Houses for the Living

Two-aisled houses from the Neolithic and Early Bronze Age in Denmark

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Two-aisled houses from the Neolithic and Early Bronze Age in Denmark

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Volume 1 – Text



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Neolithic settlements in South-East Jutland and around the Vejle River Valley

Charlotta Lindblom and Mads Ravn

Abstract: In this paper, we present an overview of the best-preserved and most recently excavated Neolithic house structures found in the area of archaeological responsibility of VejleMuseerne. The sites at Alstedgård, Riisvej II, and Dalsgaard II and III are presented in chronological order and more detail, in order to describe the most interesting features and house structures, whilst sites with more uncertain structures are described in the catalogue. Although this presentation is more a product of recent industrial developments than the representative settlement patterns of the Neolithic period, we suggest that many more Neolithic sites and settlement variations can be found within this area, when the screening of development areas is routinely undertaken.

Introduction

Houses from the Neolithic period have not previously been found in particularly large numbers within VejleMuseerne's area of archaeological responsibility, a picture that is probably familiar to many Danish archaeological museums. Most of the Neolithic sites in VejleMuseerne's area of responsibility have been revealed during excavations of sites of a later date within the same area. One explanation for this may be that to the untrained eye, Neolithic feature types can be difficult to spot in the subsoil, as the features have been leached out by millennia of heavy rain. Renewed focus upon the Neolithic period, together with more systematic trial excavations and excavations associated with an increasing number of construction projects, however, has led to the discovery of a number of interesting remains and sites during the past few decades. These will be presented here.

Landscape and topographic location

The Vejle River Valley is East Jutland's longest and most pronounced subglacial stream trench. It is up to 7 km wide and extends up to 20 km inland to the west; it constitutes a significant barrier, almost a border, between northern and southern East Jutland. The ridges that have been carved out by the melt water of the last Ice Age begin around c. 88 m above sea level, on the south side of Vejle Fjord in the forest of Gauerslund Skov, near Brejning, and reach 108 m to the west, in the forest of Vinding Skov and on Munkebjerg. On the northern side, the hills increase in height towards the west in the forest of Staksrode Skov to 113 metres above sea level. The river valley follows three routes: through Grejsdalen north and then west to Jelling; via the broad Vejle River Valley, to the west to Randbøldal and Egtved; and to the south, via the valley of Holten Ådal, to Ny Højen. The inaccessibility of this terrain is reflected in accounts dating to as late as the 18th century (Hvass et al. 1997, 140). Whether the sites are located close to the fjord or not, the Vejle River Valley is a significant element of the landscape of South-East Jutland, around which this article's sites, finds and remains, especially the two-aisled houses, should be presented.

Seen from a broader perspective, it ought to be mentioned that there is not much evidence of early settlement in the area. It should, however, be emphasised that there are a few late glacial finds: a Hamburg arrowhead found at Anesminde, 2.5 km south-west of Tørring; Federmesser flint at Egtved; and Bromme flint from Smidstrup, Hygum and Sandvad. Mesolithic activity is mostly known about as a result of amateur collecting at the beginning of the 20th century. A total of 97 sites are

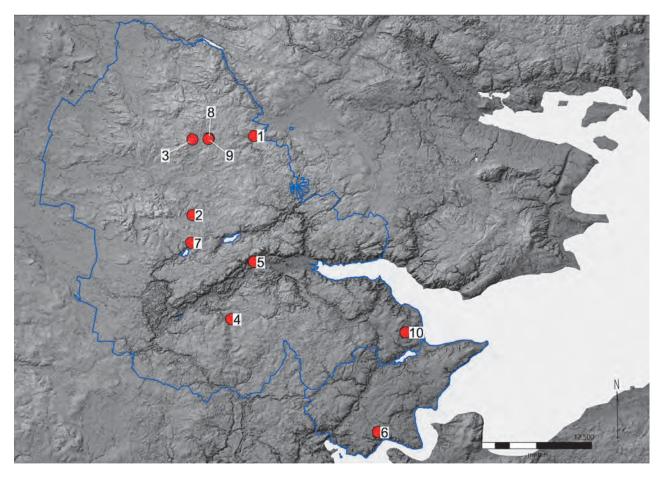


Fig. 1. Summary illustration showing the location of the sites mentioned in the text in the Vejle and Fredericia areas. 1) Alstedgård, VKH 6396. 2) Højeknøs, VKH 6378. 3) Riisvej II, VKH 7246. 4) Lille Mølkær, VKH 7033. 5) Skibet, VKH 6912. 6) Kristinebjerg øst, VKH 7087. 7) Sødover, VKH 6925. 8) Dalsgård III, VKH 7258. VKH 7258. 9) Dalsgaard II, VKH 6498 and 10) Høllvej, VKH 7303. (Graphics: Anders Horsbøl Nielsen, VejleMuseerne). Not all the sites are presented in the text, as the article is focused upon sites with clear concentrations of two-aisled houses.

known, which are located in and along the Vejle River Valley. The locations, totals, types and closer dating of these finds will have to be analysed another time. But there is no doubt that the Vejle River Valley played a 'unifying' role in this period and was attractive for both fishing and hunting.

