C56765/26	0,4g			Kullprøve fra Makroprøve 32. Ikke sendt til datering
34	2	Rydningsrøys	C56765/13	0,6g	Pinus	1430-1530	Kullprøve fra Makroprøve

						e.Kr og 1560 to 1630 e.Kr	34
35	177	Rydningsrøys	C56765/11	< 0,1g	Quercus	1260-1310 e.Kr og 1360 to 1380 e.Kr	Kullprøve fra Makroprøve 35
37	183	Rydningsrøys	C56765/22	0,2g			Kullprøve fra Makroprøve 37. Ikke sendt til datering
41	4	Kullmile	C56765/23	4,5g			Kullprøve fra Makroprøve 41. Ikke sendt til datering
42	185	Kokegrop	C56765/17	0,4g	Betula og Quercus		Ikke sendt til datering
44	5	Droveway	C56765/12	0,4g	Quercus og Pinus	1010-1170 e.Kr	
F1	F1	Stolpehull	C56765/29	2g			Fra registrering. Ikke sendt til datering
F3	F3	Stolpehull	C56765/35	1,0g			Fra registrering. Ikke sendt til datering
F28	F28	Stolpehull	C56765/34	2g			Fra registrering. Ikke sendt til datering
F41	F41	Stolpehull	C56765/37	1g			Fra registrering. Ikke sendt til datering
F42	F42	Stolpehull	C56765/16	0,1g			Kullprøve fra registrering. Ikke sendt til datering
F43	F43	Kokegrop	C56765/18	12g			Kullprøve fra registrering. Ikke sendt til datering
F50	F50	Stolpehull	C56765/15	1,0g			Kullprøve fra registrering. Ikke sendt til datering
F53	F53	Stolpehull	C56765/30	2,5g			Fra registrering. Ikke sendt til datering
F59	F59	Grøft	C56765/32	11g			Fra registrering. Ikke sendt til datering
F77	F77	Kokegrop	C56765/33	2g			Fra registrering. Ikke sendt til datering
F78	F78	Ilsted	C56765/36	1,0g			Fra registrering. Ikke sendt til datering
F81	F81	Kokegrop	C56765/31	11g			Fra registrering. Ikke sendt til datering
F86	F86	Stolpehull	C56765/28	1g	Betula og Pinus	1660-1960 e.Kr	Fra registrering. Sendt til

							datering
1	6	Spredt	C56765/58	11,9g			
6	1	Rydningsrøys	C56765/52	19,5g			
8	193	Grop	C56765/47	0,1g			
13	153	Kokegrop	C56765/48	0,2g			
14	178	Kokegrop	C56765/50	0,15g			
20	167	Kokegrop	C56765/53	0,2g			
21	197	Stolpehull	C56765/61	< 0,1g			
22	103	Stolpehull	C56765/49	0,3g			
23	89	Kokegrop	C56765/45	0,9g			
24	95	Ilsted	C56765/46	2,4g			
26	85	Stolpehull	C56765/62	0,2g			
27	138	Grop	C56765/55	0,6g			
28	83	Ilsted	C56765/44	0,6g			
29	84	Ilsted	C56765/38	0,2g			
30	97	Kokegrop	C56765/41	0,2g			
31	96	Kokegrop	C56765/40	7g			
32	98	Kokegrop	C56765/51	0,3g			
33	198	Stolpehull	C56765/42	< 0,1g			
34	2	Rydningsrøys	C56765/54	1,1g			
35	177	Rydningsrøys	C56765/59	2,4g			
36	182	Rydningsrøys	C56765/57	3,4g			
37	183	Rydningsrøys	C56765/39	4,3g			
38	184 = 181	Rydningsrøys	C56765/60	1,5g			
41	4	Kullmile	C56765/63	13,5g			
42	185	Kokegrop	C56765/43	0,3g			
44	5	Droveway	C56765/56	2,8g			

POLLENPRØVE LISTE

Pollenprøve Nr.	Struktur Nr.	Struktur type	C-Nr.	Profil tegn nr.	Rør Nr.	Kommentar
3	1	Gravhaug	C56765/64	5	3 (3,4,5)	Under gravhaug i området 1
16	182	Rydningsrøys	C56765/65	15	3 (a,b,c)	Området 2
15	5	Droveway	C56765/66	17	4 (a,b,c,d)	Området 2
19	190	Steingjerde	C56765/67	12	4 (a,b,c,d)	Området 2
17	183	Rydningsrøys	C56765/68	49	4 (a,b,c,d)	Området 2
18	177	Rydningsrøys	C56765/69	13	3 (a,b,c)	Området 2

8.3. Drawings

Tegning Nr.	Struktur Nr.	Struktur type	Plan / Profil	Målestokk
1	1	Rydningsrøys	plan	1:20
2	6	grop	plan	1:20
3	8	kullspredt	plan	1:20
4	1	Rydningsrøys	profil	1:20
5	1	Rydningsrøys	profil	1:20
6	10	grop	plan	1:20
7	177	rydningsrøys	plan	1:20
8	182	rydningsrøys	plan	1:20
9	2	rydningsrøys	profil	1:20
10	7	staur	plan og profil	1:20
11	2	rydningsrøys	profil	1:20
12	190	gjerde	profil	1:20
13	177	Rydningsrøys	profil	1:20
14	190	gjerde	plan	1:20
15	182	Rydningsrøys	profil	1:20
16	5	droveway eller vei	profil	1:20
17	5	droveway eller vei	profil	1:20
18	184 = 181	Rydningsrøys	profil	1:20
19	193	grop	plan og profil	1:20
20	153	kokegrop	plan og profil	1:20
21	178	grop	profil	1:20
22	192	avskrevet	profil	1:20
23	158	stolpehull	plan og profil	1:20
24	35	stolpehull	profil	1:20
25	197	stolpehull	plan og profil	1:20
26	167	kokegrop	profil	1:20
27	131	avskrevet	profil	1:20
28	155 og 157	grop og avskrevet	profil	1:20
29	103	stolpehull	profil	1:20
30	89	kokegrop	plan og profil	1:20
31	95	ilsted	plan og profil	1:20
32	111	grop	plan og profil	1:20
33	84	ilsted	plan og profil	1:20
34	83	ilsted	plan og profil	1:20
35	98	ilsted	plan og profil	1:20
36	85	stolpehull	plan og profil	1:20
37	11	avskrevet	plan	1:20
38	138	grop	plan og profil	1:20
39	97	ilsted	plan og profil	1:20
40	118	kokegrop	plan og profil	1:20
41	174	grop	plan og profil	1:20
42	96	ilsted	plan og profil	1:20

Tegning Nr.	Struktur Nr.	Struktur type	Plan / Profil	Målestokk
43	198	stolpehull	plan og profil	1:20
44	24	stolpehull	plan og profil	1:20
45	22	staur	plan og profil	1:20
46	141	grop	plan og profil	1:20
47	4	kullmile	profil	1:20
48	93	ilsted	plan og profil	1:20
49	183	Rydningsrøys	profil	1:20
50	5	droveway eller vei	plan	1:20
51	185	kokegrop	profil	1:20
52	170	grop	plan og profil	1:20
53	94	grop	plan og profil	1:20

8.4. PHOTO LIST

Fotoliste, Negativnr. Cf.34000

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_01.JPG	323724			Monika Serafinska (MS).
Cf34000_02.JPG	323725	Jakob Johansson		MS
Cf34000_03.JPG	323726	Før undersøkelse området 2	N	MS
Cf34000_04.JPG	323727	Før undersøkelse området 2	S	MS
Cf34000_05.JPG	323728	Før undersøkelse området 2	Ø	MS
Cf34000_06.JPG	323729	S.177 mulig rydningsrøys	N	MS
Cf34000_07.JPG	323730	S.177 mulig rydningsrøys	Ø	MS
Cf34000_08.JPG	323731	S.177 mulig rydningsrøys	S	MS
Cf34000_09.JPG	323732	S.4 kullmile	N	MS
Cf34000_10.JPG	323733	S.4 kullmile	Ø	MS
Cf34000_11.JPG	323734	Areal vest for området 2	SØ	MS
Cf34000_12.JPG	323735	Areal vest for området 2	Ø	MS
Cf34000_13.JPG	323736	Areal vest for området 2	NØ	MS
Cf34000_14.JPG	323737	Areal vest for området 2	NØ	MS
Cf34000_15.JPG	323738	arbeidsbilde med Ole Christian Aslaksen (OCA)	N	MS
Cf34000_16.JPG	323739	Areal vest for området 2	SE	MS
Cf34000_17.JPG	323740	Areal vest for området 2	SØ	MS
Cf34000_18.JPG	323741	Areal vest for området 2	Ø	MS
Cf34000_19.JPG	323742	Areal vest for området 2	Ø	MS
Cf34000_20.JPG	323743	Areal vest for området 2	SØ	MS
Cf34000_21.JPG	323744	Areal vest for området 2	SØ	MS
Cf34000_22.JPG	323745	Areal vest for området 2	SØ	MS
Cf34000_23.JPG	323746	Areal vest for området 2	NØ	MS
Cf34000_24.JPG	323747	Før undersøkelse bilde	V	MS
Cf34000_25.JPG	323748	Før undersøkelse bilde	Ø	MS

