

## *Aggemose - part II. Refitting and wall effect*

*By Ole Grøn*

### INTRODUCTION

In 1993 a shallow pit directly associated with a concentration of lithic material were interpreted as the remains of a small dwelling from the Kongemose Culture (Grøn & Sørensen 1996). This interpretation was based on a) the structural features preserved; b) the distribution patterns of the different artefact-types; and c) a comparison with other mesolithic sites with surviving structural remains. On this basis the position, approximate outline, and entrance zone of a mesolithic dwelling was suggested.

The Aggemose material is from a very small concentration. Compared to other Danish sites it is of rather limited size and from a typological point of view appears to be uncontaminated (Grøn & Sørensen 1996). In 1994 Sørensen refitted the material. The idea was to use the refittings as an independent test of our division of the site into a "dwelling area" and an "outside zone" around this.

The site was excavated and the artefacts recorded in one-metre squares. Where a hypothetical habitation border follows the boundary between two rows of squares, this poses no problem. Where such a border cuts through squares, however, it is impossible to determine whether an artefact from a square belongs on the one side of the postulated wall or the other.

In the illustrations, the refitted artefacts have been placed as close to the centres of the squares as graphically possible. This reduces the errors of their positions to less than 0.7 m (the distance to one of the corners). The outline of the hypotheti-

cal dwelling is shown as a rectangular shaded area measuring 3.5 by 3.5 metres in figures 1A and 1B.

Figure 1A shows all the lines of refitting observed except those from one core. Figure 1B shows the lines of refitting from the reduction of this core. Figure 2 shows the slightly revised dwelling, measuring 3.5 by 4.0 metres, suggested by this study. According to Sørensen, refitting reveals that quite a number of regular blades are missing from the material. These may either be located in the waste layer of which only a small test pit was excavated or have been transported from the site.

### ANALYSIS OF THE REFITTINGS

To estimate how individual refittings relate to the hypothetical dwelling wall, four types of refitting may be distinguished:

- A Refittings connecting a square outside the hypothetical dwelling with either another square outside it or with a square cut by its wall and thus containing material from either inside it or outside it. This category also comprises refittings connecting pieces found in one single square outside the proposed dwelling.
- B Refittings connecting a square inside the hypothetical dwelling with a square outside it.
- C Refittings connecting a square inside the hypothetical dwelling either with a square inside it or with a square which is cut by its wall and thus may con-

tain material both from inside it and outside it. This category also comprises refittings connecting pieces found in a single square inside the proposed dwelling.

- D The fourth type of refit connects a square cut by the hypothetical wall with another square cut by the same or another hypothetical wall. This category is of less interest since it does not yield any information on the exchange of material between the inside and the outside.

A total of 69 refittings were observed. With the postulated position of the dwelling they are distributed through the four categories as follows: A: 25 (36%), B: 2 (3%), C: 36 (52%), and D: 6 (9%) (fig. 2A; fig. 2B.a). It is interesting to note that only two lines of refitting connect squares inside the proposed dwelling with squares outside it. It is also noteworthy that these both connect squares immediately to the west of the proposed dwelling with squares inside it. If the proposed dwelling outline is adjusted by adding half-a-metre to its western side (fig. 2A), these refittings change from category B to category C and the distribution by category becomes: A: 25 (36%), B: 0 (0%), C: 37 (54%), and D: 7 (10%) (fig. 2B, b).

In both cases it is clear that the refittings indicate the existence of two independent zones within the approximately 7 by 8 metres large concentration of Kongemose material: one inside the proposed dwelling area and one outside it. This is shown in figure 2A, where some of the refitting lines of category A are shown as curved lines avoiding the proposed dwelling area to demonstrate that they do not necessarily cut through it in spite of the fact that they are shown as straight lines in the figure 1.

To this point we have only been concerned with the single lines of refitting. In two cases, however, *series of refitting lines* indicate a connection between the inside and the outside of the hypothetical dwelling area. These two series are shown as straight dot-and-dash lines in figure 2A. They both connect the proposed habitation area with the zone to the east of it and thus support the assumption that an entrance should be located on this side (Grøn & Sørensen 1996).

The fact that it is possible to distinguish two complementary refitting zones in such a small concentration, one of which is conjunct with the postulated dwelling area, indicates that we are dealing with a highly structured accumulation of artefacts. Inside the hy-

pothetical dwelling outline there are 37 refittings. Outside but immediately adjacent to it are other 25 refittings. Seven refittings give no information as they belong to category D, connecting artefacts that may belong to either the inside or the outside with other artefacts that may also belong to both zones.

Out of a total of 62 refittings yielding relevant information, none connect the two zones. Considering the fact that they belong to a relatively small artefact accumulation, this seems quite a bold statement. To check the significance of this observation, the percentages of B-refits were calculated for the adjusted version of the hypothetical dwelling (4.0 by 3.5 metres) being moved all over the central part of the excavated area in half-metre steps. Figure 3A shows the value for each centre position of the dwelling. Figure 3B shows the corresponding percentage of C-refits, again with the values located in each centre of a series of conceivable locations of the hypothetical dwelling. A zero value occurs for the B-refits in two positions where at the same time the dwelling outline contains a reasonable amount (20-40) of C-refits.