The situation is completely different after the transition to the Neolithic. Based upon the sites mentioned below, although these are not representative, people apparently settled on the hills north and south of the river valley, at sites located between 22 m and up to over 100 m above sea level. This settlement pattern indicates that another type of economy was dominant in the hilly landscape. This argument is also partly supported by the distribution of later burial mounds. The mounds are often later, but nevertheless reflect greater focus upon an agrarian economy, in which hunting and gathering were less dominant (Hvass *et al.* 1997, 25); this can also be observed from dated Neolithic finds,

remains and sites. When the Danish archaeological database, Fund og Fortidsminder, is searched for Neolithic settlement remains in their broadest definition, 57 are listed. These are evenly spread out across a map of the museum's area of responsibility, and are located on relatively high ground, but are not far from coast and rivers, along the Vejle Fjord and the Grejs Valley (Grejsdalen) further inland. To the north, there are also apparently inland sites, but upon closer examination it becomes clear that these sites were originally situated close to known, now drained, wetlands and river courses. The known sites are located in sandy areas, which are visible as headlands. The location of the sites is not representative, but instead reflects developer activity in the museum's area of responsibility, which is supported by the relatively dense settlement. Despite this, the provisional conclusion must be that Neolithic sites, in contrast to those from the Mesolithic period, are located higher up in the area, although close

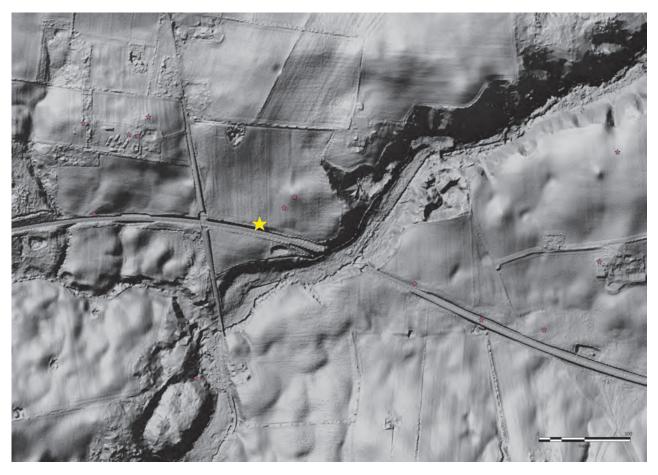


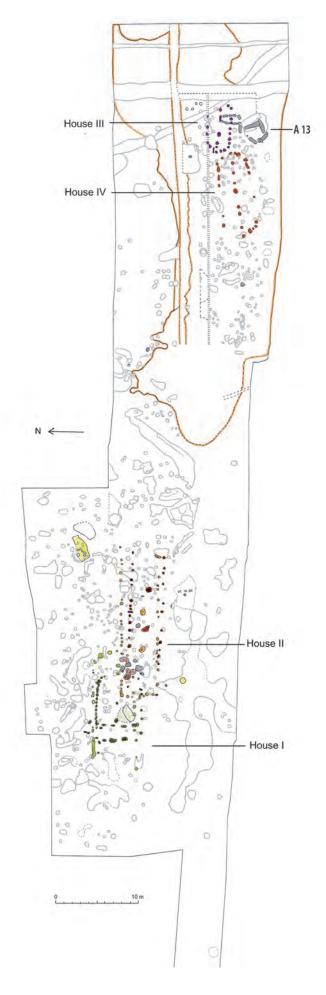
Fig. 2. Relief map of Alstedgård (marked with yellow star) and surrounding sites (red stars). (Source: Fund og Fortidsminder 2016).

enough to the water routes to enable connections to be maintained with coastal and inland areas. Greater understanding of the location of the sites in the landscape will, however, require thorough source-critical studies, which are unfortunately not possible within the scope of this summary. As the general aim of this book is to present the variation amongst and interpretations of the Neolithic houses, the authors have decided in this article to present data from just four sites. The remainder are presented in a catalogue, in the hope that, even though the small number of sites in VejleMuseerne's area of responsibility is not representative from a local let alone a regional perspective, this data can perhaps contribute to a better understanding of the representativeness and variation from a more general, East Jutlandic, indeed Danish perspective, which is also the overall aim of this volume. If we examine the excavated sites presented here in detail, they contain relatively obvious structures; the most definite and well documented of these are presented here in chronological order. The more uncertain examples are classified as suggested houses. All of the sites are described in the book's general catalogue. Fig. 1 shows the sites discussed in the text on a summary map of the area.

Early Neolithic and MN A (c. 3900-2800 BC)

Alstedgård

The site of Alstedgård (cat. no. 422) is located 2 km east of the ancient route, Hærvejen, up to 100 m above sea level on a south-facing slope. It is situated north of a wetland through which the watercourse, Alsted Mølleå, runs. The site was excavated in 2001, prior to the construction of the motorway between Riis and Ølholm, and was just one of several Neo-lithic sites that were excavated (figs. 1 and 2). The excavation extended over an elongated area covering 1680 m², which of course did not provide a natural demarcation of the site. The site is located on a sandy



hill, like many of the other Early Neolithic houses. In the following description of the structures that were found at the site, references are routinely made to the summary illustration (fig. 3).

Here, the excavator identified six possible houses from the Early Neolithic and Middle Neolithic (Nielsen 1999, 151), referred to in the text below as houses Ia-Ib, IIa-IIb, III and IV. When the term "possible house sites" is used this is because it can be argued that houses Ia-Ib and IIa -IIb may constitute the remains of long barrows, involving several phases of reconstruction. To the west were four houses orientated east-west (houses Ia-Ib and houses IIa-IIb), which were parallel to one another, but were displaced and the buildings overlapped, although no stratigraphy could be observed. Close to these was a pit containing sherds from at least three pottery vessels, including a lugged jar. The pottery is dated to EN I-II. Apart from the numerous surrounding features and large fills, this area containing the structures described above was on one level, whereas the eastern part of the area consisted of a large, darkcoloured layer containing red sand and small sherds of decorated MN A pottery. The large patches were thought to be associated with a mound or cultural layer. No mound fills were, however, recorded in the eastern part of the area, although this still does not rule out the possibility of a mound having been located here. The cultural layer in the east was excavated in square metres in order to examine the finds' distribution within the area, and to see if any features could be identified under the layer. Two houses orientated east-west were recognised under the layer, along with probable remains of a small rectangular dolmen chamber with a passage consisting of posts.

There is, as also demonstrated by recent research, a real possibility that some of 'the house sites' Ia-b and IIa-b may have been part of a complex pattern of houses, long barrows with dolmen chambers and separate dolmens, as at Damsbo on Funen (Eriksen & Andersen 2014, 266) and Ibjerg Øst I and II (Juel, Hansen & Andersen 2016, 12 ff.). There is no doubt that the various structures at the site should be viewed as reflecting a complicated building history. As it cannot definitely be determined whether houses or remains of long barrows are represented, both these interpretations should be regarded as possibilities.

