

THE EXCAVATION OF A WOODEN BUILDING AT THE BIGGINGS, PAPA STOUR, SHETLAND

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Introduction

The events which took place on Papa Stour in the spring of 1299 have provided a rich source of research material for me in many respects; the role of the Norwegian tax-collector in Shetland society, the status of women in Norse society, the economics of land assessment and the functioning of the Lawthing to name but a few (Crawford 1984, 1985, 1992). But of all the unexpected avenues which have opened up as a result of my investigations into the first document in Shetland's history, the study of the development of wooden architecture has been the most surprising — and in some respects the most rewarding. I have learned to appreciate the Norwegian heritage of wooden buildings, and to understand something of the principles of their construction. I have also grown to love the atmosphere and warmth of wooden houses, and to regret the total disappearance of this element of our Norwegian heritage in the Northern Isles. It is difficult now to imagine that the bare landscapes of Orkney and Shetland once had substantial wooden houses nestling among the familiar stone buildings; this feature of the Faeroese and Norwegian countryside is what strikes the visiting Scot to the neighbouring North Sea countries more forcibly than any other indigenous element of those Scandinavian societies.

A piece of incidental information in the 1299 document, combined with a programme of excavation at the Biggings, Papa Stour, has brought out the former importance of wooden buildings in Shetland, and increased our awareness of the significance of a particular type of wooden building in Scandinavian house architecture. The documentary evidence has been set out by me several times before, but will be briefly rehearsed again. In the late thirteenth century Shetland was under the control of Duke Håkon Magnusson, brother of the ruling king Erik Magnusson whom he succeeded on the throne in the year 1299. This royal prince had been given the German title of 'hertog' (duke), along with a large 'appanage' commensurate with his dignity, which included the 'skattlands' of Shetland and Faeroe. It is with his ducal rule, which seems to have been modelled on the feudal power of kings and dukes in the kingdoms of Germany, France and England, that the first documentary sources of information about society and government in the Atlantic islands appear. This was because of the central control exercised over lands and fiscal rights which were an automatic adjunct to a grant of this kind to a powerful member of the royal family, and which resulted in the preservation of record material in the central government archives. One of the documents which still survives is an account of the row over ducal rents and

taxes in Papa Stour which gives us such illuminating information about the political, social and economic situation in Shetland at the very end of the thirteenth century (*DN* 1: 89; *Reg. Norv.* II: 978; Clouston 1914: 67; *OSR*: 38).

The row was between the ducal rent collector — or ‘sysselman’ to give him his formal Norwegian title — Thorvald Thoresson, a figure whose role in Shetland at the time was clearly a very powerful one (Crawford 1984: 50; 1992: 76-78); and Ragnhild Simunsdatter, a resident on Papa Stour, and probably a land-holder, who was complaining about sharp practice, or worse, by the sysselman himself. Her accusations must have had some basis in fact, for Thorvald was concerned to refute them, and had a record of the altercation drawn up at the Shetland Lawthing with a rebuttal of her accusations, for transmitting to Duke Håkon in Norway. We do not know the result of this dispute, but Thorvald’s powerful position was clearly not undermined for we find him a few years later acting in a high-handed manner in a judicial case concerning another woman, in the island of Yell (Crawford 1992: 81).

All this is incidental (but fascinating) information to the particular piece of evidence given in the document about a building on the ducal farm on Papa Stour, called a *stofa*, where the first confrontation took place between Thorvald and Ragnhild. This name signified a particular kind of building and is a term that I have discussed in detail before (1985: 131-2), and analyse further below (pp.144-145). It was the stimulus to a research excavation which was conducted at the Biggings on the island of Papa Stour through the late 1970s and 1980s, the results of which are nearing completion. The reasons for deciding to excavate at the Biggings rested on a study of the settlement geography of the island and its farm-names (Crawford 1985: 136-141). The discoveries showed what possibilities exist for a research excavation in the heart of a Shetland crofting township, and also what problems (Crawford 1991: 36-43). We were fortunate to be able to excavate in a locality which had been central to settlement, but which had become available for excavation due to a combination of particular circumstances. However, the problems which intensive settlement produce for understanding the archaeological sequence should not be under-estimated. Parts of the site will never be fully understood due to the destruction of the houses in that locality in the 19th century. Fortunately, however, one of the Norse buildings in the yard at the Biggings had been preserved far better because a house was built over it in the mid 19th century and then abandoned in the early 20th century. It is that building sequence which has preserved the remains of what we are interpreting as a *stofa*, and possibly the *stofa* where Thorvald and Ragnhild clashed over the rents and taxes which were due to be paid from the island to Duke Håkon in 1299.

The purpose of this particular paper is to explain what we understand by the name *stofa*, to give a brief survey of architectural investigations of such buildings in Norway, and to present a preliminary description of the late Norse house — or sequence of houses — uncovered at the Biggings which

appear to fit into this particular context of medieval Scandinavian house development. The results of this combined historical and archaeological research project are going to add a completely new dimension to our knowledge of the Scandinavian inheritance of the Northern Isles.

1. Building Developments in Medieval Scandinavia

The longhouse was the normal housing structure throughout the European Iron Age in Scandinavia where excavations have uncovered the impressive long halls of Iron Age chieftains at Leire in Denmark (Christensen 1981), Ullandhaug near Stavanger (Myhre 1980), and Vågen, Lofoten, North Norway. The longhouse encompassed all dwelling rooms under one roof and very often the animal house (byre) as well. The latter form was a dominant feature

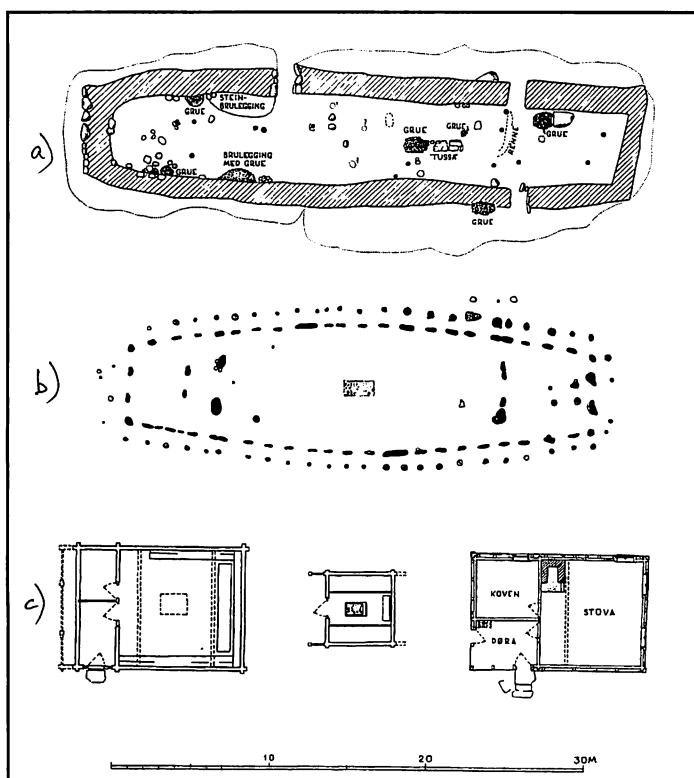


Fig. 1. Contrasting plans of a) stone-built longhouse at Storrsheia, Bjerkreim, Rogaland; b) Stave-built barracks house at Trelleborg, Zealand; and c) log-timbered 'stova'. (From: *Gilde og Gjestebed*, ed. J. Landsverk, Norsk Kultur Arv. 1967)

of Scottish vernacular building history throughout the Lowlands, Highlands and Islands from the medieval period up to modern times.