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_26.JPG	323749	Før undersøkelse bilde	V	MS
Cf34000_27.JPG	323750	Før undersøkelse bilde	S	MS
Cf34000_28.JPG	323751	Før undersøkelse bilde	SV	MS
Cf34000_29.JPG	323752	Før undersøkelse bilde	V	MS
Cf34000_30.JPG	323753	Før undersøkelse bilde	NV	MS
Cf34000_31.JPG	323754	Før undersøkelse bilde	N	MS
Cf34000_32.JPG	323755	Før undersøkelse bilde	NØ	MS
Cf34000_33.JPG	323756	Før undersøkelse bilde	V	MS
Cf34000_34.JPG	323757	Før undersøkelse bilde	NØ	MS
Cf34000_35.JPG	323758	Før undersøkelse bilde	N	MS
Cf34000_36.JPG	323759	Før undersøkelse bilde	NV	MS
Cf34000_37.JPG	323760	s.4 kullmile	N	MS
Cf34000_38.JPG	323761	s.4 kullmile	N	MS
Cf34000_39.JPG	323762	s.4 kullmile	SV	MS
Cf34000_40.JPG	323763	s.4 kullmile	NØ	MS
Cf34000_41.JPG	323764	S.1 gravhaug eller rydningsrøys	V	Michael Derrick (MD)
Cf34000_42.JPG	323765	S.1 gravhaug eller rydningsrøys	N	MD
Cf34000_43.JPG	323766	S.1 gravhaug eller rydningsrøys	Ø	MD
Cf34000_44.JPG	323767	S.1 gravhaug eller rydningsrøys	S	MD
Cf34000_45.JPG	323768	S.2 rydningsrøys	N	MS
Cf34000_46.JPG	323769		V	MS
Cf34000_47.JPG	323770	S.2 rydningsrøys	S	MS
Cf34000_48.JPG	323771	S.2 rydningsrøys	Ø	MS
Cf34000_49.JPG	323772	Metalldetektormannen.		Linda Engstrøm (LE)
Cf34000_50.JPG	323773	Metalldetektormannen		LE
Cf34000_51.JPG	323774	Feltlerere i Drøbak		MS
Cf34000_52.JPG	323775	Feltlerere i Drøbak		MS
Cf34000_53.JPG	323776	S.1 gravhaug eller rydningrøys	N	MS
Cf34000_54.JPG	323777	S.1 gravhaug eller rydningrøys	V	MS
Cf34000_55.JPG	323778	S.1 gravhaug eller rydningrøys	S	MS
Cf34000_56.JPG	323779	S.1 gravhaug eller rydningrøys	Ø	MS
Cf34000_57.JPG	323780	S.2 Rydningsrøys	N	Jakob Johansson (JJ)
Cf34000_58.JPG	323781	S.2 Rydningsrøys	Ø	JJ
Cf34000_59.JPG	323782	S.2 rydningsrøys	Ø	JJ
Cf34000_60.JPG	323783	S.2 rydningsrøys	S	JJ
Cf34000_61.JPG	323784	S.2 rydningsrøys	S	JJ
Cf34000_62.JPG	323785	S.2 rydningsrøys	V	JJ
Cf34000_63.JPG	323786	S.6 grop i plan	N	JJ
Cf34000_64.JPG	323787	S.6 grop i profil	N	JJ
Cf34000_65.JPG	323788	S.1 Østlig del av sørvendt profil	N	Egil Marstein Bauer

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
				(EMB)
Cf34000_66.JPG	323789	S.1 Sørligdel av østrvendt profil	V	EMB
Cf34000_67.JPG	323790	S.7 stolpehull plan	N	Linda Engstrøm (LE)
Cf34000_68.JPG	323791	S.7 stolpehull plan	N	LE
Cf34000_69.JPG	323792	S.1 NØ kvadrant Norvendt profil	S	JJ
Cf34000_70.JPG	323793	S.1 NØ kvadrant østvendt profil	V	JJ
Cf34000_71.JPG	323794	S.1 SV kvadrant Sørvendt profil	N	EMB
Cf34000_72.JPG	323795	S.1 SV kvadrant vestvendt profil	Ø	EMB
Cf34000_73.JPG	323796	S.8 kullspredt	N	JJ
Cf34000_74.JPG	323797	S.7 staur profil	NØ	LE
Cf34000_75.JPG	323798	S.8 Kullspredt profil	N	JJ
Cf34000_76.JPG	323799	S.10 grop plan	NØ	JJ
Cf34000_77.JPG	323800	s.10 utgravd	NØ	JJ
Cf34000_78.JPG	323801	s.11 avskrevet	N	JJ
Cf34000_79.JPG	323802	S.1 profil SV kvadrant	NØ	MS
Cf34000_80.JPG	323803	S.1 nordvendt profil	S	MS
Cf34000_81.JPG	323804	arbeidbilde s.1	Ø	MS
Cf34000_82.JPG	323805	arbeidbilde s.1	NV	MS
Cf34000_83.JPG	323806	arbeidbilde s.1	V	MS
Cf34000_84.JPG	323807	S.1 utgravde	N	MS
Cf34000_85.JPG	323808	S.1 utgravde	S	MS
Cf34000_86.JPG	323809	S.1 utgravde	Ø	MS
Cf34000_87.JPG	323810	S.1 utgravde	V	MS
Cf34000_88.JPG	323811	arbeidsbilde		MS
Cf34000_89.JPG	323812	arbeidsbilde		MS
Cf34000_90.JPG	323813	arbeidsbilde		MS
Cf34000_91.JPG	323814	arbeidsbilde		MS
Cf34000_92.JPG	323815	arbeidsbilde		MS
Cf34000_93.JPG	323816	S.35 Stolpehull med brynestein plan	V	MD
Cf34000_94.JPG	323817	S.34 stolpehull plan	V	MD
Cf34000_95.JPG	323818	S.12 stolpehull plan	V	MD
Cf34000_96.JPG	323819	S.13 stolpehull plan	V	MD
Cf34000_97.JPG	323820	S.29 staur plan	V	MD
Cf34000_98.JPG	323821	S.28 Stolpehull plan	V	MD
Cf34000_99.JPG	323822	S.33 stolpehull plan	V	MD
Cf34000_100.JPG	323823	S.30 stolpehull plan	V	MD
Cf34000_101.JPG	323824	S.22 stolpehull plan	V	MD
Cf34000_102.JPG	323825	S.27 staur plan	V	MD
Cf34000_103.JPG	323826	S.25 staur plan	V	MD
Cf34000_104.JPG	323827	S.26 grop plan	NV	MD
Cf34000_105.JPG	323828	S.24 staur plan	V	MD
Cf34000_106.JPG	323829	S.31 staur plan	V	MD

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_107.JPG	323830	S.23 stolpehull plan	NV	MD
Cf34000_108.JPG	323831	S.21 stolpehull plan	V	MD
Cf34000_109.JPG	323832	S.18 stolpehull plan	V	MD
Cf34000_110.JPG	323833	S.16 staur plan	V	MD
Cf34000_111.JPG	323834	S.17 kvadratisk stolpehull plan	V	MD
Cf34000_112.JPG	323835	S.37 stolpehull plan	V	MD
Cf34000_113.JPG	323836	S.38 stolpehull plan	V	MD
Cf34000_114.JPG	323837	S.39 stolpehull plan	NV	MD
Cf34000_115.JPG	323838	S.40 halv av en stolpehull plan	V	MD
Cf34000_116.JPG	323839	S.43 staur plan	V	MD
Cf34000_117.JPG	323840	S.42 staur plan	V	MD
Cf34000_118.JPG	323841	S.41 stolpehull plan	V	MD
Cf34000_119.JPG	323842	S.44 stolpehull plan	V	MD
Cf34000_120.JPG	323843	S.45 (V), S.32 og S.36 stolpehuller plan	NV	MD
Cf34000_121.JPG	323844	S.50 stolpehull plan	V	MD
Cf34000_122.JPG	323845	S.47 stolpehull plan	V	MD
Cf34000_123.JPG	323846	S.46 stolpehull plan	V	MD
Cf34000_124.JPG	323847	S.58 stolpehull plan	V	MD
Cf34000_125.JPG	323848	S.51 stolpehull	V	MD
Cf34000_126.JPG	323849	S.48 stolpehull plan	MD	V
Cf34000_127.JPG	323850	S.52 Stolpehull plan	V	MD
Cf34000_128.JPG	323851	S.49 stolpehull plan	V	MD
Cf34000_129.JPG	323852	S.19 stolpehull plan	V	MD
Cf34000_130.JPG	323853	S.55 Stolpehull plan	NV	MD
Cf34000_131.JPG	323854	S.56 stolpehull plan	V	MD
Cf34000_132.JPG	323855	S.60 grop plan	SV	MD
Cf34000_133.JPG	323856	S.61 grop plan	V	MD
Cf34000_134.JPG	323857	S.62 stolpehull plan	V	MD
Cf34000_135.JPG	323858	S.63 staur plan	V	MD
Cf34000_136.JPG	323859	S.64 staur plan	V	MD
Cf34000_137.JPG	323860	S.65 staur plan	V	MD
Cf34000_138.JPG	323861	S.59 stolpehull plan	V	MD
Cf34000_139.JPG	323862	S.66 grop plan	SV	MD
Cf34000_140.JPG	323863	S.69 stolpehull plan	NØ	MD
Cf34000_141.JPG	323864	S.70 stolpehull plan	Ø	MD
Cf34000_142.JPG	323865	S.71 stolpehull plan	S	MD
Cf34000_143.JPG	323866	S.74 kokegrop plan	V	MD
Cf34000_144.JPG	323867	S.75 grop plan	SV	MD
Cf34000_145.JPG	323868	S.76 stolpehull plan	V	MD
Cf34000_146.JPG	323869	S.5 vei eller droveway i plan	V	JJ
Cf34000_147.JPG	323870	S.5 vei eller droveway i plan	V	JJ
Cf34000_148.JPG	323871	S.5 vei eller droveway i plan	V	JJ
Cf34000_149.JPG	323872	S.5 vei eller droveway i plan	V	JJ

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_150.JPG	323873	S.5 vei eller droveway i plan	Ø	JJ
Cf34000_151.JPG	323874	S.5 vei eller droveway i plan	Ø	JJ
Cf34000_152.JPG	323875	S.5 vei eller droveway i plan	Ø	JJ
Cf34000_153.JPG	323876	S.77 stolpehull plan	N	Ole Christian Aslaksen (OCA)
Cf34000_154.JPG	323877	avskrevet	N	OCA
Cf34000_155.JPG	323878	avskrevet	N	OCA
Cf34000_156.JPG	323879	S.74 kokegrop plan	N	OCA
Cf34000_157.JPG	323880	S.88 grop plan	N	OCA
Cf34000_158.JPG	323881	S.81 stolpehull plan	N	OCA
Cf34000_159.JPG	323882	S.82 stolpehull plan	N	OCA
Cf34000_160.JPG	323883	S.81 og 82 stolpehull plan	N	OCA
Cf34000_161.JPG	323884	S.83 ilsted plan	N	OCA
Cf34000_162.JPG	323885	S.84 ilsted plan	Ø	OCA
Cf34000_163.JPG	323886	avskrevet	N	OCA
Cf34000_164.JPG	323887	S.86 grop plan	Ø	OCA
Cf34000_165.JPG	323888	S.87 grop plan	Ø	OCA
Cf34000_166.JPG	323889	S.88 grop plan	Ø	OCA
Cf34000_167.JPG	323890	S.89 kokegrop plan	Ø	OCA
Cf34000_168.JPG	323891	S.90 stolpehull plan	Ø	OCA
Cf34000_169.JPG	323892	S.91 ilsted plan	Ø	OCA
Cf34000_170.JPG	323893	avskrevet	N	OCA
Cf34000_171.JPG	323894	S.93 Ilsted plan	N	OCA
Cf34000_172.JPG	323895	S.94 grop plan	N	OCA
Cf34000_173.JPG	323896	S.89 Kokegrop plan	Ø	OCA
Cf34000_174.JPG	323897	S.95 ilsted plan	Ø	OCA
Cf34000_175.JPG	323898	S.72 stolpehull plan	Ø	OCA
Cf34000_176.JPG	323899	S.73 stolpehull plan	Ø	OCA
Cf34000_177.JPG	323900	S.96 kokegrop plan	V	MD
Cf34000_178.JPG	323901	S.97 kokegrop plan	Ø	MD
Cf34000_179.JPG	323902	S.98 kokegrop plan	Ø	MD
Cf34000_180.JPG	323903	S.100 stolpehull plan	N	EMB
Cf34000_181.JPG	323904	S.101 stolpehull plan	N	EMB
Cf34000_182.JPG	323905	S.102 stolpehull plan	N	EMB
Cf34000_183.JPG	323906	S.103 stolpehull plan	N	EMB
Cf34000_184.JPG	323907	S.104 stolpehull plan	N	EMB
Cf34000_185.JPG	323908	S.105 staur plan	N	EMB
Cf34000_186.JPG	323909	S.106 grop plan	N	EMB
Cf34000_187.JPG	323910	S.107 stolpehull plan	N	EMB
Cf34000_188.JPG	323911	S.108 stolpehull plan	N	EMB
Cf34000_189.JPG	323912	S.109 stolpehull plan	Ø	MD
Cf34000_190.JPG	323913	S.112 stolpehull plan	N	EMB
Cf34000_191.JPG	323914	S.113 stolpehull plan	N	EMB