House Ia was located furthest west and was only preserved along a length of c. 12 m and a width of c. 5 m (fig. 4), with two possible central posts at the eastern end of the house. House site Ib was preserved along a length of 9 m and a width of c. 5 m, and had one central post at its western end (fig. 5). Here, a small wall slot can be seen in the north-western and south-western part of the wall course. Both buildings had a possible entrance along their northern sides. The two houses were distinguished from one another on the basis of the form and fill of their posts. No definite stratigraphy was observed, which might clearly indicate whether this was two phases of one house or actually two different houses. Therefore, the structures are dealt with in the following text, in accordance with the excavator's interpretation, as two different structures/houses - here referred to as houses Ia and Ib. Due to poorer preservation in the western part of the area, the west end of the structure was not preserved. Scattered postholes were, however, recognised, although the fill of these was of another character. At the western end of house Ib, a possible division into sections was observed, with a small pit present in the southern part. The northern part of this pit consisted of clay and the southern part grey sand with charcoal flecks. The feature contained two narrow flakes and a rim sherd from a funnel beaker that was decorated with diagonal hatching.

Whether the feature is contemporary with some of the phases of the house is uncertain, as no clear stratigraphy could be identified between the features. One of the wall posts in house Ib contained Neolithic pottery, although this could not be dated any more closely. No material that was suitable for scientific dating was recovered from these houses.

The other possible interpretation is that these are remains of early, wood-built long barrows containing the remains of a burial, which was placed at right angles to the longitudinal direction of the mound. In this case, the small pit containing two flakes and a funnel beaker sherd, east of the right-angled post arrangement, may have been associated with a possible burial (Madsen 1972). If the structure is interpreted as a burial mound, then there would have been several phases of expansion, which is typical of the earliest long barrows (Ebbesen 2007, 13 ff.).

The structures that are referred to as houses IIa and IIb were located just to the south-east of house I. The two possible houses cut one another in the south-eastern end of house I, although unfortunately no obvious stratigraphy could be observed.

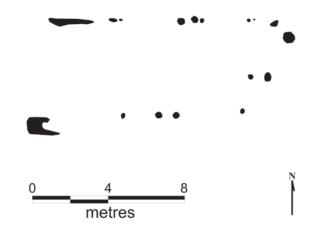


Fig 4. House Ia at Alstedgård. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

House IIa is slightly trapezoid and measures 4-4.5 m in width, whereas house IIb is 3.5-4 m wide. Both houses are 18 m long. House IIa is slightly trapezoid and wider in the east, whereas it appears that IIb has parallel wall courses. Both house sites have preserved central posts - three central posts in house IIa and two central posts in house IIb (figs. 6 and 7). The eastern end of the house is missing, and at the west end of the house was a collection of large stones measuring between 0.5 m and 1 m in diameter. These had clearly been buried. Near the stones were a few fills containing Early Neolithic pottery. The placement of the stones inside the building cannot be further explained. That these two structures, houses IIa-b, together with the collection of stones at the western end, could either be interpreted as the remains of a long barrow, a palisade enclosure or ordinary house sites, was discussed during the excavation. Palisade enclosures are primarily found

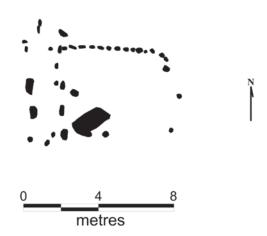


Fig. 5. Summary plan of house Ib at Alstedgård. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

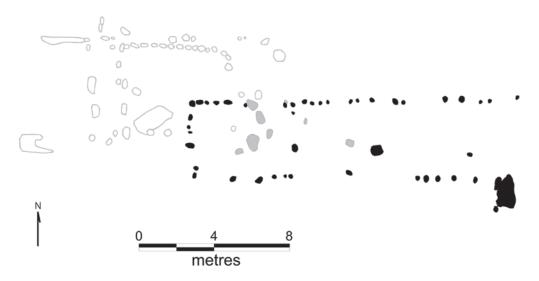


Fig. 6. Summary plan of house IIa at Alstedgård. (Graphics: Mads Ravn, VejleMuseerne).

in Jutland, and can be both trapezoid and rectangular in shape.

Trapezoid long barrows and trapezoid palisade enclosures are, for example, found at Bygholm Nørremark, Teglværksgården, Harreby I-II and Surløkke. These are dated to the latter part of EN and pottery decorated in the Volling style has been recovered within the enclosures (Rønne 1979, 3 ff., Kristensen 1991, 72 ff.). Recently published examples also show that some sites had both burial structures and settlement in the same place (Eriksen & Andersen 2014, 267; N.H. Andersen in this volume). In addition, Early Neolithic pottery was found in a pit immediately south and south-west of the houses/structures at Alstedgård. The pottery probably dates to EN II-Volling. It is therefore possible that these two houses should be interpreted as remains of long barrows without mounds, for instance, with one early house preserved (Eriksen & Andersen 2014, 267). No mound fill was found, however, although this could easily have been ploughed away in the past (Liversage 1983, 5 ff.)

Five transverse arrowheads were retrieved from the surface between house II and the eastern cultural layer. These were regarded as unstratified surface finds and were found after extensive sand drifting had occurred at the site. As previously mentioned, there was an extensive cultural layer in the eastern part of the excavation area, see summary illustration (fig. 3). This contained ceramics, moderate quanti-

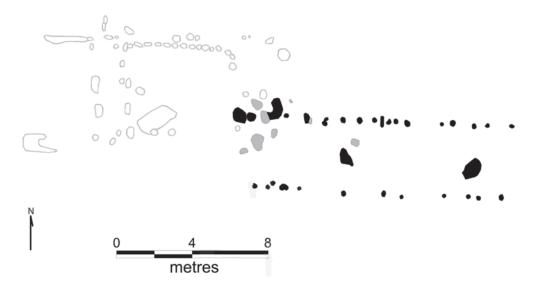
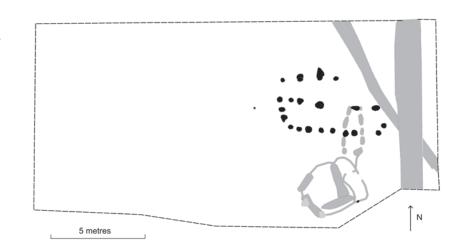


Fig. 7. Summary plan of house IIb at Alstedgård. (Graphics: Mads Ravn, VejleMuseerne).