During the early Middle Ages in Scandinavia there was a move away from these long rectangular structures with parallel rows of load-bearing posts down the middle of the living space, and broad benches along the side walls, to a totally new kind of building. This change was determined by the introduction of the technique of log-timbering or 'lafting' (see fig. 2a) in which the roof rested on the outer timber walls, and the length of the timbers dictated the size of the building. The verb *å lafte*, noun *lafteteknikk*, is used in Norwegian of the technique of jointing the timbers at the corners of the structure. This technique is sometimes called in English 'notched log', but the Norwegian word will be adopted as 'lafted', as by Fett and Sørheim in their English translation of the Gamlebyen report (see 1989: 91). This led to the

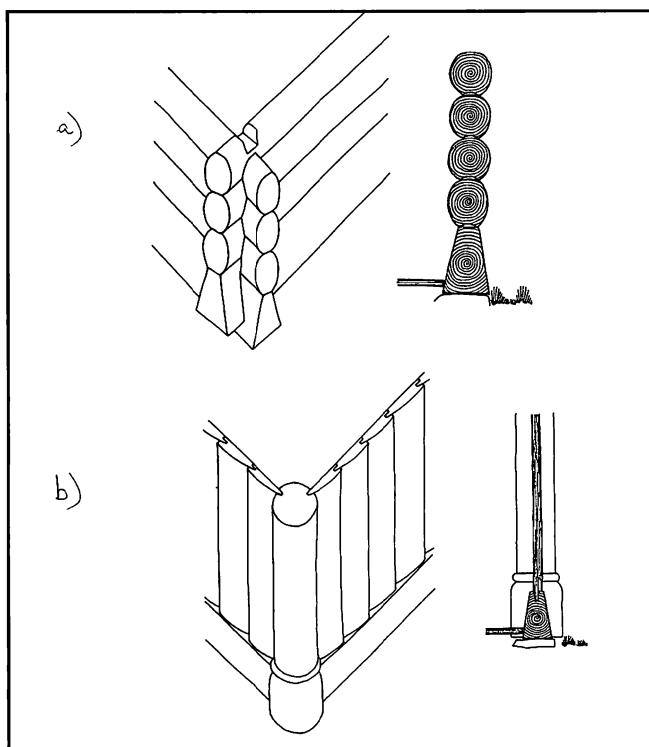


Fig. 2. Sketches showing different methods of wooden house construction: a) 'Lafted' timber in which the walls are made of horizontal logs notched at the corners. b) Stave-built walls, in which the vertical planks are slotted into a sill beam which connects with large corner posts. (From: H. Christie, *Middelalderen Bygger i Tre*, Universitetsforlaget, 1974)

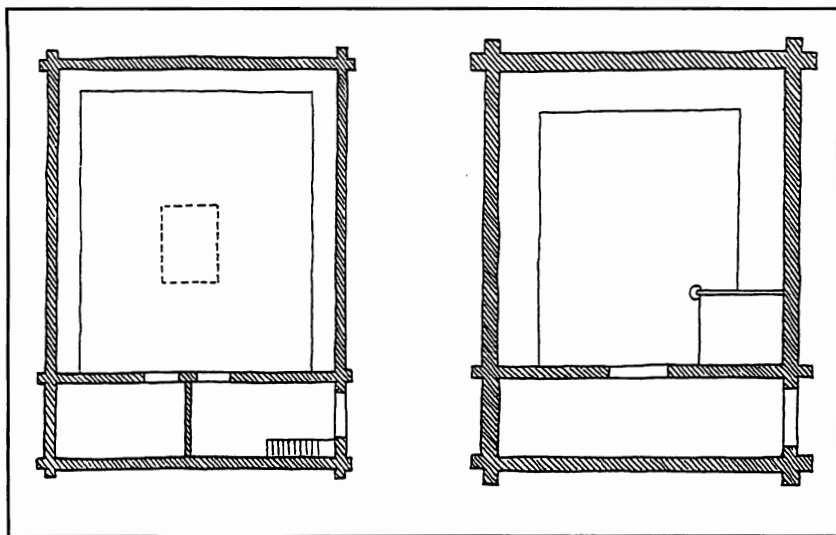


Fig. 3. Left, typical three-room plan (Raulandstua). Right, typical two-room plan (reconstruction based on several buildings). Not to scale. (From: T.M. Fett, 'Bygninger og Bygningsdetaljer' fig. 102 in *De Arkeologiske Utgravninger i Gamlebyen, Oslo*, bd. 6, ed. E. Schia, 1989)

establishment of smaller, squarer, totally wooden buildings which had separate functions rather than the long-house where all the functions were carried on under the one roof (see fig.1). It is not known exactly why and when this new technique was introduced into Scandinavia but it seems likely to have been copied from eastern Europe and Russia where such houses have been found at Novgorod dating from the 10th century (Brisbane 1992: 136ff).

Urban excavations have produced the earliest evidence for such timber buildings in Norway. At Trondheim they were being built in the second half of the 10th century (Christophersen 1992: 73). At Oslo the oldest settlement goes back to the early 11th century but the standard type of timber building develops c.1100-a two-room structure with an almost square main room, and an ante-room (*forstue*) through which the building was entered (fig.3). The whole measured on average 7.3m x 5.3m or 34.4m² (Fett 1989: 29). The majority of such houses in Oslo were 'lafted' whereas most of the wooden buildings excavated at Bryggen, Bergen, were of stave construction (post and beam), with strong upright posts and sill-beams into which were slotted upright planks (fig.2b). This series of structures starts in the late 12th century, and they appear to have been mostly warehouses (Herteig 1991: 114).