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_192.JPG	323915	S.114 staur plan	N	EMB
Cf34000_193.JPG	323916	S.115 staur plan	N	EMB
Cf34000_194.JPG	323917	S.116 stolpehull plan	N	EMB
Cf34000_195.JPG	323918	S.117 stolpehull plan	S	LE
Cf34000_196.JPG	323919	S.118 kokegrop plan	S	EMB
Cf34000_197.JPG	323920	S.119 stolpehull plan	S	EMB
Cf34000_198.JPG	323921	S.120 stolpehull plan	S	EMB
Cf34000_199.JPG	323922	S.121 stolpehull plan	V	EMB
Cf34000_200.JPG	323923	S.122 stolpehull plan	V	EMB
Cf34000_201.JPG	323924	S.123 stolpehull plan	V	EMB
Cf34000_202.JPG	323925	S.124 kokegrop plan	V	EMB
Cf34000_203.JPG	323926	S.125 staur plan	V	EMB
Cf34000_204.JPG	323927	S.126 staur plan	V	EMB
Cf34000_205.JPG	323928	S.127 staur plan	V	EMB
Cf34000_206.JPG	323929	S.128 stolpehull plan	V	EMB
Cf34000_207.JPG	323930	S.129 stolpehull plan	S	LE
Cf34000_208.JPG	323931	S.130 stolpehull plan	S	LE
Cf34000_209.JPG	323932	S.131 stolpehull plan	S	LE
Cf34000_210.JPG	323933	S.132 stolpehull plan	S	LE
Cf34000_211.JPG	323934	S.133 stolpehull plan	S	LE
Cf34000_212.JPG	323935	S.134 staur plan	S	LE
Cf34000_213.JPG	323936	S.135 staur plan	S	LE
Cf34000_214.JPG	323937	S.136 staur plan	S	LE
Cf34000_215.JPG	323938	S.110 grop plan	SV	EMB
Cf34000_216.JPG	323939	S.137 stolpehull plan	SV	EMB
Cf34000_217.JPG	323940	s.111 grop plan	SV	EMB
Cf34000_218.JPG	323941	S.138 grop plan	SV	EMB
Cf34000_219.JPG	323942	S.139 stolpehull plan	S	LE
Cf34000_220.JPG	323943	S.140 staur plan	S	LE
Cf34000_221.JPG	323944	S.141 grop plan	SØ	LE
Cf34000_222.JPG	323945	S.142 staur plan	S	LE
Cf34000_223.JPG	323946	S.143 grop plan	S	LE
Cf34000_224.JPG	323947	S.144 stolpehull plan	N	
Cf34000_225.JPG	323948	S.145 staur plan	NV	EMB
Cf34000_226.JPG	323949	S.146 grop plan	N	EMB
Cf34000_227.JPG	323950	S.147 stolpehull plan	N	EMB
Cf34000_228.JPG	323951	S.148 grop plan	Ø	LE
Cf34000_229.JPG	323952	S.149 staur plan	Ø	LE
Cf34000_230.JPG	323953	S.150 kokegrop plan	Ø	LE
Cf34000_231.JPG	323954	S.151 grop plan	N	EMB
Cf34000_232.JPG	323955	S.152 stolpehull plan	N	LE
Cf34000_233.JPG	323956	S.153 kokegrop plan	N	LE
Cf34000_234.JPG	323957	S.154 stolpehull plan	N	LE

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_235.JPG	323958	S.155 grop plan	N	LE
Cf34000_236.JPG	323959	avskrevet	N	LE
Cf34000_237.JPG	323960	S.157 grop plan	N	LE
Cf34000_238.JPG	323961	S.158 stolpehull plan	N	EMB
Cf34000_239.JPG	323962	S.159 staur plan	N	LE
Cf34000_240.JPG	323963	S.160 stolpehull plan	N	LE
Cf34000_241.JPG	323964	S.161 grop plan	N	EMB
Cf34000_242.JPG	323965	arbeidsbilde	Ø	EMB
Cf34000_243.JPG	323966	S.162 staur plan	S	LE
Cf34000_244.JPG	323967	S.163 kokegrop plan	S	LE
Cf34000_245.JPG	323968	S.164 grop plan	V	LE
Cf34000_246.JPG	323969	S.165 kokegrop plan	SØ	LE
Cf34000_247.JPG	323970	S.166 stolpehull plan	N	EMB
Cf34000_248.JPG	323971	S.167 kokegrop plan	V	EMB
Cf34000_249.JPG	323972	S.168 staur plan	V	EMB
Cf34000_250.JPG	323973	S.169 staur plan	S	LE
Cf34000_251.JPG	323974	S.170 grop plan	S	LE
Cf34000_252.JPG	323975	S.171 grop plan	S	LE
Cf34000_253.JPG	323976	S.172 grop plan	S	LE
Cf34000_254.JPG	323977	S.173 kokegrop plan	V	EMB
Cf34000_255.JPG	323978	S.174 kokegrop plan	S	LE
Cf34000_256.JPG	323979	S.175 stolpehull plan	S	LE
Cf34000_257.JPG	323980	S.176 kokegrop plan	S	LE
Cf34000_258.JPG	323981	S.5 droveway plan	V	JJ
Cf34000_259.JPG	323982	S.5 droveway plan	V	JJ
Cf34000_260.JPG	323983	S.5 droveway plan	V	JJ
Cf34000_261.JPG	323984	S.5 droveway plan	V	JJ
Cf34000_262.JPG	323985	S.5 droveway plan	V	JJ
Cf34000_263.JPG	323986	S.5 droveway plan	V	JJ
Cf34000_264.JPG	323987	S.5 droveway plan	V	JJ
Cf34000_265.JPG	323988	S.5 droveway plan	V	JJ
Cf34000_266.JPG	323989	S.5 droveway plan	V	JJ
Cf34000_267.JPG	323990	arbeidsbilde	SV	JJ
Cf34000_268.JPG	323991	S.5 droveway plan	V	JJ
Cf34000_269.JPG	323992	S.5 droveway plan	S	JJ
Cf34000_270.JPG	323993	S.5 droveway plan	S	JJ
Cf34000_271.JPG	323994	S.5 droveway plan	S	JJ
Cf34000_272.JPG	323995	S.5 droveway plan	S	JJ
Cf34000_273.JPG	323996	S.5 droveway plan	S	JJ
Cf34000_274.JPG	323997	S.5 droveway plan	SV	JJ
Cf34000_275.JPG	323998	S.5 droveway plan	SV	JJ
Cf34000_276.JPG	323999	S.5 droveway plan	S	JJ
Cf34000_277.JPG	324000	S.5 droveway plan	V	JJ

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_278.JPG	324001	S.5 droveway plan	V	JJ
Cf34000_279.JPG	324002	S.5 droveway plan	Ø	JJ
Cf34000_280.JPG	324003	S.5 droveway plan	Ø	JJ
Cf34000_281.JPG	324004	S.177 rydningsrøys plan	NØ	EMB
Cf34000_282.JPG	324005	S.177 rydningsrøys plan	NØ	EMB
Cf34000_283.JPG	324006	S.177 rydningsrøys plan	SØ	EMB
Cf34000_284.JPG	324007	S.177 rydningsrøys plan	S	EMB
Cf34000_285.JPG	324008	S.177 rydningsrøys plan	SV	EMB
Cf34000_286.JPG	324009	S.177 rydningsrøys plan	N	EMB
Cf34000_287.JPG	324010	S.177 rydningsrøys plan	N	EMB
Cf34000_288.JPG	324011	S.182 rydningsrøys plan	Ø	EMB
Cf34000_289.JPG	324012	S.182 rydningsrøys plan	S	EMB
Cf34000_290.JPG	324013	S.182 rydningsrøys plan	SV	EMB
Cf34000_291.JPG	324014	S.182 rydningsrøys plan	Ø	JJ
Cf34000_292.JPG	324015	S.182 rydningsrøys plan	Ø	JJ
Cf34000_293.JPG	324016	S.183 rydningsrøys plan	Ø	JJ
Cf34000_294.JPG	324017	S.183 rydningsrøys plan	Ø	JJ
Cf34000_295.JPG	324018	arbeidsbilde	SØ	JJ
Cf34000_296.JPG	324019	S.183 rydningsrøys plan	N	JJ
Cf34000_297.JPG	324020	S.183 rydningsrøys plan	Ø	JJ
Cf34000_298.JPG	324021	S.183 rydningsrøys plan	S	JJ
Cf34000_299.JPG	324022	S.183 rydningsrøys plan	V	JJ
Cf34000_300.JPG	324023	S.39 stolpehull plan	V	MD
Cf34000_301.JPG	324024	S.37 stolpehull plan	V	MD
Cf34000_302.JPG	324025	S.9 stolpehull plan	V	MD
Cf34000_303.JPG	324026	S.15 stolpehull plan	V	MD
Cf34000_304.JPG	324027	S.14 stolpehull plan	V	MD
Cf34000_305.JPG	324028	S.99 grop plan	S	MS
Cf34000_306.JPG	324029	S.184 = 181 rydningsrøys plan	Ø	JJ
Cf34000_307.JPG	324030	S.184 = 181 rydningsrøys plan	Ø	JJ
Cf34000_308.JPG	324031	S.184 = 181 rydningsrøys plan	Ø	JJ
Cf34000_309.JPG	324032	S.184 = 181 rydningsrøys plan	S	JJ
Cf34000_310.JPG	324033	S.184 = 181 rydningsrøys plan	V	JJ
Cf34000_311.JPG	324034	S.2 rydningsrøys plan	S	LE
Cf34000_312.JPG	324035	S.2 rydningsrøys plan	N	LE
Cf34000_313.JPG	324036	S.185 kokegrop plan	Ø	LE
Cf34000_314.JPG	324037	S.85 kokegrop plan	Ø	LE
Cf34000_315.JPG	324038	S.186 stolpehull plan	Ø	LE
Cf34000_316.JPG	324039	S.187 staur plan	Ø	LE
Cf34000_317.JPG	324040	S.187 staur plan	Ø	LE
Cf34000_318.JPG	324041	S.188 staur plan	Ø	LE
Cf34000_319.JPG	324042	S.37 stolpehull plan	Ø	LE
Cf34000_320.JPG	324043	S.37 stolpehull plan	Ø	LE