Fig. 8. Summary plan of house III at Alstegård. Remains of the possible megalith shown in grey. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).



ties of burnt flint and flint flakes. The cultural layer consisted of dark, grey-brown sand with clear, large, red "ochre-coloured patches". This was thought to be a possible megalithic structure. An east-west orientated baulk was therefore excavated across the area to see whether or not remains of a megalithic structure were present. No mound fills, however, could be observed. The layer extended over an area measuring c. 49 m E-W and 14 m N-S. In order to better investigate the density of finds, as well as the possible underlying features, a significant part of the layer was divided into square metres and sieved on site. The uppermost part of the cultural layer contained a number of fragmented flint objects, including pieces of a polished pointed-butted axe and a polished thin-butted axe. The cultural layer contained decorated pottery from MN AI, flint, burnt flint and a few charcoal flecks. The flint was generally fragmentary and had been exposed to fire. The thickness of the cultural layer varied between 10 and 25 cm. Sieving indicated that there was a correlation between the concentrations and distribution of burnt bones and Neolithic pottery. The burnt bone fragments were very small and crumbled easily. In the area between house site II and the eastern part of the cultural layer, a total of four fine transverse arrowheads were found, whilst one transverse arrowhead was recovered from the cultural layer itself. The transverse arrowhead from the cultural layer is made from a flake, and has a wide, curved cutting edge with rounded corners. Of the other transverse arrowheads, two are narrow with parallel sides and one has been made from a disc flake.

No features or pits were, however, visible in the cultural layer itself. Under the cultural layer, the substantial, reddish sand layer was even more obvious, with scattered pockets containing drifted sand, as had already been observed during soil stripping. This red-brown sandy layer was, as mentioned previously, mixed with material from the overlying cultural layer. After excavation and sieving of the cultural layer, the underlying sand layer was investigated for evidence of features. There were a number of postholes under the layer and subsequently two houses (III and IV) were identified, as well as an almost rectangular structure containing evidence of stones and a "post passage", marked as A13 on the summary plan. This structure is interpreted as the remains of a dolmen chamber, with a post passage that was added afterwards.

A small house (house III) was located in the easternmost part of the excavation area. This house measured 3 m wide and 6 m long, and had four-five central posts (fig. 8). A fragment of pottery was recovered from one of the postholes in its western end wall. The sherd was decorated with vertical lines – impressions that may have been made with plant fibres. The house's north-eastern end wall was missing, as it had been disturbed by a ditch. This ditch contained a piece of flint that had been polished and a rim sherd with double-twisted cord decoration under the rim. The ditch is certainly later than the house, although there is very little chronological difference between house III and the ditch, on the basis of the finds that were recovered from the latter.

Immediately west of house III were a number of postholes. During the excavation, it was not possible to identify any systematic pattern amongst these, but by examining the placement of the postholes and comparing this with the distribution of Neolithic pottery, a house site can cautiously be suggested – house IV. The house is E-W orientated, with a slight slope to the NE-SW, and measures c. 10 m in length and is 4 m wide; it has eight-ten central posts and 17 small wall



Fig. 9. House IV at Alstedgård. Remains of the possible megalith shown in grey. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

posts (fig. 9). The total number of posts associated with this house, however, is difficult to establish. These two houses very much resemble known Early Neolithic houses, both in terms of their shape and size (Nielsen 1999; Eriksen 1992).

As previously mentioned, on the southern side of house III and to the south-east of house IV was a small, almost square structure, A13 (fig. 3). This was orientated ENE-WSW and measured 2.5 × 2.5 m. The square structure had a small area/extension in the north. When a section was excavated (SSE-NNW), it became clear that the structure consisted of four pits, which were clearly separate from one another. These were c. 30-40 cm wide, although the pit in the northern part was smaller. The western pit contained numerous stones, which were both hand and head sized, as well as stone tiles. The fills of the features consisted of dark, grey-brown sand, apart from the eastern ditch, the fill of which was made up of grey homogeneous sand. Just north of this grey layer was a small strip containing a mixed fill. This could very possibly be interpreted as evidence of stones. The layer in the middle of the structure consisted of light, yellow-brown speckled sand. The pits themselves contained scattered pottery sherds, flint flakes, burnt flint and charcoal. The pottery consisted of small undecorated sherds. Some of the sherds were of a Neolithic date. An unusual part of the construction was the north-running "ochre band" (c. 1 m wide), which appeared to have been enclosed/bordered by posts. The posts were almost elongated oval and rectangular in shape on the surface (chopped?) and were very obvious in section. The passage appears to have been closed to the north. The post passage runs into house III, but there was a small amount of stratigraphy at its northern end. According to the stratigraphy, the house is probably earlier than the post passage. The rectangular structure with "the post passage" should probably be interpreted as the remains of a dolmen chamber with a subsequently added passage of posts. Neither can it be excluded that the features interpreted as postholes may be remains of very regular stone tiles. The thick cultural layer, quantities of ochre, burnt flint, black sand, fragments of flint tools, as well as the rectangular structure (A13) with the post passage, suggest that a burial structure was placed at the site and rituals were carried out on top of an earlier settlement area, consisting of two houses - houses III and IV. A similar example was excavated at the site of Damsbo, close to Helnæs Bugt on Funen. Here, three megalithic structures were placed on top of the sites of earlier two-aisled houses (Eriksen & Andersen 2014, 260-269).