Stave construction symbolises a rather different tradition of building and one particularly associated with Church architecture. It was also used for housing in West Norway, although 'lafted' timber buildings were commonly

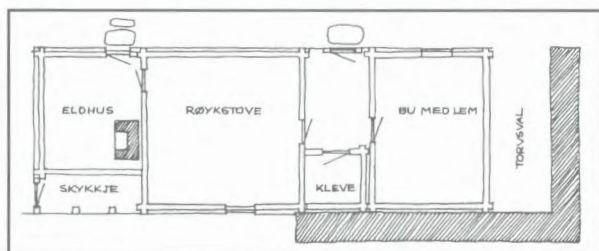
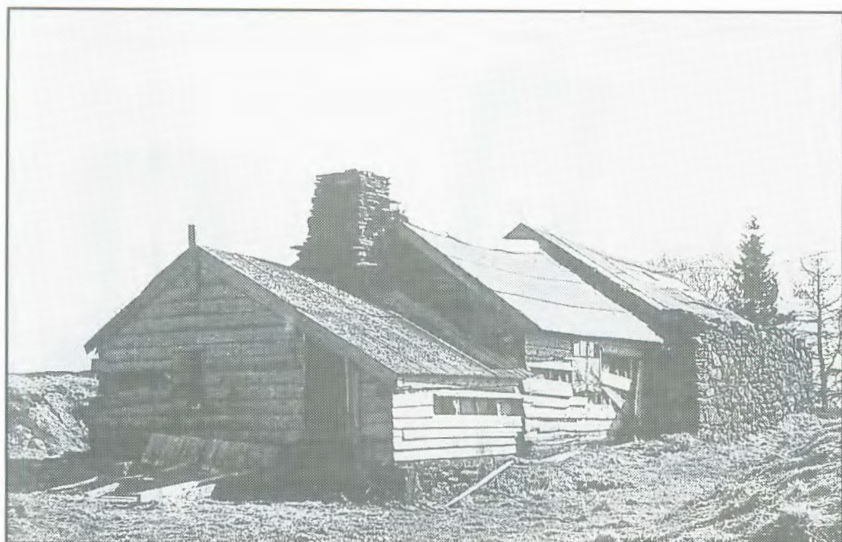


Fig. 4. Surviving wooden house of the 'longhouse' type at Risa, Lindås, Nordhordaland, with the kitchen (*eldhus*), living-room (*røykstove*), and store (*bu*) interconnected in a row, with one end protected by a large stone-built wall. (From: O.D. Laerum and N.G. Brekke, *Røykstova-Bustad Gjennom to Tusen Ar*, fig. 6.8)

constructed as well, which might be of *sleppverk* (= horizontal wall planking slotted into upright posts).

1.1. Introduction of the *stofa*

Dwelling-houses of this kind, that is of timber framing, without central posts, which appear in the towns of Norway in the 11th century, were known by the ON word *stofa*. This is a difficult term to translate — 'living-room' seems rather inadequate — and it has little meaning in the English language, except that our word 'stove' is probably of the same origin. Certainly the concept of an enclosed form of fireplace had something to do with such a room originally (Stoklund 1984: 101; 1993: 211). At Oslo the majority of these buildings were furnished with a corner fireplace rather than a central hearth

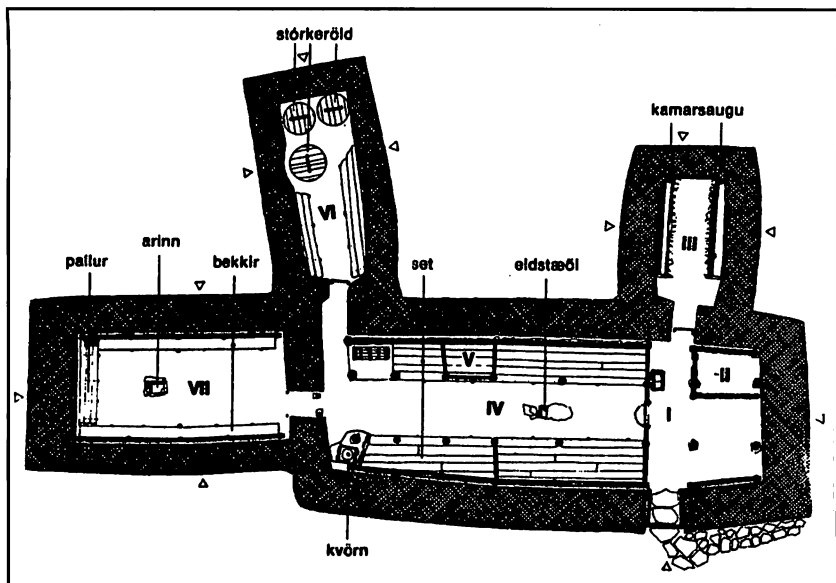


Fig. 5. Plan of reconstructed 12th century farm at Stöng, Þjorsadalur, Iceland. The original 'skali' (IV) is on the right, with the 'stofa' (VII) added onto the left gable. Note the central hearth (*arinn*) and benches (*bekkir*). (From: site guide book by H. Agustsson)

(Sørheim 1989: fig. 1) although this was not the case in rural areas. The term *stofa* (*stova*, *stua*) came to be used for the main dwelling house in all medieval Norwegian settlements, whether urban or rural, and the word *røykstova* ('smoky stova') was the usual word for the central building in the community right up to the twentieth century, deriving from the permanent smoke haze which permeated these buildings from the open hearth in the centre of the floor (Laerum and Brekke 1990).

This dark, smoky, moderately-sized wooden building was the hub of the family's existence, where a number of domestic activities were carried on, including light work and eating, and where people gathered in the evenings. Possibly it was used for sleeping also, and at a later date fixed beds were built along the sides. The heavier domestic activity of the baking, brewing, steeping kind was confined to the firehouse or kitchen (*eldhus*) where the larger cooking fireplaces and ovens were found. There would also be another domestic building called the *bu* (store), where food was kept, and which was raised up on stone slabs to discourage vermin (*stabbur*). The separation of these three buildings was usual in east Norway, where they are often rather far apart from each other perhaps because of the danger of fire spreading from one to another. The three terms *stova*, *eldhus* and *bu* are referred to in medieval documents, although it is not always clear that they were separate