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_321.JPG	324044	S.38 stolpehull plan	Ø	LE
Cf34000_322.JPG	324046	S.189 kokegrop plan	Ø	LE
Cf34000_323.JPG	324047	S.189 kokegrop plan	Ø	LE
Cf34000_324.JPG	324048	S.190 steingjerde plan	N	EMB
Cf34000_325.JPG	324049	S.190 steingjerde plan	S	EMB
Cf34000_326.JPG	324050	S.5 Droveway/veilengst mot N profil	Ø	EMB
Cf34000_327.JPG	324051	S.5 Droveway/vei nestlengst mot N profil	Ø	MS
Cf34000_328.JPG	324052	S.5 Droveway/vei midten profil	Ø	MS
Cf34000_329.JPG	324053	S.5 Droveway/vei nestlengst mot S profil	Ø	MS
Cf34000_330.JPG	324054	S.5 Gei lengst mot S profil	Ø	MS
Cf34000_331.JPG	324055	S.5 Droveway/vei øst vendt nordlig del	V	MS
Cf34000_332.JPG	324056	S.5 Giel/vei øst-vendt profil nordlig del	V	EMB
Cf34000_333.JPG	324057	S.5 Giel/vei øst-vendt profil midtre del	V	EMB
Cf34000_334.JPG	324058	S.5 Giel/vei øst-vendt profil midtre del		
Cf34000_335.JPG	324059	S.5 Giel/vei øst-vendt profil sørlig del	V	EMB
Cf34000_336.JPG	324060	S.177 rydningsrøys	N	LE
Cf34000_337.JPG	324061	S.177 rydningsrøys	N	LE
Cf34000_338.JPG	324062	S.177 rydningsrøys	N	LE
Cf34000_339.JPG	324063	Monika Serafinska the Polish girl who talks too much		MD
Cf34000_340.JPG	324064	S.183 rydningsrøys profil	N	LE
Cf34000_341.JPG	324065	S.190 steingjerde profil	N	JJ
Cf34000_342.JPG	324066	S.177 rydningsrøys profil	S	JJ
Cf34000_343.JPG	324067	S.193 grop datert till middelalder perioden (fra registrering) plan	NØ	MD
Cf34000_344.JPG	324068	S.182 rydningsrøys	N	Helena Russ (HR)
Cf34000_345.JPG	324069	S.178 grop plan	MD	SØ
Cf34000_346.JPG	324070	S.180 stolpehull plan	MD	N
Cf34000_347.JPG	324071	S.179 stolpehull plan	NV	MD
Cf34000_348.JPG	324072	S.195 stolpehull plan	MD	V
Cf34000_349.JPG	324073	S.67 steinspredt	Ø	MD
Cf34000_350.JPG	324074	S.67 steinspredt	V	MD
Cf34000_351.JPG	324075	referansebilde		
Cf34000_352.JPG	324076	S.184 Rydningsrøys profil	Ø	JJ
Cf34000_353.JPG	324077	S.196 stolpehull plan	Ø	LE
Cf34000_354.JPG	324078	S.197 stolpehull plan	Ø	LE
Cf34000_355.JPG	324079	S.196 og 197 stolpehull plan	Ø	LE
Cf34000_356.JPG	324080	Kokegrop 167, stolpehuller 196 og 197	Ø	LE
Cf34000_357.JPG	324081	Kokegrop 167, stolpehuller 196 og 197	Ø	LE
Cf34000_358.JPG	324082	S.193 grop profil	N	MS
Cf34000_359.JPG	324083	S.5 droveway mulig stolpehull (c) i profil	V	EMB
Cf34000_360.JPG	324084	S.5 droveway mulig stolpehull (c) i profil	V	EMB
Cf34000_361.JPG	324085	S.192 rydningsrøys profil mot V	Ø	HR
Cf34000_362.JPG	324086	S.192 rydningsrøys profil mot V	Ø	HR
Cf34000_363.JPG	324087	S.197 Stolpehull profil	Ø	LE

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_364.JPG	324088	S.197 Stolpehull profil	Ø	LE
Cf34000_365.JPG	324089	Kokegrop 167, stolpehuller 196 og 197 profiler	Ø	LE
Cf34000_366.JPG	324090	S.5 droveway sentral del av gei etter fjerning an steinpakning	V	EMB
Cf34000_367.JPG	324091	S.5 droveway sentral del av gei etter fjerning an steinpakning	Ø	EMB
Cf34000_368.JPG	324092	S.5 droveway sentral del av gei etter fjerning an steinpakning	S	EMB
Cf34000_369.JPG	324093	S.178 grop profil	NØ	MS
Cf34000_370.JPG	324094	S.153 kokegrop profil	NNØ	JJ
Cf34000_371.JPG	324095	avskrevet		
Cf34000_372.JPG	324096	S.35 stolpehull profil	Ø	OLA
Cf34000_373.JPG	324097	S.35 stolpehull profil	Ø	OLA
Cf34000_374.JPG	324098	S.118 kokegrop profil	NV	EMB
Cf34000_375.JPG	324099	S.158 stolpehull profil	N	JJ
Cf34000_376.JPG	324100	avskrevet		
Cf34000_377.JPG	324101	avskrevet		
Cf34000_378.JPG	324102	S.175 stolpehull under kokegrop s.174	S	EMB
Cf34000_379.JPG	324103	S.155 (grop) og 157 (avskrevet)	Ø	JJ
Cf34000_380.JPG	324104	S.175 stolpehull profil	S	EMB
Cf34000_381.JPG	324105	S.174 grop profil	S	EMB
Cf34000_382.JPG	324106	S.89 kokegrop profil	SØ	LE
Cf34000_383.JPG	324107	S.95 ilsted profil	SØ	LE
Cf34000_384.JPG	324108	S.89 (kokegrop) og 95 (ilsted) profiler	SØ	LE
Cf34000_385.JPG	324109	S.103 stolpehull profil	SØ	HR
Cf34000_386.JPG	324110	Stabbur området før undersøkelse	N	JJ
Cf34000_387.JPG	324111	Stabbur området før undersøkelse	N	JJ
Cf34000_388.JPG	324112	Stabbur området før undersøkelse	V	JJ
Cf34000_389.JPG	324113	Stabbur området før undersøkelse	V	JJ
Cf34000_390.JPG	324114	Stabbur området før undersøkelse	S	JJ
Cf34000_391.JPG	324115	Stabbur området før undersøkelse	Ø	JJ
Cf34000_392.JPG	324116	Stabbur området før undersøkelse	Ø	JJ
Cf34000_393.JPG	324117	S.96 Stolpehull plan	NV	EMB
Cf34000_394.JPG	324118	S.83 stolpehull profil	N	JJ
Cf34000_395.JPG	324119	S.111 grop profil	Ø	MS
Cf34000_396.JPG	324120	S.96 ilsted profil	NV	EMB
Cf34000_397.JPG	324121	S.84 stolpehull profil	N	EMB
Cf34000_398.JPG	324122	S.198 stolpehull profil	N	EMB
Cf34000_399.JPG	324123	S.98 ilsted profil	SØ	MS
Cf34000_400.JPG	324124	S.22 staur profil	N	EMB
Cf34000_401.JPG	324125	S.85 kokegrop profil	SØ	LE
Cf34000_402.JPG	324126	S.138 grop profil	SØ	JJ
Cf34000_403.JPG	324127	S.79 ilsted profil	N	HR
Cf34000_404.JPG	324128	S.29 stolpehull profil	NØ	EMB
Cf34000_405.JPG	324129	Stabbur området	N	JJ
Cf34000_406.JPG	324130	Stabbur området før undersøkelse	N	JJ

Filnavn	Fotoark Id	Motivbeskrivelse	Retning Sett Mot	Tatt av
Cf34000_407.JPG	324131	Stabbur området før undersøkelse	V	JJ
Cf34000_408.JPG	324132	Stabbur området før undersøkelse	S	JJ
Cf34000_409.JPG	324133	Stabbur området før undersøkelse	Ø	JJ
Cf34000_410.JPG	324134	Stabbur området før undersøkelse	Ø	JJ
Cf34000_411.JPG	324135	Stabbur området før undersøkelse	Ø	JJ
Cf34000_412.JPG	324136	Stabbur området før undersøkelse	Ø	JJ
Cf34000_413.JPG	324137	Stabbur området før undersøkelse	Ø	JJ
Cf34000_414.JPG	324138	S.141 grop profil	SØ	EMB
Cf34000_415.JPG	324139	S.170 grop profil	Ø	MS
Cf34000_416.JPG	324140	S.4 Kullmile nærbilde av brent tre biter i profil	N	HR
Cf34000_417.JPG	324141	S.4 Kullmile profil	N	HR
Cf34000_418.JPG	324142	S.4 Kullmile profil	N	HR
Cf34000_419.JPG	324143	S.4 Kullmile profil	N	HR
Cf34000_420.JPG	324144	S.4 Kullmile profil	N	HR
Cf34000_421.JPG	324145	S.4 Kullmile profil	N	HR
Cf34000_422.JPG	324146	S.93 ilsted profil	N	EMB
Cf34000_423.JPG	324147	S.185 Kokegrop profil	Ø	LE
Cf34000_424.JPG	323723	S.94 grop profil	NØ	MS

8.5. ANALYSIS

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Darden Hood
President

Ronald Hatfield
Christopher Patrick
Deputy Directors

November 6, 2008

Dr. Jes Martens
Universitetet I Oslo
Kulturhistorisk Museum
Postbooks 6762
St. Olavs plass
Oslo NO-0130, Norway

RE: Radiocarbon Dating Results For Samples KP24 S95, MP34 S2, MP14 S178, KP44 S5, SAMPLE21 S197, MP35 S177, SAMPLE1 S1, SAMPLE20 S167, SAMPLE30 S97, SAMPLE27 S138, SAMPLE28 S83

Dear Dr. Martens:

Enclosed are the radiocarbon dating results for 11 samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses proceeded normally. The report sheet contains the dating result, method used, material type, applied pretreatment and two-sigma calendar calibration result (where applicable) for each sample.