Several excavations have revealed evidence of fire in the form of charcoal layers or burning of the subsoil. This burning has been interpreted in a ritual context, and associated with a consecration or purification ritual that took place before the construction of the burial chamber (Juel, Hansen & Andersen 2015, 28). Rituals involving burning have been interpreted as a rite of passage connected with an area changing status from the profane to the sacred sphere (Talos 1987, 391 ff.).

The houses and features are dated on the basis of the pottery from the postholes, as well as house typology. The house sites mainly date to the Neolithic period, especially the early or middle. The cultural layer contained pottery from EN II and MN AI. The pottery sherds appear to come from open bowls and vessels with funnel-shaped necks. The characteristic decoration consists of vertical bands surrounded by hatched bands. The funnel-shaped beakers are decorated under the rim and display vertical lines

on the belly. Houses III and IV, which were located under the east of this cultural layer, should of course be interpreted as earlier. These houses also resemble other small houses dating to EN and the beginning of MN A from Denmark, such as those at Bygholm Nørremark, Ornehus and Strandby Gammeltoft (Nielsen 1999, 152). The pottery from house II can be dated to EN II-Volling. The ceramic evidence generally does not indicate substantial chronological differences, and with the relatively significant sand drifting that has occurred at the site, it can be assumed that the settlement layers/cultural layer were sealed very quickly. Unfortunately, very little suitable material for ¹⁴C dating was recovered, and also, prior to 2001, the Museum Act did not enable much 14C dating to be undertaken.

Interpretation

The archaeological material suggests a small settlement, perhaps consisting of a small family unit, which settled in the area for a period. As previously mentioned, it cannot be excluded that ritual activities occurred and dolmens were constructed in the area, even if the evidence for this is ambiguous. This aspect is particularly well illuminated by the two houses that were overlain by the cultural layer. The discovery of pits indicates that digging for clay has taken place and these pits were subsequently filled up with waste. In the area between house sites I and II and the cultural layer, a number of transverse arrowheads were found. In the cultural layer, which appears to define the settlement to the east, there seems to have been a complicated pattern of activity and interaction between the different features. A number of problems are associated with interpreting the function of some of these features. The function of the cultural layer is not obvious from the finds. It most of all resembles the remains of waste from an ordinary settlement area. Pottery sherds, flint flakes, burnt flint, transverse arrowheads and a few fragments of flint objects were recovered. But the distribution of Neolithic pottery and small pieces of burnt bone was also very uniform, and there were large patches of red and red-brown sand under the cultural layer. It must be assumed that at this location, an earlier settlement was cleared in order to erect a dolmen site in the early MN A.

An attempt to sum up the chronological sequence of the site follows (fig. 3). During EN, a small settlement is located on the sandy hill, consisting of a small house (house III/IV) and a possible woodbuilt long barrow to the west in several successive phases (house sites Ia-b and IIa-b). The small house is followed by another house (house III/IV). There is unfortunately no stratigraphy between houses III and IV. But according to observations about the relative chronology - the sealed cultural layer from MN AI-II, the houses should be dated between 3900 and 3200 BC (Nielsen 1999, 151-152). The two large house sites/mound sites (houses Ia-b; houses IIab) certainly stood for some time. This can clearly be seen from the two subsequent phases, as well as possible extensions. Whatever occurred, it is clear that the sequence of activities at the site was very complicated. It is hoped that a series of ¹⁴C dates will be able to shed more light upon the problem. Modern methods of analysis only require small amounts of organic material, so the scanty organic material from the site can be used for dating. A few km north of the site of Alstedgård, at least six plough-damaged burial mounds have been recorded and from most of these battle axes/boat-shaped axes or thin-butted axes have been recovered, with the finds mainly dating to the Single Grave Culture (fig. 2).¹

Riisvej II

Riisvej II (cat. no. 418) is located 101 m above sea level on a high sandy hill, c. 2.5 km west of the N-S running ancient transport corridor, Hærvejen. During the excavation, a number of scattered features were recognised in the form of postholes and pits. A fragment of a stone axe had been found in a feature in the trial excavation. One of the fills contained numerous flint objects, including several transverse arrowheads, disc and flake scrapers, flakes and a flint core. A house, possibly in two phases, was apparently associated with this fill (figs. 10 and 11). It is, however, somewhat difficult to determine which posts belong to which phase, although it must be assumed that there were two houses at the site.

The house is orientated almost NNW-SSE and measures c. 12 m in length and 4.5 m in width. In house Ia, five central posts and eight possible wall posts were identified. House Ib contained one-two central posts, as well as nine possible wall posts. The fill can most likely be interpreted as a sunken floor in the house. Some of the postholes were clearly visible during surface cleaning, after which the area in and around the sunken area was investigated in order to identify the remaining posts. The posts could be

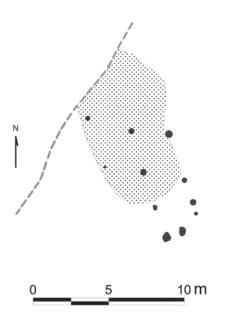


Fig. 10. Summary plan of two-aisled house Ia with sunken floor at Riisvej II. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

seen on the surface and during the excavation of the sunken area. When the sunken area was excavated, a NE-SW section was placed across it. It was deepest in the north-east, measuring as much as 60 cm in places. On its south-western side, however, it was only 18 cm deep. No clear division into layers was observed in the sunken area, which consisted of red-brown to yellow-brown homogeneous sand. A thinner layer at the top was, however, mixed with

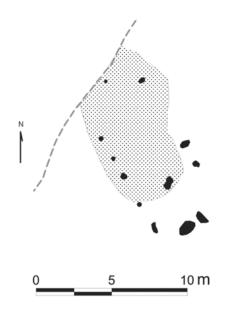


Fig. 11. Summary plan of two-aisled house Ib with sunken floor at Riisvej II. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

grey-brown homogeneous sand. The boundary between these layers was, though, somewhat diffuse. No evidence of fireplaces was found amongst the excavated material. The excavation of the house unfortunately took place under a very strict time schedule, due to the practical circumstances, as well as weather conditions involving snow and frost. Dating to the Funnel Beaker Culture is suggested by both the flint and pottery. The ceramic material unfortunately has altered surfaces, and may have been exposed to sand and wind for a considerable period. It is still, however, obvious that some of the sherds are decorated with stabbing and vertical grooves under the rim. The pottery can cautiously be dated to MN AI, whilst the flint that was retrieved dates to the Funnel Beaker Culture.