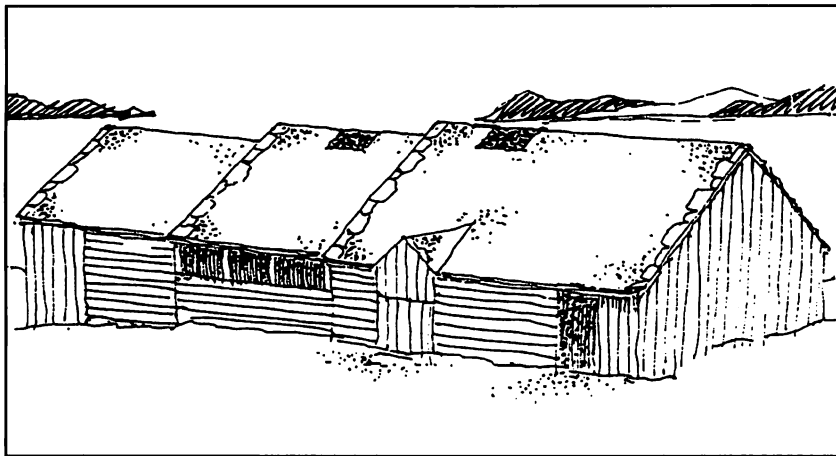


Fig. 6. Reconstruction of a Medieval house excavated on Lurekalven in North Hordaland. It consisted of *eldhus* (kitchen), *stove* (living-room), *bu* (store) and *loe* (byre) in a *rekkjetun* or longhouse construction. Note the variety of horizontal and vertical walling depicted. (Drawing by N.G. Brekke)

units; they might have been separate rooms but under one roof- especially in west Norway (fig. 4).

In west Norway the building of 'lafted' timber structures was less common, but nonetheless the *stofa* was of wooden construction. Was the *stofa* separated off from the end of the old Viking-Age longhouse (*skali*) or was it added on to it, as was apparently the case in Iceland, where the excavations of the house at Stöng clearly show the *stofa* as an additional element? (Stenberger 1943): (fig. 5). The house-building tradition in historic times in west Norway — which is what we should be looking at, as far as Shetland is concerned — was for the different rooms of the house to be built together in a row (*rekkjetun*). But is this a direct continuity from the Viking-Age longhouse or is it the development of a different kind of house construction, in which each building is a separate unit, although lying contiguous to each other along the same alignment? Architectural historians have differing ideas about this house development. Berg declares that all that is known about wooden buildings from the Middle Ages is of separate, free-standing structures (Berg 1982: 190; 1992: 148). But there is a growing body of opinion which argues for the persistence of the longhouse tradition through the medieval period in west Norway (Myrhe 1982: 195-217; Stoklund; Brekke). The problem is that there are so few excavated medieval sites in Norway that the archaeological evidence is not abundant. Lurekalven, near Bergen, is one of the few medieval farmhouses which have been excavated and it is apparently constructed in the longhouse tradition, with the *stove* in the middle, *bu* at one end and *eldhus* at the other (fig. 6) (although the

function of the different rooms is not absolutely clear from the existing publication: Kaland 1985: 186). The building appears to have been constructed in a mixture of lafted and stave-built wooden structures on stone foundations. All these problems are exceedingly pertinent to the Biggings site as will be discussed.

1.2 Excavations of *stofa* buildings in urban locations

There is in the first place the problem of recognising wooden buildings archaeologically, because of the non-survival of wood in certain conditions, or because of the removal of wooden walls for re-use. Sometimes the recognisable foundations of such walls may consist only of corner stones for log-timbering to rest on, or sill stones in a row for the ground beam of stave-built structures. The good survival of wooden foundation beams in Gamlebyen (Oslo), Bryggen (Bergen) and at Trondheim is due to the fires which took place in these towns and the rebuilding on top of the rubble. The absence of stone foundations to the wooden walls at the Biggings made it very difficult to interpret the house plan, and this was a factor in understanding the site which we were very slow to come to terms with.

Wooden floors may be less easily re-used and therefore survive in the archaeological record (if conditions are right). In the case of the Biggings

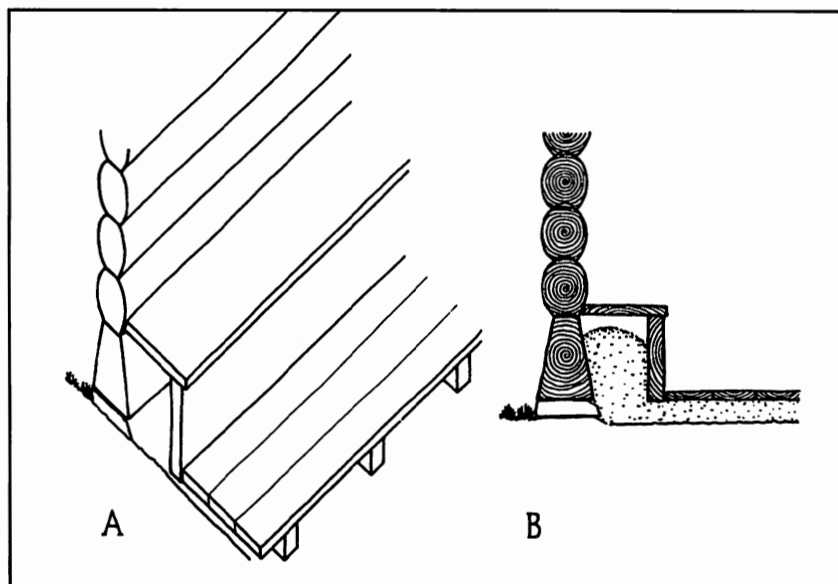


Fig. 7. Sketches of narrow, earth-filled benches (*moldbenk*) which were constructed against two or three of the outer walls of the medieval '*stofa*' buildings in Scandinavia. (From: H. Christie, *Middelalderen Bygger i Tre*, fig. 8)

wooden floor its survival must have been because it was in such poor condition and so old that it was not worth attempting to re-use and was covered by clay which formed a new anaerobic floor layer. Evidence from the urban excavations shows that wooden floors could be either laid on the earth or carried on joists-which was the most usual in the two-roomed *stofa* at Gamlebyen. They could be constructed so that they had no connection with the side walls (*flyttende* or 'floating') or they could be joined in to the wall