This report has been both mailed and sent electronically, along with a separate publication quality calendar calibration page. This is useful for incorporating directly into your reports. It is also digitally available in Windows metafile (.wmf) format upon request. Calibrations are calculated using the newest (2004) calibration database. References are quoted on the bottom of each calibration page. Multiple probability ranges may appear in some cases, due to short-term variations in the atmospheric 14C contents at certain time periods. Examining the calibration graphs will help you understand this phenomenon. Calibrations may not be included with all analyses. The upper limit is about 20,000 years, the lower limit is about 250 years and some material types are not suitable for calibration (e.g. water).

We analyzed these samples on a sole priority basis. No students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analyses. We analyzed them with the combined attention of our entire professional staff.

Information pages are enclosed with the mailed copy of this report. They should answer most of questions you may have. If they do not, or if you have specific questions about the analyses, please do not hesitate to contact us. Someone is always available to answer your questions.

Our invoice has been sent separately. Thank you for your prior efforts in arranging payment. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

Darden Hood
Digital signature on file

BETA

REPORT OF RADIOCARBON DATING ANALYSES

Dr. Jes Martens — Report Date: 11/6/2008

Universitetet I Oslo — Material Received: 10/6/2008

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 250018	250 +/- 40 BP	-25.7 o/oo	240 +/- 40 BP
SAMPLE : KP24 S95			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1530 to 1560 (Cal BP 420 to 390) AND Cal AD 1630 to 1680 (Cal BP 320 to 270) Cal AD 1740 to 1800 (Cal BP 210 to 150) AND Cal AD 1940 to 1950 (Cal BP 20 to 0)			
Beta - 250019	400 +/- 40 BP	-24.8 o/oo	400 +/- 40 BP
SAMPLE : MP34 S2			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1430 to 1530 (Cal BP 520 to 420) AND Cal AD 1560 to 1630 (Cal BP 390 to 320)			
Beta - 250020	1170 +/- 40 BP	-27.5 o/oo	1130 +/- 40 BP
SAMPLE : MP14 S178			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 780 to 1000 (Cal BP 1160 to 950)			
Beta - 250021	950 +/- 40 BP	-24.9 o/oo	950 +/- 40 BP
SAMPLE : KP44 S5			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1010 to 1170 (Cal BP 940 to 780)			
Beta - 250022	1550 +/- 40 BP	-26.9 o/oo	1520 +/- 40 BP
SAMPLE : SAMPLE21 S197			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 430 to 620 (Cal BP 1520 to 1330)			

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

BETA

REPORT OF RADIOCARBON DATING ANALYSES

Dr. Jes Martens

Report Date: 11/6/2008

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 250023	710 +/- 40 BP	-24.9 o/oo	710 +/- 40 BP
SAMPLE : MP35 S177			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1260 to 1310 (Cal BP 700 to 640) AND Cal AD 1360 to 1380 (Cal BP 590 to 570)			
Beta - 250024	2280 +/- 40 BP	-24.6 o/oo	2290 +/- 40 BP
SAMPLE : SAMPLE1 S1			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal BC 400 to 350 (Cal BP 2350 to 2300) AND Cal BC 290 to 220 (Cal BP 2240 to 2170)			
Beta - 250025	1380 +/- 40 BP	-26.8 o/oo	1350 +/- 40 BP
SAMPLE : SAMPLE20 S167			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 640 to 710 (Cal BP 1320 to 1240) AND Cal AD 750 to 760 (Cal BP 1200 to 1190)			
Beta - 250026	1050 +/- 40 BP	-26.7 o/oo	1020 +/- 40 BP
SAMPLE : SAMPLE30 S97			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 970 to 1040 (Cal BP 980 to 910) AND Cal AD 1100 to 1120 (Cal BP 850 to 830)			
Beta - 250027	1220 +/- 40 BP	-25.6 o/oo	1210 +/- 40 BP
SAMPLE : SAMPLE27 S138			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 690 to 900 (Cal BP 1260 to 1050)			

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

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REPORT OF RADIOCARBON DATING ANALYSES

Dr. Jes Martens

Report Date: 11/6/2008

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 250028	650 +/- 40 BP	-22.1 o/oo	700 +/- 40 BP

SAMPLE : SAMPLE28 S83
ANALYSIS : AMS-Standard delivery
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid
2 SIGMA CALIBRATION : Cal AD 1260 to 1310 (Cal BP 690 to 640) AND Cal AD 1360 to 1390 (Cal BP 590 to 560)

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample

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REPORT OF RADIOCARBON DATING ANALYSES

Dr. Michael Derrick — Report Date: 1/22/2009

University of Oslo — Material Received: 12/29/2008

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 253957	160 +/- 40 BP	-24.9 o/oo	160 +/- 40 BP
SAMPLE : C56765/24 F86			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1660 to 1960 (Cal BP 290 to 0)			
Beta - 253958	360 +/- 40 BP	-23.0 o/oo	390 +/- 40 BP
SAMPLE : C56765/24 S103			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1440 to 1540 (Cal BP 510 to 420) AND Cal AD 1540 to 1630 (Cal BP 400 to 320)			

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.7:lab. mult=1)

Laboratory number: **Beta-250018**

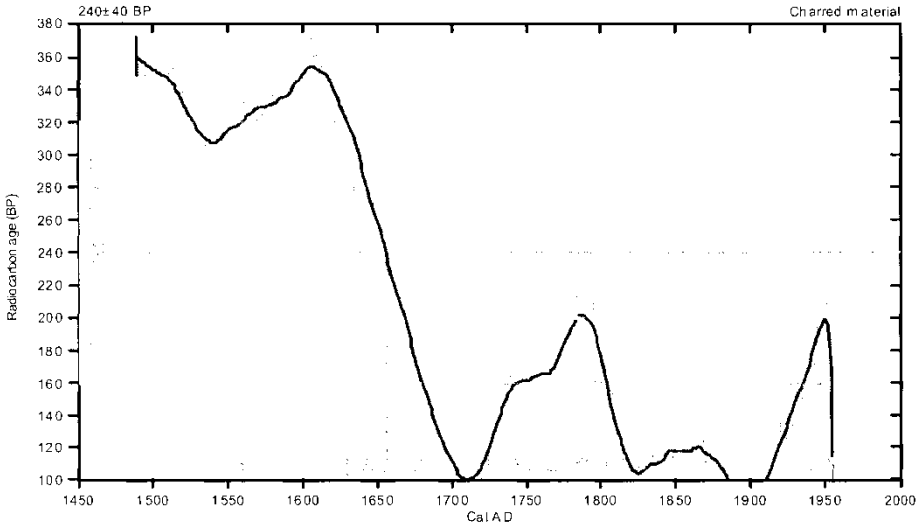
Conventional radiocarbon age: **240±40 BP**

2 Sigma calibrated results: **Cal AD 1530 to 1560 (Cal BP 420 to 390) and**
(95% probability) **Cal AD 1630 to 1680 (Cal BP 320 to 270) and**
Cal AD 1740 to 1800 (Cal BP 210 to 150) and
Cal AD 1940 to 1950 (Cal BP 20 to 0)

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1660 (Cal BP 290)

1 Sigma calibrated results: Cal AD 1640 to 1670 (Cal BP 310 to 280) and
(68% probability) Cal AD 1780 to 1790 (Cal BP 160 to 160)



References:

Database used
INTCAL04
Calibration Database
INTCAL04 Radiocarbon Age Calibration
IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).
Mathematics
A Simplified Approach to Calibrating C14 Dates
Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.8:lab. mult=1)

Laboratory number: **Beta-250019**

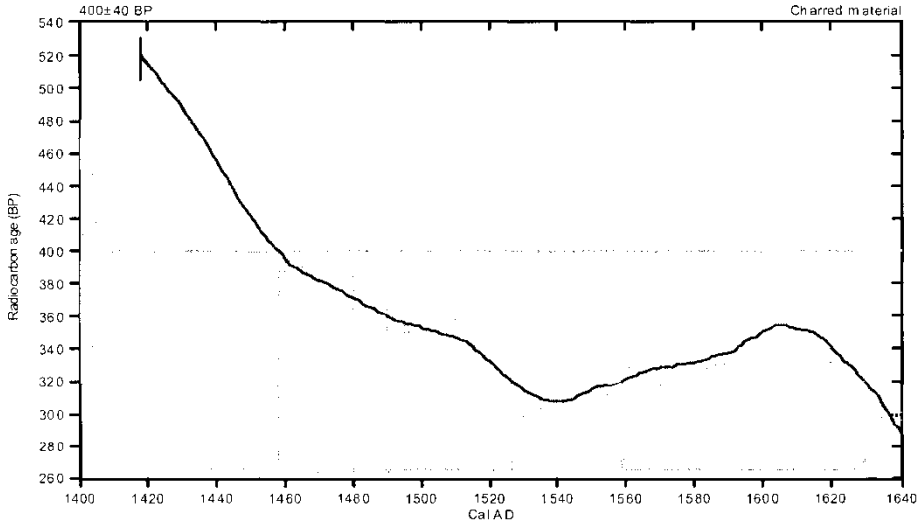
Conventional radiocarbon age: **400±40 BP**

2 Sigma calibrated results: (95% probability) **Cal AD 1430 to 1530 (Cal BP 520 to 420) and Cal AD 1560 to 1630 (Cal BP 390 to 320)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1460 (Cal BP 490)

1 Sigma calibrated result: (68% probability) Cal AD 1440 to 1490 (Cal BP 510 to 460)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

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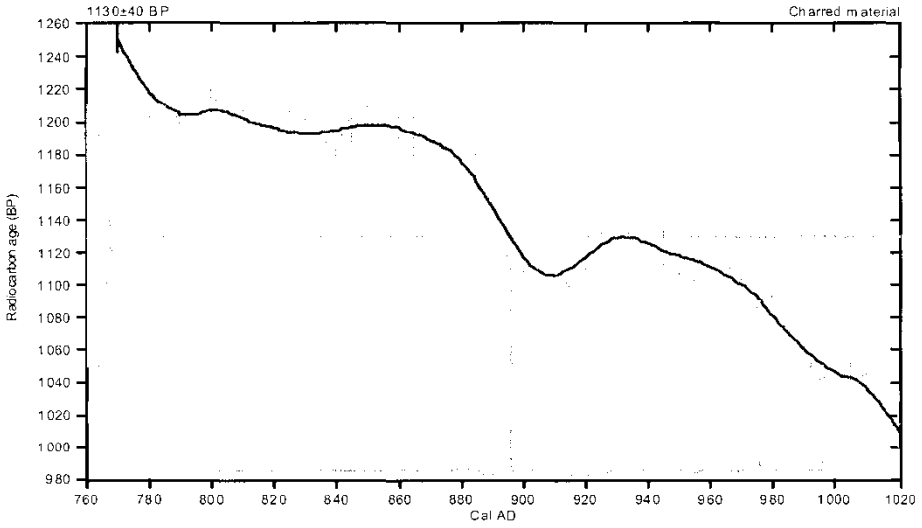
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.5:lab. mult=1)