MN B/Late Neolithic

Dalsgaard III

At Dalsgaard, two houses from the transition between the Late Neolithic and Early Bronze Age were excavated: Dalsgaard II (cat. no. 417) and Dalsgaard III (cat. no. 419). The houses were excavated separately, with an interval of eight years in between, in connection with the construction of the motorway between Riis and Ølholm, and the extension of this in 2008. Despite having been given different archive numbers, both houses actually belong to the same settlement. The site is located 101 m above sea level, c. 400 m south of the Omme Å watercourse on a pronounced ridge, which slopes down to the north and south. Hærvejen is c. 130 m to the east.

The two-aisled longhouse (house I) at Dalsgaard III (cat. no. 419) had three internal roof-bearing posts, which were placed along the middle of the house and probably bore the most of the weight of the roof. In addition, both preserved long wall and end wall posts were present in a mostly uninterrupted course all the way round the house, together with possible entrances on each long side (fig. 12). The house is approximately trapezoid, with straight long sides, and measures c. 16.5 m in length from one end wall to the other. It has a width of c. 6.2 m at the east end and c. 7.7 m at the west end. The ground plan of the house would therefore have covered an area of c. 100 m². The transition from long wall to end wall is slightly rounded. The end walls themselves are straight and

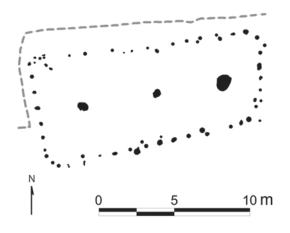


Fig. 12. Dalgaard III house I. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

most of the house's postholes contained obvious fills, typically various nuances of dark, grey-brown sandy fills mixed with charcoal flecks. The house as a whole was clearly visible against the light-coloured subsoil. The fill at the east end of house I at Dalsgaard III was not very deep or well preserved. All the features from house I, as well as other features that were possibly associated with the house, were fully excavated. Despite this, just one very small body sherd was found in a posthole in the western end of the house. The coarse tempering of this sherd suggests that it dates to the Late Neolithic/Early Bronze Age.

The other finds from house I consisted of flint flakes and small fragments of fire-affected flint. During soil stripping, a single body sherd was found at the bottom of the topsoil just outside the northwestern end of house I. Based upon its tempering, this sherd is thought to be Neolithic. On the basis of archaeological house typology and finds, house I is dated to the transition period between the Late Neolithic and Early Bronze Age. When comparisons are made with similar, trapezoid longhouses of the same size, it seems likely that house I should in fact be dated to the earliest part of the Bronze Age, period I. Apart from charcoal, charred cereal grains and grain fragments were also present in a number of the samples. Of the cultivated species, barley (Hordeum Vulgare sp.) was identified, together with possible wheat (Triticum) in the form of einkorn (Triticum cf. Monococcum).² Charred seeds were not present in the samples. A total of three ¹⁴C dates were taken. These indicate a date of around 1781-1623 BC.3 The archaeological and scientific dates thus both place the house at the transition to the Early Bronze Age. Immediately east of house I and partially overlying it was house II (fig. 13). This was a three-aisled house with a preserved wall slot at its eastern end. The house was dated to the Pre-Roman Iron Age, 538-387 BC.

In 2002, not far from the site of Dalsgaard III, a well-preserved, two-aisled house was found in the south-eastern part of a 1400 m²-large excavation area; the house was E-W orientated, although it turned slightly towards the south-east - referred to here as Dalsgaard II (cat. no. 417). The house, which was located 102 m above sea level, measured 19.5 m in length and was 7.25 m wide. Its west end consisted of 38 wall postholes, in several of which were remains of an oblong, split plank. The postholes measured on average 45.5 cm long and c. 30 cm wide. At the east end, they almost resembled stakeholes. The postholes there were round and had an average diameter of 19.8 cm. The average distance between them was 13.7 cm. In some cases, there was an extra stake on the inner side of the wall. The house's corners, which consisted of postholes, were strengthened in the east

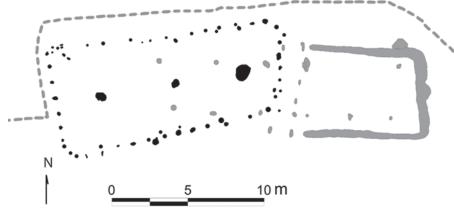


Fig. 13. Dalgaard III house I and II. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).

by an extra internal post; in both of these postholes was a fire-affected stone. The east end was open with one roof-bearing post placed along the central axis of the house, whilst the western end wall was straight with slightly rounded corners. The distance between the postholes at the west end was on average 25 cm. At the east end of the house was a sunken area, which was up to 50 cm deep and was probably the remains of a sunken floor (fig. 14).