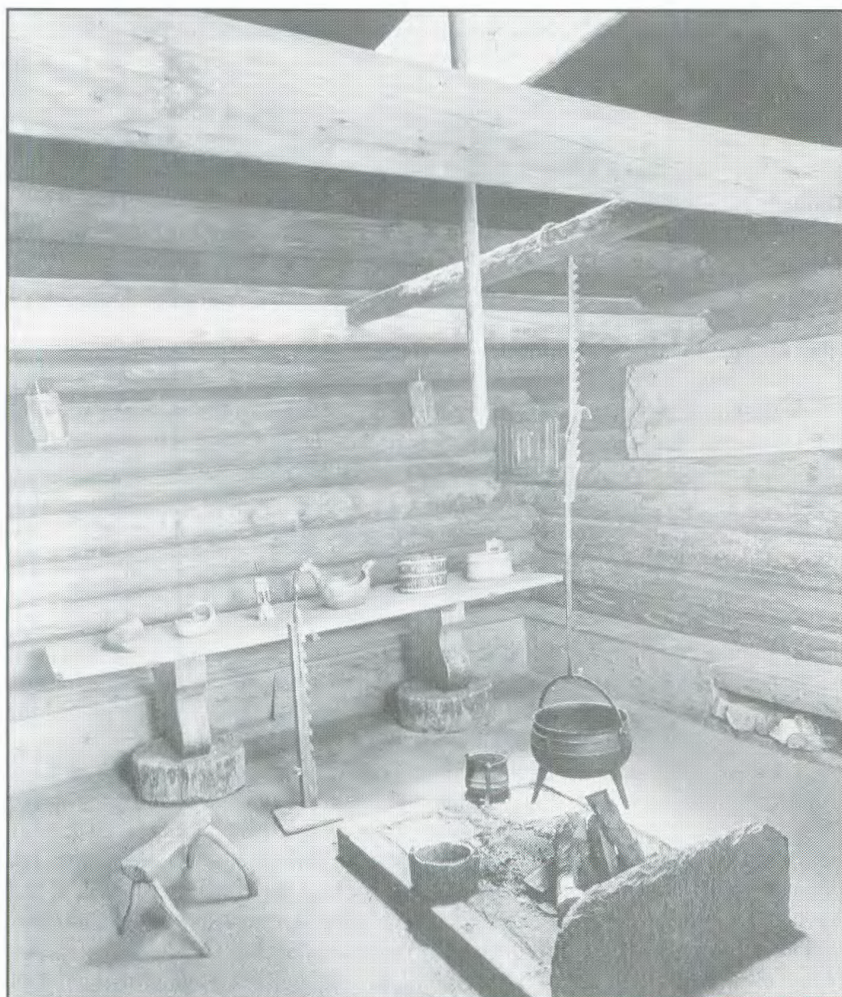


Fig. 8. Årestova from Vågå, Gudbrandsdal (now in Maihaugen Open-Air Museum, Lillehammer). Note the *blekkjarstein* in front of the hearth to protect the fire from draughts (Fig. 4.1 from Laerum and Brekke, 1990: *De Sandvigske Samlingen*)

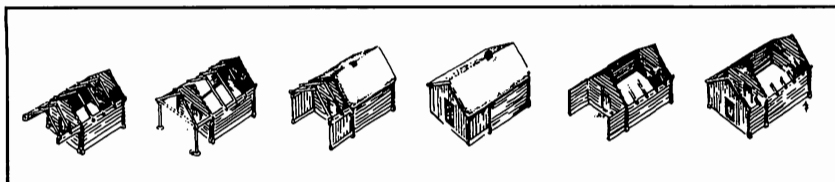


Fig. 9. Sketches showing the development of a single-roomed *stova* (on left) to a three-roomed one by means of a gable extension. Note that the extension could be either stave-built (on left) or constructed with horizontal timbers (on right). (From: A. Berg, *Norske Tømmerhus fra Mellomalderen*).

(*fast*). Nailing the floor to the joists was the most usual way of securing it. The distance between the joists varied from 1.3m-3.3m. The earliest floors in Oslo were not planked, but made of beaten earth, and these buildings were probably dwelling-houses because they also had hearths (Fett 1989: 44-5).

One distinctive feature of the excavated urban timber buildings was the existence of wall benches along one, two or three sides of the interior of the room, called *moldbenk*. They were made of wooden planks constructed against and over an earthen core (see fig.7). Such benches are known in the oldest standing timber buildings of Norway such as Raulandstua (Bygdøy Folk Museum dated c.1200), and they are presumed to have existed in many of the urban houses where there now can be seen a gap between the edge of the floor and the outer wall of 50-80 cms. Sometimes there are remnants of the board which was set on edge against the front of the earthen bank. In one case in Gamlebyen the cross cleats (*oker*) which supported the upright plank and were secured to the wall beam had survived. The *moldbenk* was probably about 40 cms. high (at Trondheim 25 cms.) and it appears that sometimes the floor level could be somewhat lower than the outside wall foundations. The purpose of such wall-benches seems to have been to insulate the house against draughts coming through the timber wall. They could hardly have been used for sleeping on, as the wide benches found in Viking-Age houses are thought to have been. In later log-built houses wooden sleeping-platforms/beds were built up against the walls of the *stova*.

In the town houses excavated in Gamlebyen *moldbenker* are always found in association with a corner hearth. But this is not necessarily the case with *stua* in the country districts. In fact there are some famous old timber buildings in Norway called *årestua*, and the *åre* is the stone hearth set centrally in the floor (as in the *røykstova*). It often had a large stone set at the back of the fire to divert draughts coming in the door, called a *blekkjarstein*, just as is known in the older Orkney farmhouses (fig.8). The corner fireplace (*hjørneildsted*) is said not to have really taken on in the country districts until the end of the Middle Ages (Berg 1992: 150). It is quite a distinguishing feature of the excavated houses at Gamlebyen that the corner fireplace took over from the central hearth in the 12th century (fig.3); the two-roomed house

with a corner fireplace against the dividing wall of *stua* and *forstua* was then the standard type of dwelling-house until the 13th century when other changes start to take place in the dwelling-house plan, and fireplaces disappear altogether from the urban archaeological record (probably because they came to be located on an upper floor).

The single-roomed timber house (*einromstua*) was particularly predominant in west Norway (Berg 1992: 153) and likely to have been the usual type before the problems of the later 14th century (when the Black Death hit Norway very badly). It was usually 5m x 5m, had the entrance door mid-way in the gable which was sometimes covered with a porch. This is called the 'megaron' plan and the walls extending forward from the house itself which formed the porch, could be stave-built, or 'lafted' (see fig. 9). This porch was eventually enclosed and formed a second room, or was divided and the classic three-roomed building (*treromstua*) came into existence.

1.3. The Northern Isles

The few published excavations which have taken place on Viking and Norse sites in the Northern Isles have revealed nothing of such buildings as those described above and very little of the features which are standard in them,



Fig. 10. Røykstova, Kirkjubøer, Faeroe Islands. This remarkable 'lafted' timber structure is thought to date from the 12th century. (Photo: author)

such as wooden floors, corner hearths or narrow wall benches. The survival of wooden structures has never in fact been noted. Yet there must have been wooden houses and there must have been plenty of wooden fittings in them as in stone-built ones. The significance of the place-name 'Stove' was not appreciated until the research project into the 1299 document and associated excavations at the Biggings got under way in the 1970s (Crawford 1985: 131-2). Such place-names tell us that wooden buildings of the type described must have existed at those places in the islands. There are five farms called Stove in Orkney and a good few more incorporate the 'stove' element in Shetland: about 19 (Stewart 1990: 198). Indeed the technical term 'stock-stove' for pre-fabricated wooden buildings imported from Norway survived in Shetland into the early modern period (Smith 1980). Nothing has survived in Orkney or Shetland like the famous Røykstova at Kirkjubøer in the Faeroes (fig.10), which still stands as a dramatic witness to the contacts with the home country of Norway, and as proof of the use of timber construction techniques in the Atlantic islands. This is of course at the seat of the bishop and evidence of the wealth and status of the most powerful members of the medieval church. It would clearly only be the wealthiest in Faeroese society who could afford to import and live in such a home.