Laboratory number:	**Beta-250020**
Conventional radiocarbon age:	**1130±40 BP**
2 Sigma calibrated result: (95% probability)	**Cal AD 780 to 1000 (Cal BP 1160 to 950)**

Intercept data

Intercept of radiocarbon age with calibration curve:	Cal AD 900 (Cal BP 1050)
1 Sigma calibrated result: (68% probability)	Cal AD 880 to 980 (Cal BP 1070 to 970)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.9:lab. mult=1)

Laboratory number: **Beta-250021**

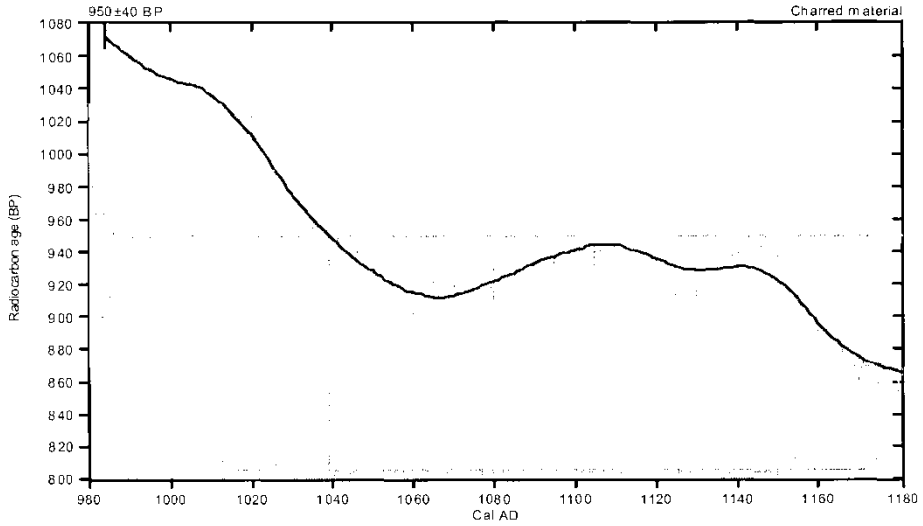
Conventional radiocarbon age: **950±40 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 1010 to 1170 (Cal BP 940 to 780)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1040 (Cal BP 910)

1 Sigma calibrated result: (68% probability) Cal AD 1030 to 1160 (Cal BP 920 to 800)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.9:lab. mult=1)

Laboratory number: **Beta-250022**

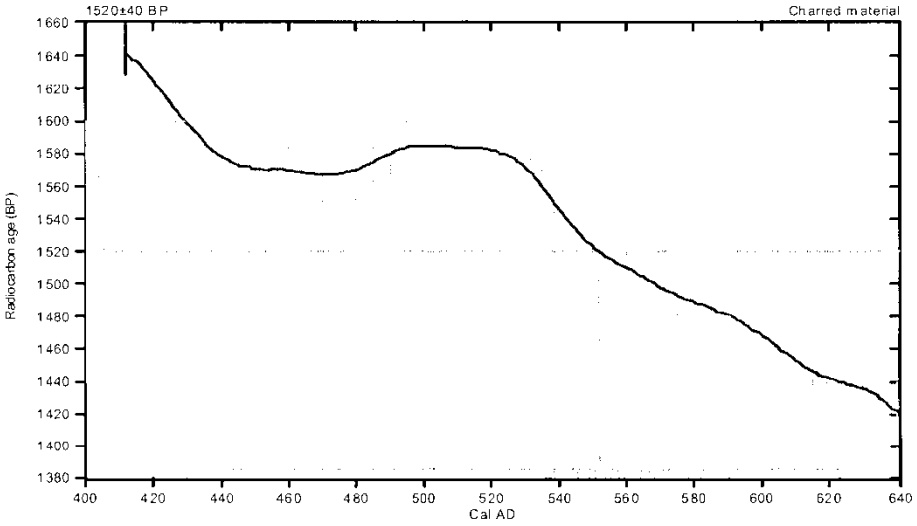
Conventional radiocarbon age: **1520±40 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 430 to 620 (Cal BP 1520 to 1330)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 550 (Cal BP 1400)

1 Sigma calibrated result: (68% probability) Cal AD 540 to 590 (Cal BP 1420 to 1360)



References:

Database used

INTCAL04

Calibration Database

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Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.9:lab. mult=1)

Laboratory number: **Beta-250023**

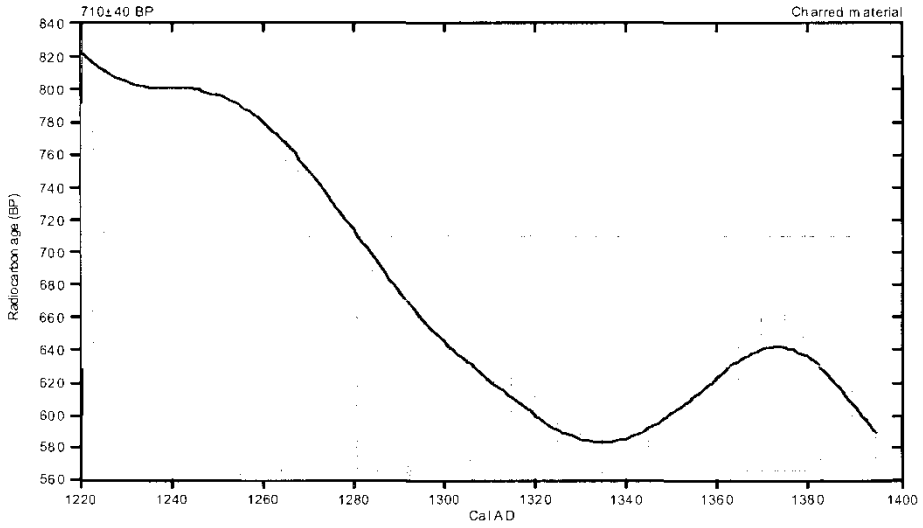
Conventional radiocarbon age: **710±40 BP**

2 Sigma calibrated results: **Cal AD 1260 to 1310 (Cal BP 700 to 640) and**
(95% probability) **Cal AD 1360 to 1380 (Cal BP 590 to 570)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1280 (Cal BP 670)

1 Sigma calibrated result: Cal AD 1270 to 1290 (Cal BP 680 to 660)
(68% probability)



References:

Database used

INTCAL04

Calibration Database

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IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.6:lab. mult=1)

Laboratory number: **Beta-250024**

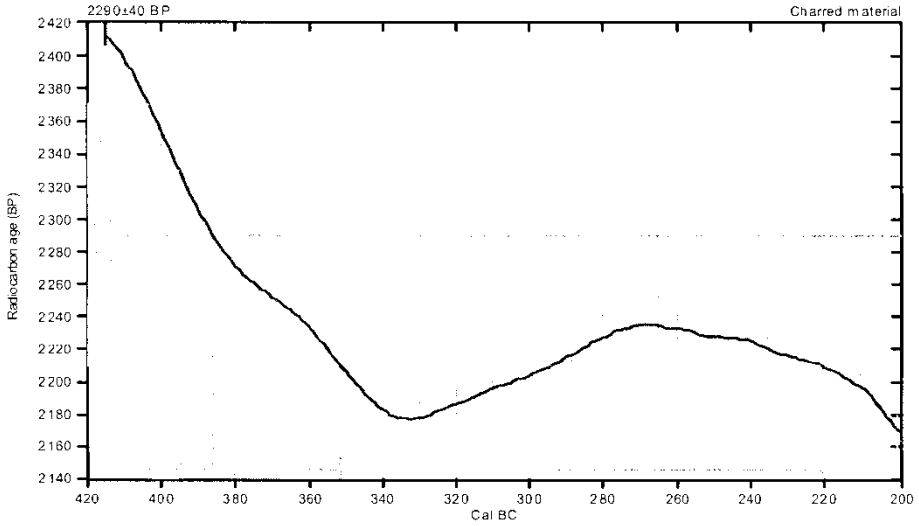
Conventional radiocarbon age: **2290±40 BP**

2 Sigma calibrated results: (95% probability) **Cal BC 400 to 350 (Cal BP 2350 to 2300) and Cal BC 290 to 220 (Cal BP 2240 to 2170)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal BC 390 (Cal BP 2340)

1 Sigma calibrated result: (68% probability) Cal BC 400 to 370 (Cal BP 2340 to 2320)



References:

Database used

INTCAL04

Calibration Database

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IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.8:lab. mult=1)

Laboratory number: **Beta-250025**

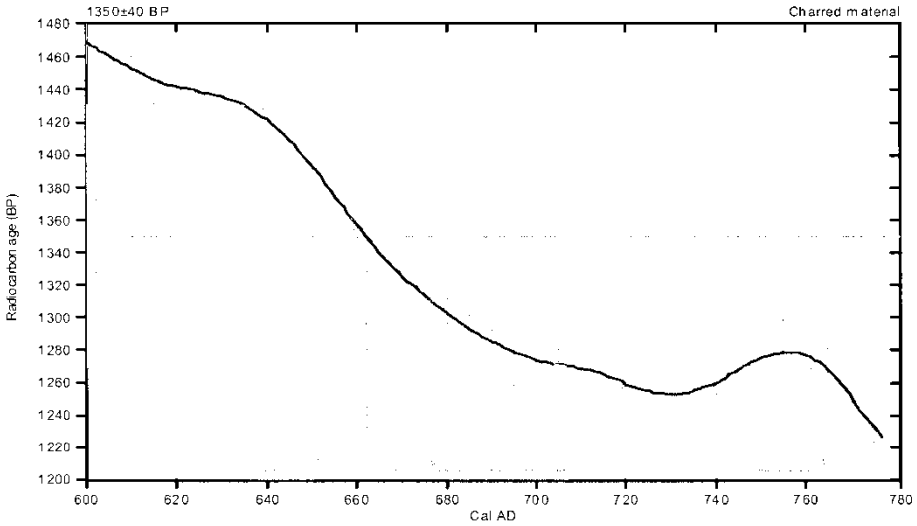
Conventional radiocarbon age: **1350±40 BP**

2 Sigma calibrated results: (95% probability) **Cal AD 640 to 710 (Cal BP 1320 to 1240) and Cal AD 750 to 760 (Cal BP 1200 to 1190)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 660 (Cal BP 1290)

1 Sigma calibrated result: (68% probability) Cal AD 650 to 680 (Cal BP 1300 to 1270)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.7:lab. mult=1)