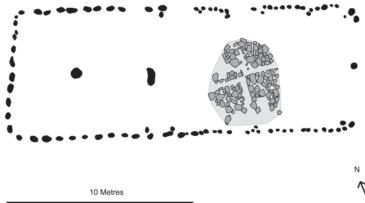
On the inner side of the wall was also a set of recessed posts, which have been interpreted as an entrance. One of the features also contained a flat, fire-affected stone, which may have been a support for a door. Opposite this, on the north side of the house, was evidence of an entrance structure, but the eastern part of this entrance had been disturbed by a tree root. The roof-bearing postholes were up to 30 cm deep. There is a distance of 3.5 m between the western end wall and the roof-bearing post in the west. A roof-bearing post was also unsuccessfully looked for under the cultural layer in the eastern part of the house. There was, therefore, a clear difference between the construction of the east and west ends. The wall construction was less substantial in the east, possibly consisting of wattle and daub, whilst the west end was constructed of regular planks. This was confirmed by wood identifications, which showed that the wood in the western part of the house was oak, whilst in the eastern part it consisted of poplar and aspen. The excavator interpreted this as indicating a functional difference between the east and west ends (Gyldion et al. 2004, 42; see also NNU j.nr: A8453; Nationalmuseet Danmarks Oldtid/Naturvidenskab). No houses are known dating to the Late Neolithic or beginning of the Early Bronze Age with specific areas for stalls, but it is perhaps possible that the eastern part of the house had an "agricultural function", such as the drying or storage of grain. There must be a reason why a less substantial wall construction was chosen, but perhaps this was to achieve more effective air circulation. One ¹⁴C date places the house at the transition between the Late Neolithic and Early Bronze Age (1880-1610 BC). The site of Dalsgaard continues to be occupied into the Bronze Age with other house types (Gyldion *et al.* 2004, 43).

Two-aisled houses of this type with a sunken floor, like at the two Dalsgaard sites, are known from several locations. 10 such Late Neolithic houses were, for example, excavated at Nørre Holsted (Grundvad *et al.* 2015, 50-51). Another location with comparable Late Neolithic houses is Hemmed Kirke and Hemmed Plantage (Boas 1993, 125, 133). At both sites, the houses from the Late Neolithic and Early Bronze Age are located in the same area, whilst in the late Early Bronze Age they move to a new area (Grundvad *et al.* 2015, 50; Boas 1993, 119 ff.) This is probably also the case at Dalsgaard II and III, where four three-aisled houses from the Early Bronze Age were excavated nearby (Dalsgaard VKH 6392).

Sites with suggested two-aisled houses

It can be something of a challenge to identify houses at Neolithic sites and therefore there is often a large group of suggested two-aisled houses from these sites. In the Vejle area, sites including Skibet and Sødover can be placed in this group.

The site of Skibet (cat. no. 425) is located on a sandy headland on the north side of the Vejle River Valley, around 22 m above sea level. To the east it is bordered by the Vejle River and to the south-west by a small watercourse. The area drops down steeply to the east and north. A large east-west ridge can be



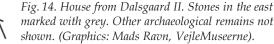




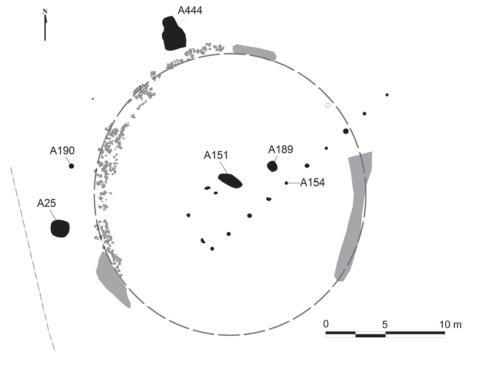
Fig. 15. *The suggested two-aisled Neolithic house (house II) at Skibet. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).*

seen to the north. To the south-east is a former wetland. The settlement remains from the Neolithic consisted of pits and two possible two-aisled houses. The Neolithic features could only faintly be recognised on the surface, but upon closer inspection, a number of Neolithic pits and fills were identified. Many of these contained large quantities of pottery, which was dated to EN II, MN AI-II. Scattered postholes were also found, which were the remains of two possible two-aisled houses, houses I and II. The houses only had a few preserved wall posts. The buildings were orientated in an east-west direction. House II (fig. 15) consisted of seven central posts and three possible wall posts. The fills of the posts consisted of yellow-brown to dark, yellow-brown sand. The post diameters measured 22-32 cm and their depths 5-18 cm. Organic material suitable for ¹⁴C dating was

not recovered. A EN-MN date is, however, thought likely based upon the form of the surrounding features. One of the house's central postholes contained two body sherds from the vessel belly area that were decorated with vertical stripes. It is noteworthy that just to the south of the house was a large pit that produced c. 30 flint flakes, burnt clay and sherds decorated with vertical stripes on the vessel belly, together with a thin-butted, thick-bladed flint axe with polished wide sides and knapped narrow sides. The cutting edge of the axe was missing. The Neolithic features were mainly situated in the eastern and southern part of the area.

The site of Sødover (cat. no. 424) is prominently located in the landscape, at a height of 99 m above sea level. During the excavation, a suggested Neolithic construction from the Bell Beaker Culture was excavated, which lay underneath a mound with partially preserved kerbstones and turf layers. The burial complex had been placed on top of a Middle or Late Neolithic settlement. Around a quarter of the kerbstones were preserved (fig. 16). The NE-SW-orientated row of posts was 19.6 m long and consisted of ten posts, together with three posts that were probably associated to the south-west. The posts were placed at a distance of 2.2-2.6 m apart. They were similar to one another in terms of fill and shape, and the best preserved examples were located under the later mound. In one of the postholes, a decorated rim sherd was found that dates to the Bell Beaker

Fig. 16. Summary plan of the site at Sødover based upon the excavator's interpretation of the house, which is located under a mound. The mound, based upon kerbstones and traces of kerbstones, is estimated as measuring c. 23 m in diameter. The fireplace A189, central grave A151, and other secondary burials and features that contained finds (A25, A 190 and A444) are marked. Other archaeological remains not shown. (Graphics: Mads Ravn, VejleMuseerne).



Culture. A feature that has been interpreted as a fireplace, located around the middle of the house, contained quantities of pottery of the same type, probably from the same vessel. There was therefore probably a fireplace in the house. The pottery dates it to the Bell Beaker Culture, that is to say late SGC or LN I.