All excavated sites in Shetland from the Norse period have revealed a traditional method of house structure and of internal lay-out. The early longhouse (*skali*) with one large open room, heated by the *langeld* (= 'long hearth') in the centre of the floor and with the roof supported on double rows of internal load-bearing posts seems to give way to a true longhouse plan in which the animals were housed under the same roof as the living quarters. Further changes have been recorded in the excavations at Sandwick in Unst where the reorganisation of living space entailed the abandonment of the central hearth and its replacement by an oven-like hearth placed in the room corner; the construction of a large bench or dais at one gable end; and the addition of small outshot rooms along the south wall (Bigelow 1987: 29). These changes took place in the 13th or 14th centuries and the living room of the later Sandwick house certainly developed more 'stofa-like' features; it was reduced in width and length (new dimensions 8 x 4m); its only entrance was through the internal dividing wall next to the central passage and the entrance near the gable wall was blocked; it may even have been provided with internal wooden panelling for there are signs of sill stones running along the longwalls. House I at Jarlshof was a longhouse, but with many alterations at both ends, and although recent reconstructions show it with wall panelling this is pure assumption. There is a total lack of any wooden features recorded from either Jarlshof or Sandwick or Underhoull, another Unst site (Small 1964-6). There is certainly no trace of any wooden floors ever having existed at any of these sites — or of *moldbenk*, the other standard feature of the Norwegian *stofa*. Sandwick remains a stone-built house of the old Viking kind with a few re-arrangements of internal features.

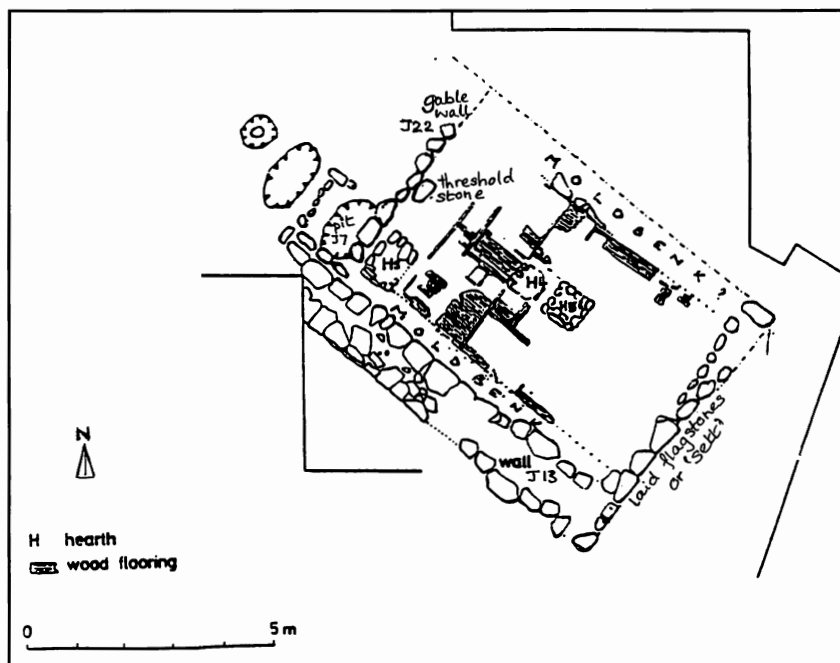


Fig. 11. Plan of the 'stofa' building at the Biggins in phase 3 (12th-13th centuries), showing the extent of the surviving wooden floor, central and corner hearths, and protective stone wall (J13)

2. Consideration of the Biggins *stofa*

The discovery of the wooden floor in the south-eastern half of the site (fig. 11) immediately marked the Biggins out as different from all previous excavated Viking or late Norse houses in the Northern Isles, or anywhere else in Scotland. The lack of suitable timber within Shetland has meant that all building wood has had to be imported throughout historic times. This was not an insuperable problem for the Norse settlers in the Atlantic islands, as we have seen from evidence for the importation of building timbers in the Faeroes. The total disappearance of all former wooden buildings in Shetland means however that there is no precedent to help in our interpretation of the Biggins site, and no experience of the *stofa*-type building which has formed such an important part of Scandinavian domestic architecture. The fact that such a feature was exactly what was mentioned in the documentary evidence still made it no easier to come to terms with the implications of this building tradition. The evidence uncovered was of quite a different kind from what was known of Viking settlement archaeology from excavations previously carried out in the Northern Isles, and it was with difficulty that we adjusted to

the new and different circumstances of wooden structures. Our understanding of wooden construction still remains quite inferior to the expertise of Scandinavian archaeologists and historians in these matters.

2.1. Description

The wooden floor, and its dimensions, indicate that we are dealing with a structure of the *stofa* type and it will therefore be referred to as the *stofa* in discussion. This building was at the eastern end of the Biggings yard and aligned NW-SE, (although the four sides of the building will be referred to as north, south, east and west).¹ It would appear that the dimensions of this building changed little from its initial foundation in the 11th century through to the mid 19th century when the whole Biggings township was laid out anew, and all the existing buildings were destroyed at that time. New croft houses were then constructed, one of which was built diametrically across the previous alignment of the *stofa* (SW-NE) but using the remains of the *stofa* itself as a foundation. These remains were thus preserved underneath the 19th century building which was then abandoned in the 1930s, providing the opportunity for excavation to take place.