Laboratory number: **Beta-250026**

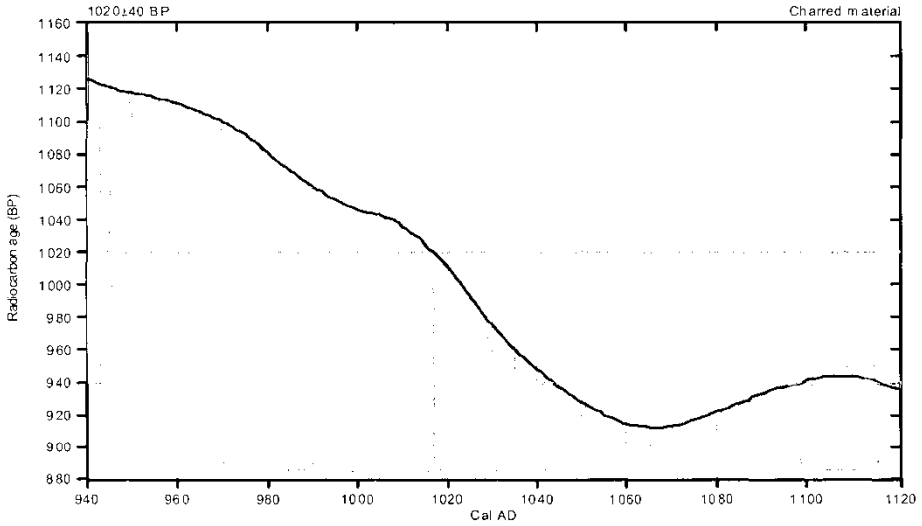
Conventional radiocarbon age: **1020±40 BP**

2 Sigma calibrated results: (95% probability) **Cal AD 970 to 1040 (Cal BP 980 to 910) and Cal AD 1100 to 1120 (Cal BP 850 to 830)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1020 (Cal BP 930)

1 Sigma calibrated result: (68% probability) Cal AD 990 to 1030 (Cal BP 960 to 920)



References:

Database used

INTCAL04

Calibration Database

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IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.6:lab. mult=1)

Laboratory number: **Beta-250027**

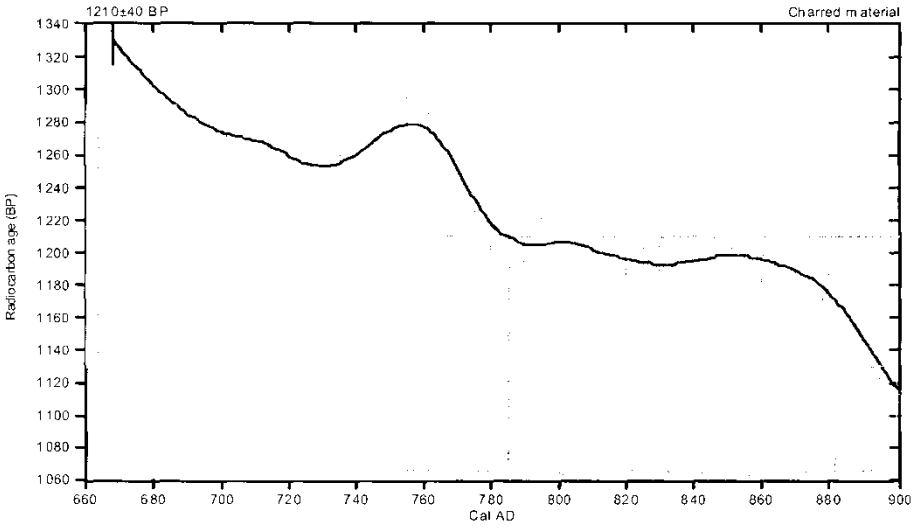
Conventional radiocarbon age: **1210±40 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 690 to 900 (Cal BP 1260 to 1050)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 780 (Cal BP 1160)

1 Sigma calibrated result: (68% probability) Cal AD 770 to 880 (Cal BP 1180 to 1070)



References:

Database used

INTCAL04

Calibration Database

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Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-22.1:lab. mult=1)

Laboratory number: **Beta-250028**

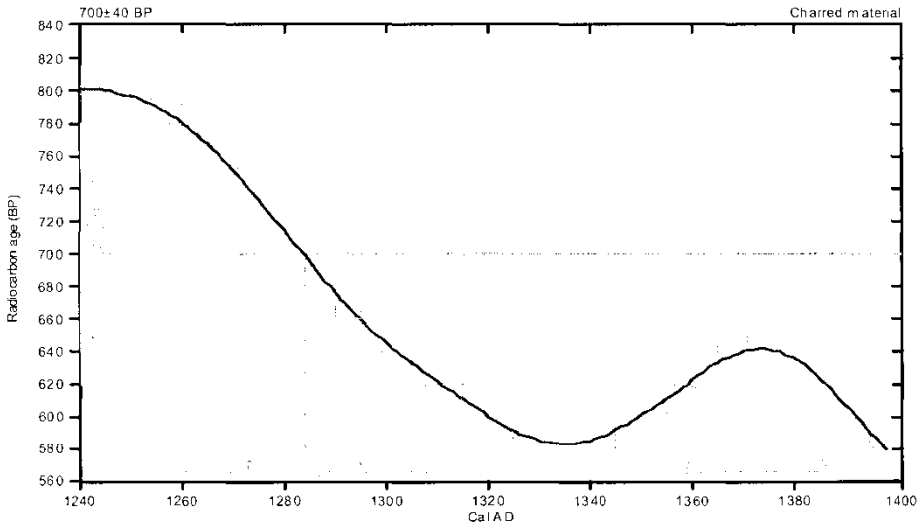
Conventional radiocarbon age: **700±40 BP**

2 Sigma calibrated results: **Cal AD 1260 to 1310 (Cal BP 690 to 640) and**
(95% probability) **Cal AD 1360 to 1390 (Cal BP 590 to 560)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1280 (Cal BP 670)

1 Sigma calibrated result: Cal AD 1270 to 1300 (Cal BP 680 to 660)
(68% probability)



References:

Database used
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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.9:lab. mult=1)

Laboratory number: **Beta-253957**

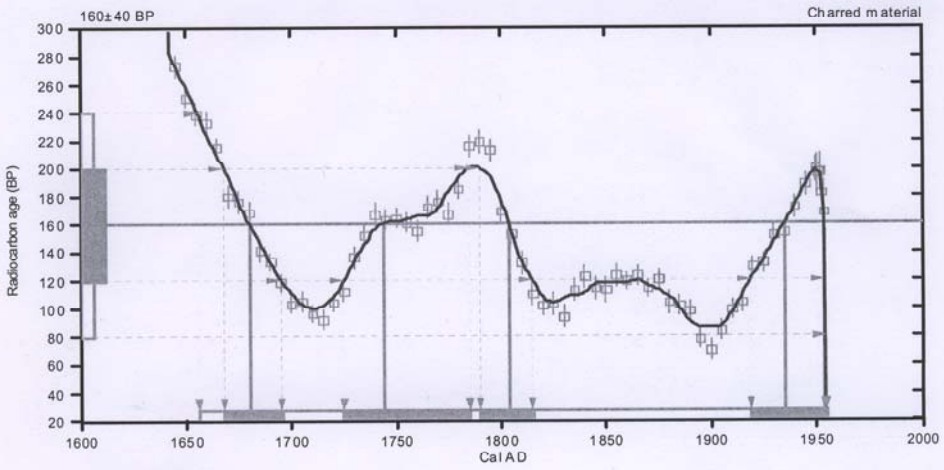
Conventional radiocarbon age: **160±40 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 1660 to 1960 (Cal BP 290 to 0)**

Intercept data

Intercepts of radiocarbon age with calibration curve: Cal AD 1680 (Cal BP 270) and
Cal AD 1740 (Cal BP 210) and
Cal AD 1800 (Cal BP 150) and
Cal AD 1940 (Cal BP 20) and
Cal AD 1950 (Cal BP 0)

1 Sigma calibrated results: (68% probability) Cal AD 1670 to 1700 (Cal BP 280 to 260) and
Cal AD 1720 to 1780 (Cal BP 220 to 160) and
Cal AD 1790 to 1820 (Cal BP 160 to 140) and
Cal AD 1920 to 1950 (Cal BP 30 to 0)



References:

Database used
INTCAL04
Calibration Database
INTCAL04 Radiocarbon Age Calibration
IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).
Mathematics
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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-23:lab. mult=1)

Laboratory number: **Beta-253958**

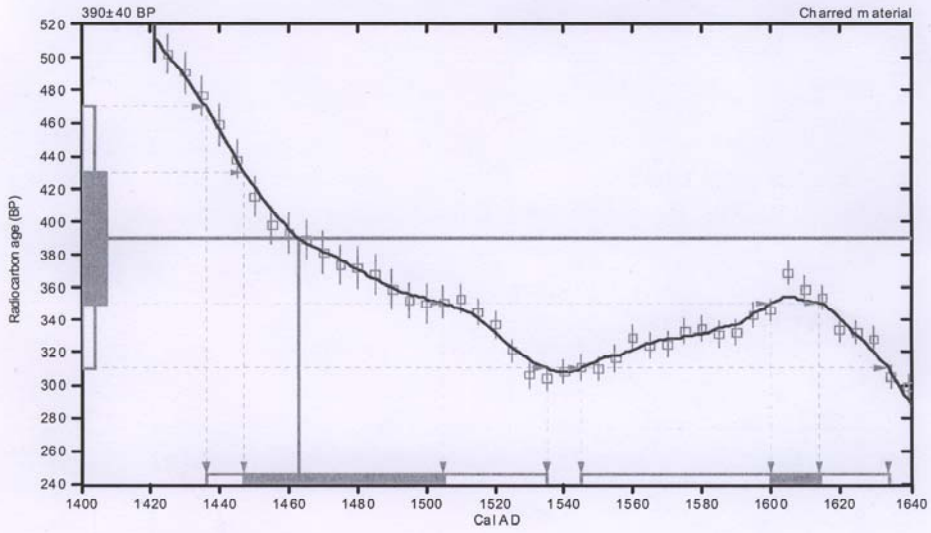
Conventional radiocarbon age: **390±40 BP**

2 Sigma calibrated results: **Cal AD 1440 to 1540 (Cal BP 510 to 420) and**
(95% probability) **Cal AD 1540 to 1630 (Cal BP 400 to 320)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1460 (Cal BP 490)

1 Sigma calibrated results: Cal AD 1450 to 1500 (Cal BP 500 to 440) and
(68% probability) Cal AD 1600 to 1610 (Cal BP 350 to 340)



References:

Database used
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Calibration Database
INTCAL04 Radiocarbon Age Calibration
IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).
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1

Høeg - Pollen, 876 842 262,
Helge Irgens Høeg,
Gloppeåsen 10,
3261 LARVIK

Oslo, 18/11-08.

Til Jes Martens.