The row of postholes described above was initially interpreted by the excavator as a row of roofbearing posts from a two-aisled house dating to the late Single Grave Culture or early Late Neolithic. The excavator interprets the row of posts as being associated with a house from the Bell Beaker Culture, an interpretation which has been much disputed. The roof-bearing posts in houses from the Bell Beaker Culture are often very small and insubstantial. When compared to contemporary houses from Bejsebakken, the proposed house from Sødover is very regular and large (Sarauw 2006). Until ¹⁴C dating has been undertaken, this large house should be regarded as an uncertain house site.

Summary and conclusion

The sites that have been mentioned here cannot be said to be representative of the Neolithic in South-East Jutland, but have been presented in order to provide an overview of the relatively well-preserved sites that have been found until 2016, as well as the variations that can be observed amongst them. But there are source-critical aspects, first and foremost associated with the interpretation of these Neolithic structures, which ought to be included. As already mentioned, recognising these often washed-out structures can be a challenge. When the features are recognised, it can be difficult to distinguish between naturally-created features, such as uprooted trees, and man-made structures. An uprooted tree from a Neolithic settlement area may contain pottery. In the absence of accompanying more definite structures, there may be grounds to be suspicious of the so-called D-shaped houses, which may merely be natural uprooted trees.

It is also clear that the frequency of the Neolithic settlements has increased in tandem with the excavation activity. During the construction of a motorway, which meant that systematic trial excavations had to be undertaken (fig. 1 sites 1, 3, 8 and 9), closely placed Neolithic sites were identified, which were located c. 2-4 km apart. This suggests that we would expect a greater density of sites in the museum's area of responsibility, a density, however, which is not reflected by the current distribution map. There could, though, be other source-critical aspects, such as landscape type, wetlands and access to resources, which may influence the picture, and therefore neither should it be suggested that the observation made above is representative of South-East Jutland.

Common to all the mentioned sites is that they are located at a significant height above the Vejle River Valley, from 21 to over 102 m above today's sea level. The sites are mostly located on sandy soils, and many are situated on sandy headlands and associated with a watercourse.

Obvious and very impressive remains of Neolithic activity have, however, also been found at the site of Kristinebjerg Øst, which is located on a moraine hill near the Little Belt, c. 26 m above sea level. At this site, no definite Neolithic houses were found, which is probably due to the focus on other priorities at the location. It nevertheless warrants a brief description here, as it is one of two known sites in the Vejle area with a probable system-ditchlike structure. The excavated areas are located in a slightly hilly moraine landscape, which today is delimited by a road, Kolding Landevej, to the south and a railway line to the north. The terrain slopes down significantly towards the coast south of Kolding Landevej. West of the excavated areas is the SSW-NNE-running pronounced subglacial stream trench, Elbodalen, which dates to the Weichsel Glacial Stage. There are two concentrations of pit complexes of a Neolithic date, containing a total of 10 large pits. These are concentrated on slightly raised plateaus in the western part of the excavated area. The complex of large pits resembles system-ditchtype features. During the excavation, however, emphasis was placed more upon other features, so that postholes that might have been interpreted as associated with enclosures were not looked for. There is, however, clear stratigraphy in a few of the features, which may indicate that the pits were left open for many years and were continually filled up. A large group of finds was recovered, consisting of flint and pottery, much of which was decorated. The flint includes both waste (hundreds of flakes and a number of cores) and complete or fragmented tools: scrapers, borers, arrowheads, burins, knives, chisels, sickles and axe fragments. The pottery dates to EN II - MN AII. The often richly decorated pottery

stands out in terms of its quantity and decoration from the usual settlement pottery. Decorated clay discs were also recovered. In addition, small quantities of burnt bones from domestic ox and pig, sheep or goat, and dog were found.

The large pits, quantities of finds and continuity of activities (deposited offerings in the pits), point toward activity over a long period. It might be expected that a contemporary settlement would have been located nearby, but this could not be demonstrated by the excavations. The structure is in many ways similar to excavated systems without posts from the same period, which are located further north in East Jutland. At these sites, similar re-dug pits containing clay discs and broken axes, especially combined with attractively decorated pottery, were found (Ravn 2004; 2011; 2013; Skousen 2008) and in some cases may be regarded as precursors to the later Sarup causewayed enclosures.

Turning to the general placement of the Neolithic sites in the landscape, it is interesting to examine the occurrence of long barrows, dolmens and passage graves around Vejle, Horsens and Kolding Fjord. Here, it is very obvious that a coastal-bound location was preferred (Hvass *et al.* 1997). Most of the burials have been recorded on the north side of the fjords and in the river valleys. The sites are often placed on sandy soils, but they are also situated on clay. It was, however, not just the soil type that determined settlement location, but perhaps rather the biotopes.

The identified houses are most often orientated E-W or SW-NE, and measure up to 9-19 m in length and 5-7 m in width. When summarising, it should be borne in mind just how long a period the Neolithic covers – from c. 3900 to 1700 BC. Based upon the houses from this period that have been found in VejleMuseerne's area of responsibility, the excavated houses clearly fall into two groups: Houses from the Funnel Beaker Culture – EN I-II–MN AI-II, together with houses from the last part of the Late Neolithic and transition to the Early Bronze Age.

The provisional observations must be that the Single Grave Culture and Funnel Beaker Culture are both represented, but remains and finds from both these cultures rarely occur together in the same area or at the same site. A relevant and interesting question would be how the sites of the Funnel Beaker Culture and the Single Grave Culture should be seen in relation to one another within the local area, not least seen in the light of recent discussions about the origins, nature and interaction of these cultures (Haak *et al.* 2015; Allentoft *et al.* 2015). With reservations, given the material's weak representative value, this angle may be the most interesting problem associated with this area of study in the future, after the amount of data has been significantly increased. The overall volume which this article is published in, is a step towards achieving this aim.

Notes

- 1. Place no. 170818- parish description numbers: 249, 250, 251, 253, 254 and 276.
- Archaeobotanical analysis: FHM 4296/913 (Moesgaard Museum).
- VKH 7258 Material (cereal grains) was taken from X88, X89 and X91 for dating. AMS/¹⁴C analysis was undertaken by Aarhus University's AMS laboratory. 1781-1623 BC (calibrated).

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