This remarkable continuity of residence on the same alignment is quite clear from the evidence of the floor area which changed little in width — and only slightly in length — throughout the history of the site until the destruction of the mid 19th century. Measuring from the southernmost plank of the wooden floor to the ? sill beam at the north side the internal width was 4.4m, while the length was just under 7m from the east gablestones to cross-wall J22 (there was some evidence for an earlier floor having extended slightly west of J22). If the width of the earth bench (presumed *moldbenk*) along the south wall is added (40cm) and if a corresponding *moldbenk* on the north wall is assumed, then the building's internal width would have been 4.6m—the normal average width of many timber *stue* in Norway.²

2.2. Structure of the *stofa*

Although stone walls exist on the site and will be discussed next the present interpretation of this building is that it was of wooden construction. This was not the original assumption; in 1986 the *stofa* was described as being one room in a stone building, because it never occurred to us that it could have

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1. The remaining excavated structures are not discussed here: they include the *eldhus* and possibly the *bu* also.
 2. Width of two-roomed *stue* in Gamlebyen range from 3.8m to 6.1m; at Bryggen from 3.8m at 5.5m. Length of the *stue* alone at Gamlebyen range from 4.2 to 6.6m; at Bryggen from 4.0 to 7.8m (9.9) The Borgund *årestua* measured 11 x 5m but it must have been of more than normal domestic size.

been anything else. The baffling absence of stone house walls was put down to destruction. Moreover there existed the feature of stone wall J13 (fig. 12) on the south side of the wooden floor, which appeared in upper levels and which has remained as a permanent feature throughout the excavation. Its construction and dimensions are impressive, for although its full length is only 8m it is massively made, and in its best-preserved section has a width of 1-1.4m. The inner and outer faces are made of carefully chosen stones which give a level surface and the central infill is of hard-packed earth with some smaller stones. This is a similar method of construction to the walls of the Jarlshof houses which are however somewhat narrower. Where this wall J13 ran underneath the later croft house it was disturbed and only the lower foundation stones of rhyolite boulders survive. The two or three surviving upper courses are well-laid slabs of sandstone beach boulders.

Wall J13 runs the length of the wooden floor and extends a little beyond the cross-wall (J22) so that it had never formed a corner with that cross-wall, which was probably the foundation of the west gable (fig. 11). It was assumed during excavation that Wall J13 must at one time have continued further west to form the full long wall of a long-house structure, but this now seems unlikely. It was probably never any longer and appears to have been a detached piece of walling the purpose of which was to provide protection for the timber wall of the *stofa* (a feature found in the coastal parts of west Norway) and it had no integral connection with the wooden construction (see later discussion). The possibility that it may have formed the stone foundation for a timber superstructure has been discounted.

Turning to the crosswall J22 at the west end of the *stofa* we have another very significant part of the building's construction which also formed an important element in the excavation of the site. This cross-wall extends right across the width of the building from Wall J13 to the north side of the floor. Although formed of only a single line of stone these were large and well-laid blocks and this wall had been part of a significant addition to the building at some point in its history. Wall J22 was contemporary with the second wooden floor as fragments of the first wooden floor were found underlying some of the stones. As this single line of stones must have supported a timber superstructure (probably of upright panelling) cross-wall J22 can fairly certainly be interpreted as the foundation of the west gable wooden wall. As it did not replace an earlier stone foundation it would appear that the original west gable cannot have rested on stones but must have been constructed of horizontal logs. If it had been stave-built the post holes would have survived (in this respect it is interesting to note that a line of post-holes was found where the original west gable of the primary house at Jarlshof had been before it was extended: Hamilton 1956: 107). Some stake-holes were found along this alignment underneath the cross-wall from phase 2 (see below pp. 156-157 for phasing) but these were not substantial enough to have been connected with a stave-built wall.

Cross-wall J22 in fact provides some good evidence of wooden construction, for single lines of stones are clearly used as foundation sills for timber walls in both Norway and Iceland (Stenberger 1943: 85). The size and permanency of the stones does not suggest that they were the foundation for an internal dividing wall (although this possibility has been very carefully considered). The lack of evidence for any flooring immediately west of this line suggests that cross-wall J22 must have been the end of the *stofa* building and this has important implications for the question of whether the *stofa* was part of a longhouse structure or whether it was an independently constructed building.

Several features point to the main entrance having been located in the centre of this west gable. In the first place the corner hearth inside the *stofa* lies in the corner formed by the south side wall and the west gable wall (see fig.11), which corresponds exactly to the position of such corner hearths in Norwegian *stue* which were always placed next to the wall where the entrance lay. Secondly, a large level slabstone (no.86) located inside and mid-way along the gable wall is ideally placed to be an internal threshold stone. This area is the least disturbed part of the Norse building phases and we do have some confidence that the main entrance into the *stofa* was located here, as it should have been.

However the destruction on the north and east of the site had been such that we are far less confident in interpreting the walling structures on these sides. The south-east gable had been very badly disturbed and the alignment altered with a later structure of rhyolite blocks inserted. They were certainly not forming a sill foundation, and may be better interpreted as a protective outer wall to an inner timber wall, as J13. Outside these stones a well-constructed row of flag-stones ran the length of the east gable. These had been re-used when the Gørl was constructed to form a 'sett', an area of paving which was traditional in Shetland crofts, particularly near the entrance. They probably relate to a later phase of the building sequences. No such exterior paving was found anywhere else on the site. The north side of the *stofa* is even more problematical. Here the ground falls away, and this area formed the main entrance into the Biggings yard which may account for the hollowing effect from its frequent use by farm traffic. Whatever walling had existed on this side of the *stofa* had been completely masked by later activity.

This baffling picture of stone walls which had little connection or relationship with each other became more explicable once it was appreciated that we were dealing with a wooden building. This has helped to provide an explanation for the absence of walls, and the disconnected type of walling discovered on the site. Stone walls are encountered in the excavation of wooden buildings in Norway (although rarely in the towns) and where they do occur they are sometimes interpreted as providing a stone foundation for a timber superstructure which has usually totally vanished. At Bryggen such

walls average only 85cms. in width. In rural areas detached pieces of stone walling could however serve another purpose around a timber building — and are seen today in exposed parts of coastal Norway where they are built on the south or west sides of the house to form a protective skin against the prevailing Atlantic weather. They were not integral to the building which existed as a timber structure totally unconnected with the stone wall (see fig. 4). These walls were moreover quite substantial structures, usually as high as the roof line, with a double facing of stone. In south Norway the Jaeren house was constructed as a timber building but entirely surrounded by stone walls with a passageway between the timber walls and the stone surrounding wall (Stoklund 1983-4: 216-7). They seem also to feature at the medieval house sites excavated on Lurekalven and Høybøen (Kaland 1987: 186). Such protective stone walls have also been recognised in Iron Age houses at Ullandhaug (Myhre 1982). There is no doubt about their existence in the Faeroe Islands where they were a feature of the houses until modern times (Stoklund 1984, 106) and have been discovered round the north and south sides of the medieval timber churches recognised at Sand (nos.2-5) while church no. 2 had a wall running round the eastern chancel also (Krogh 1975: 52-3). However, the log-timbered Røykstova at Kirkjuboer does not appear to have been provided with such a feature.