Analyse av 12 kullprøver fra Kleiver, 7/1, Vestby komm., Akershus, Kulturminneområde id 111779.

P 1, S 1.
Det ble bestemt 25 biter. Alle var Betula (bjerk). Godt daterbart materiale 0,2 g.

P 14, S 178.
Det ble bestemt 17 biter. Alle var Betula (bjerk). Godt daterbart materiale 0,15 g.

P 20, S 167.
Det ble bestemt 40 biter. Av disse var 20 Betula (bjerk), 14 Corylus (hassel), 5 Quercus (eik) og 1 Pinus (furu). Godt daterbart materiale 1,4 g.

P 21, S 197.
Det ble bestemt 40 biter. Av disse var 27 Betula (bjerk), 11 Corylus (hassel) og 2 Pinus (furu). Godt daterbart materiale 0,4 g.

P 24, S 95.
Det ble bestemt 40 biter. Av disse var 1 Betula (bjerk), 5 Corylus (hassel) og 34 Pinus (furu). Godt daterbart materiale 0,05 g.

P 27, S 138.
Det ble bestemt 20 biter. Av disse var 6 Betula (bjerk), 2 Corylus (hassel) og 12 uten vedstruktur. Godt daterbart materiale 0,1 g.

P 28, S 83.
Det ble bestemt 30 biter. Av disse var 1 Betula (bjerk) og 29 Pinus (furu) hvorav 1 ung. Godt daterbart materiale 0,0 + 0,05 g.

P 30, S 97.
Det ble bestemt 40 biter. Av disse var 34 Betula (bjerk), 5 Corylus (hassel) og 1 Salix/Populus (selje, vier/osp). Godt daterbart materiale 1,2 g.

P 34, S 2.
Det ble bestemt 40 biter. Av disse var 12 Betula (bjerk), 1 Corylus (hassel) og 27 Pinus (furu). Godt daterbart materiale 0,1 g.

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Helge Irgens Høeg,
Gloppeåsen 10,
3261 LARVIK

Oslo, 5/12-08.

Til Jes Martens.

Analyse av 2 kullprøver fra Kleiver, 7/1, Vestby komm., Akershus, Anr. 2008/237, Tiltakskode:756109.

KP 22, S 103.
Det ble bestemt 40 biter. Alle var Pinus (furu).

F 86, F 86.
Det ble bestemt 10 biter. Av disse var 1 Betula (bjerk) og 9 Pinus (furu). Godt daterbart materiale 0,0 g.

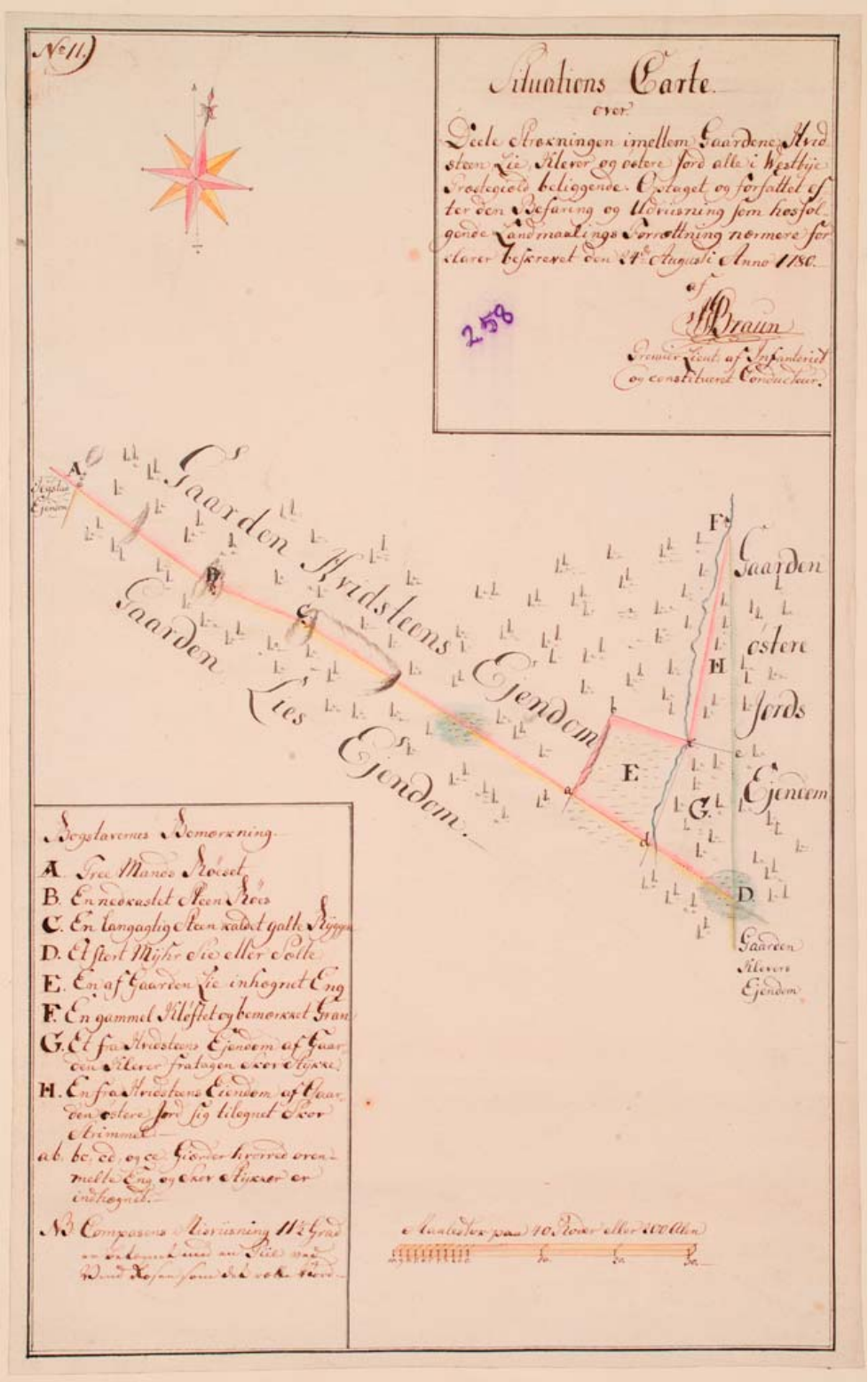
2

P 35, S 177.
Det ble bestemt 6 biter. Av disse var 1 Quercus (eik) og 5 Pinus (furu).

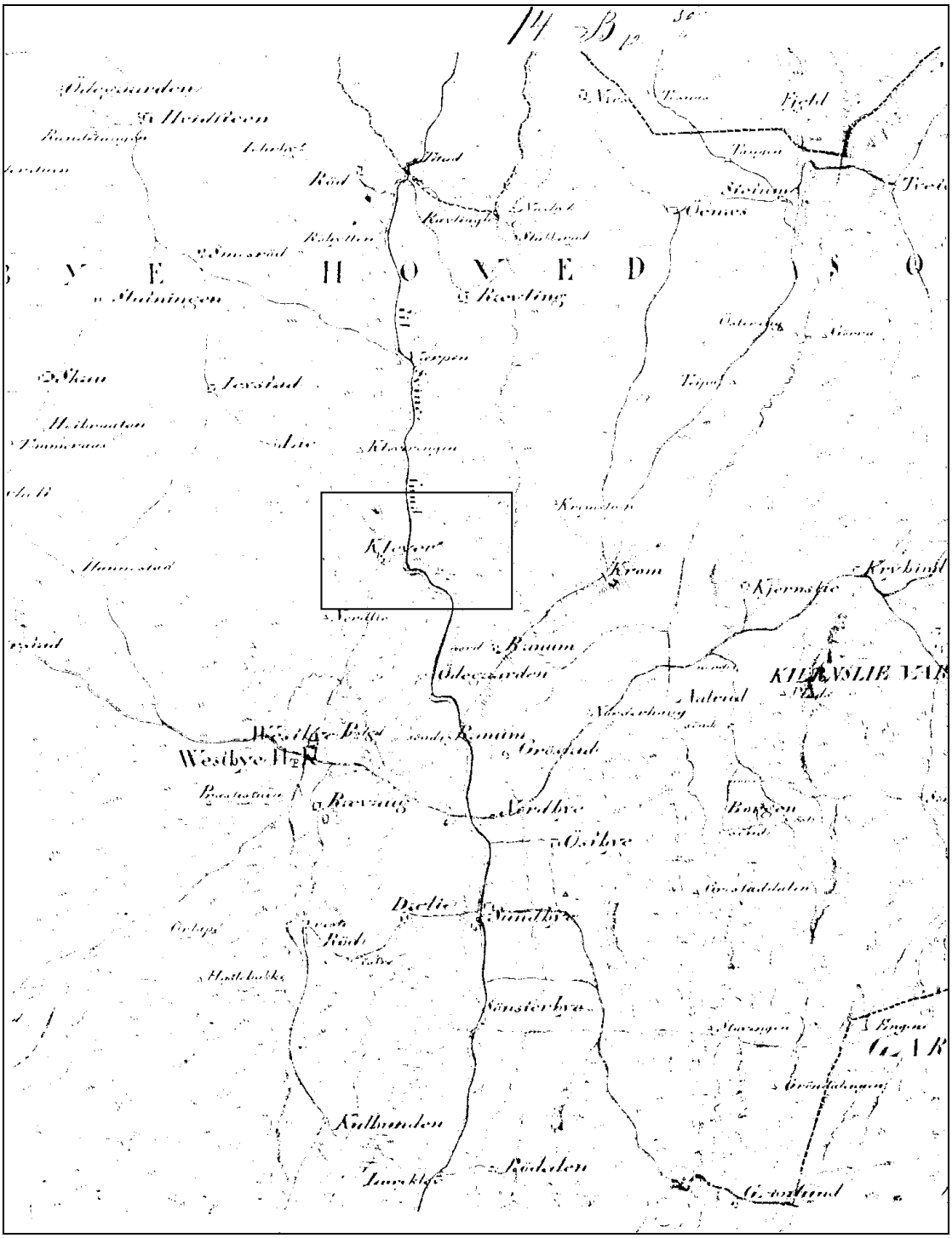
P 42, S 185.
Det ble bestemt 20 biter. Av disse var 2 Betula (bjerk), 2 Quercus (eik) og 16 uten vedanatomi. Godt daterbart materiale 0,0 g.

P 44, S 5.
Det ble bestemt 16 biter. Av disse var 2 Betula (bjerk), 10 Quercus (eik) og 4 Pinus (furu). Godt daterbart materiale 0,1 g.

8.7. MAPS



Situations map for Kleiver no. 258 17th june 1780 Riksarkivet Oslo (Jnr.134_08)



Lt. Heyerdahl map 1826 1:25000 Riksarkivet Olso.