Wall J13 at the Biggings would seem to compare with such protective stone walls and the present conclusion is therefore that Wall J13 was constructed in phase 3 as an outer skin for protecting the wooden *stofa* on its south-west side. Whether the *stofa* was built of lafted timber or was of stave construction is not yet fully determined, but it seems as if different methods of construction were used in the different phases, and possibly even combined in the one building, so that the side walls could have been of horizontal timber and the gables of upright panelling (see fig. 6).

2.3. Building Periods

Phase 2

The first wooden building was furnished with a central fire-pit (J105) and a wall-hearth (J108). These appear to be contemporary. The floor was earth and flag-laid. There was no evidence of any stone walls and it is thought that this must therefore have been a wooden building with *moldbenker*. Dating evidence suggests 11th-12th century .

Phase 3

The central fire-pit and wall-hearth went out of use and the former was covered with peat ash when the wooden floor was laid in the 12th century. This remodelling was along classical *stofa* lines according to current Norwegian fashion, with a corner hearth (J27) located and styled on the pattern of such hearths at Gamlebyen, Oslo (fig.13). It was a slightly larger

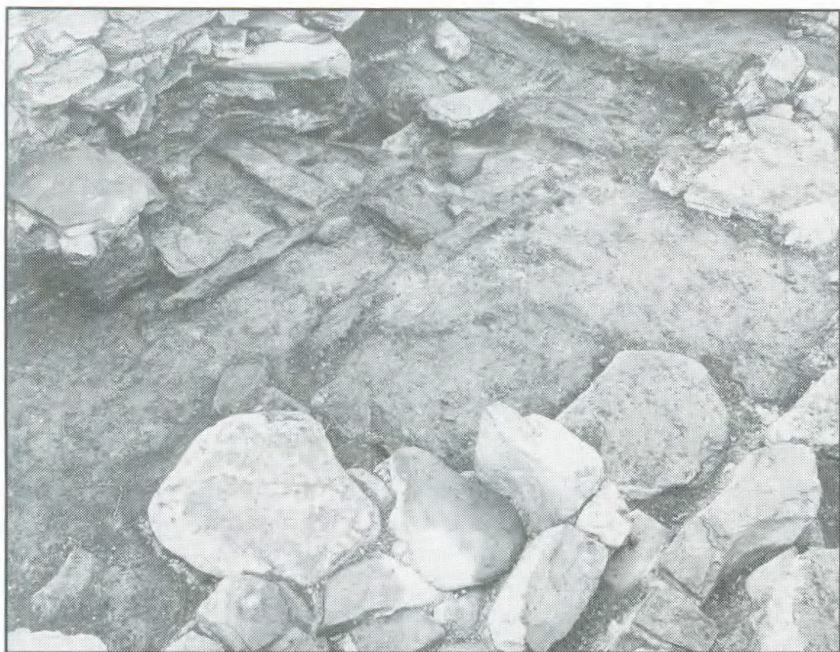


Fig. 12. View of the west end of the 'stofa' with the joists and planks of the wooden floor just showing (top centre) and underneath the 19th century croft house wall. The corner hearth J27 (*hjørneildsted*) can be seen abutting against the earth bank of the *moldbenk*. Stone setting and threshold stone bottom centre

wooden house than in phase 2 (6.4m long x 4.8m wide between the walls). A central hearth of the *åre* type (with a flat stone-flagged base and kerb) was placed in the middle of the wooden floor, perhaps in a later part of this phase. It was during this phase that the stones for the north-west gable wall (J22) were laid and the protective wall J13 probably constructed, although this has proved impossible to date.

An additional feature was added on to the north-west gable wall built around a large pit (J7). The sill stones for its walls have survived and indicate that a small annexe with a soakaway served some ablutionary purpose (perhaps as a latrine). The protective wall J13 was extended far enough to preserve the timber walls of this annexe from the effects of the south-west gales.

Later phases.

Evidence suggests that the *stofa* underwent a change of use in the later medieval period, and that it was indeed at some point destroyed by fire. The large number of pits of different kinds dug in and around the building indicate that activities of a domestic industrial kind were carried on within it.

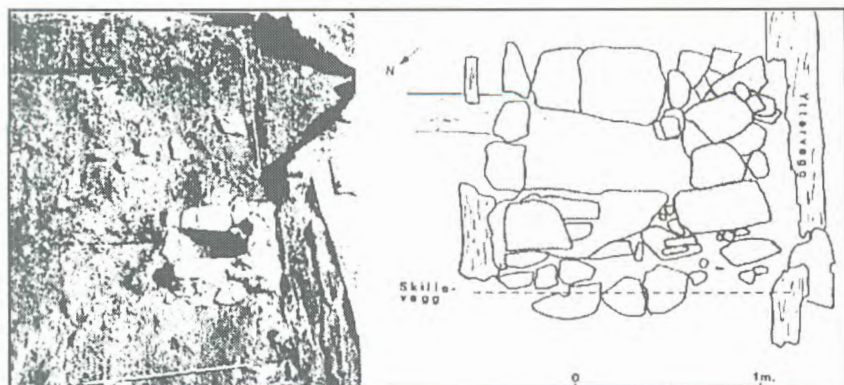


Fig. 13. Corner hearth J27 at the Biggings with protective wall J13 behind, and (top) corner hearth K62 at Gamlebyen, Oslo. (From Sørheim, 1989, fig. 13)

Conclusion

This present brief survey of the chronological development cannot give details of the finds assemblage or of dating evidence to elaborate on the phasing. Dating evidence indicates that the wooden floor discovered at the Biggings came from a *stofa* which must have been old at the time that Thorvald Thoreson held his meeting with Ragnhild Simunsdatter in 1299. It had been laid some time before and within a *stofa* building which was already in

existence. This was in the period before any documentary evidence exists to tell us by whom it was laid, whether the 11th century kings, or possibly the earls of Orkney. Closest parallels for such wooden buildings and their internal furnishings have been found in the urban excavations of Oslo, Bergen and Trondheim. These similarities tell us that the builders of the Biggings *stofa* were fully in touch with developments in the urban centres of Norway. The likelihood is of course that the materials were imported from Norway ready for erection — as they were later, in the period when historical evidence exists for such trade. Pieces of birch bark found in the debris lying on top of the wooden floor were remains of the roof covering which had certainly been imported from Norway. Birch bark was the normal means of providing an impermeable layer underneath the turf roof of Norwegian farmhouses right up to this century, and it was imported into Faeroe for this purpose. Birch bark, wooden floors, corner hearths, *moldbenker* are all standard features of houses in Norway and the islands of the north Atlantic in the middle ages. The wooden houses at the Biggings provide us with tangible evidence of Shetland's place in that Norse world of the North Atlantic and they help us to re-create that world in the historical imagination.

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