The southern position, which is identical with the centre of the dwelling area in the position postulated in 1993, is marked with a full circle in figures 3A and 3B. It is interesting to note that this value is closely surrounded on all sides by values from 6.3% to 12.1%. Thus only a small dislocation of the outline will increase the percentage of B-connections considerably. This particular location for the dwelling outline can therefore be seen to produce a strong separation of the material not found in neighbouring positions.

The northern position is marked with a dotted circle. It is surrounded by somewhat lower values down to 3.1%. Its position is quite close to the north-western area where the low values show that refitting lines are nearly absent in this zone. The northern zero position thus seems more likely to be accidental than the southern one.

The southern position of the postulated dwelling outline has already been shown to behave reasonably in relation to the shallow pit containing remains of the culture layer and in relation to the distributions of a) lithic waste in general, b) blades and blade fragments, c) irregular pieces and d) burnt flint (Grøn & Sørensen 1996: figs. 5-6). Its

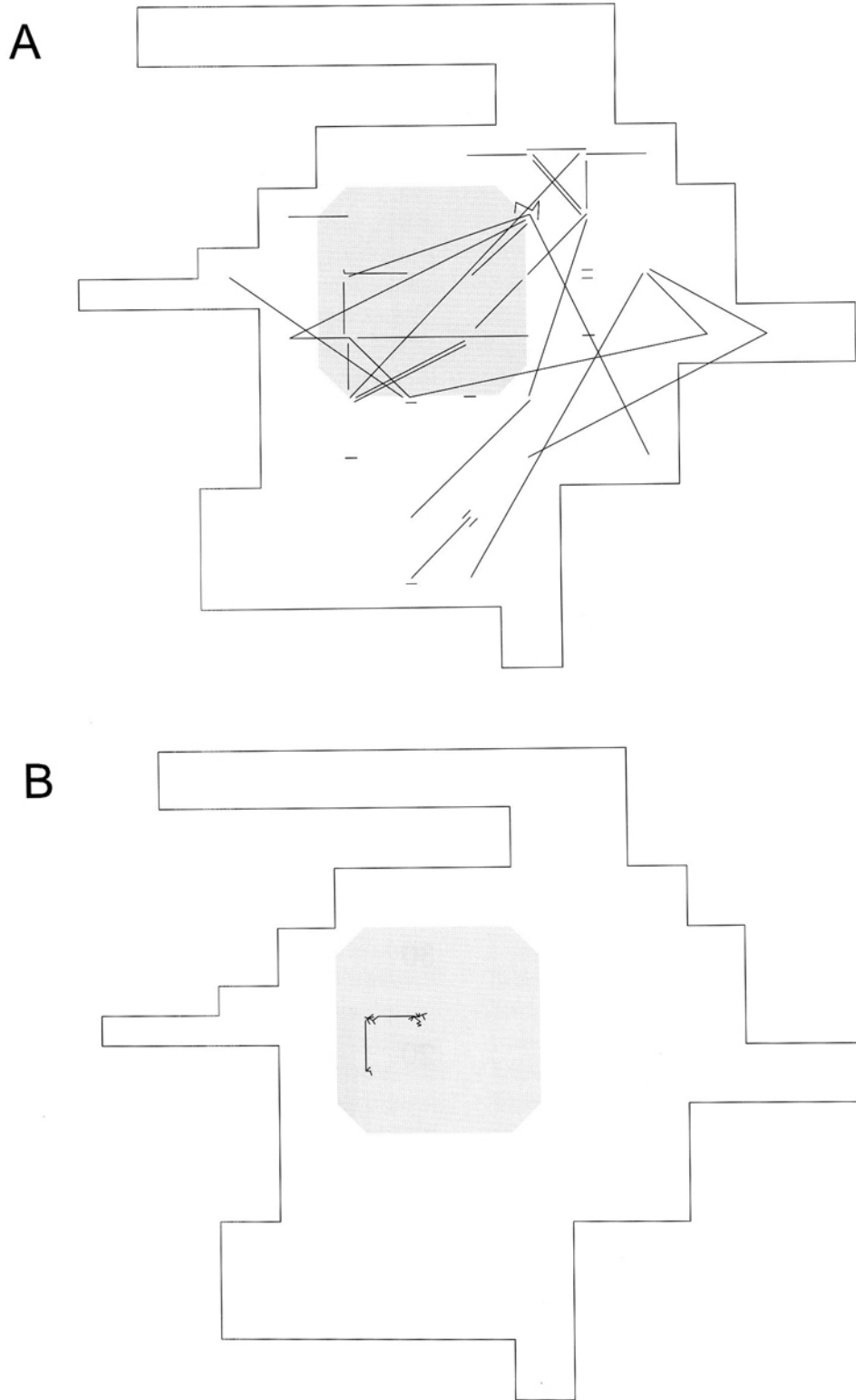


Fig. 1 A: Refitting lines of blades, flakes, cores etc. at Aggemose. B: Refitting lines from reduction of one core at Aggemose. The hypothetical dwelling area is shaded.

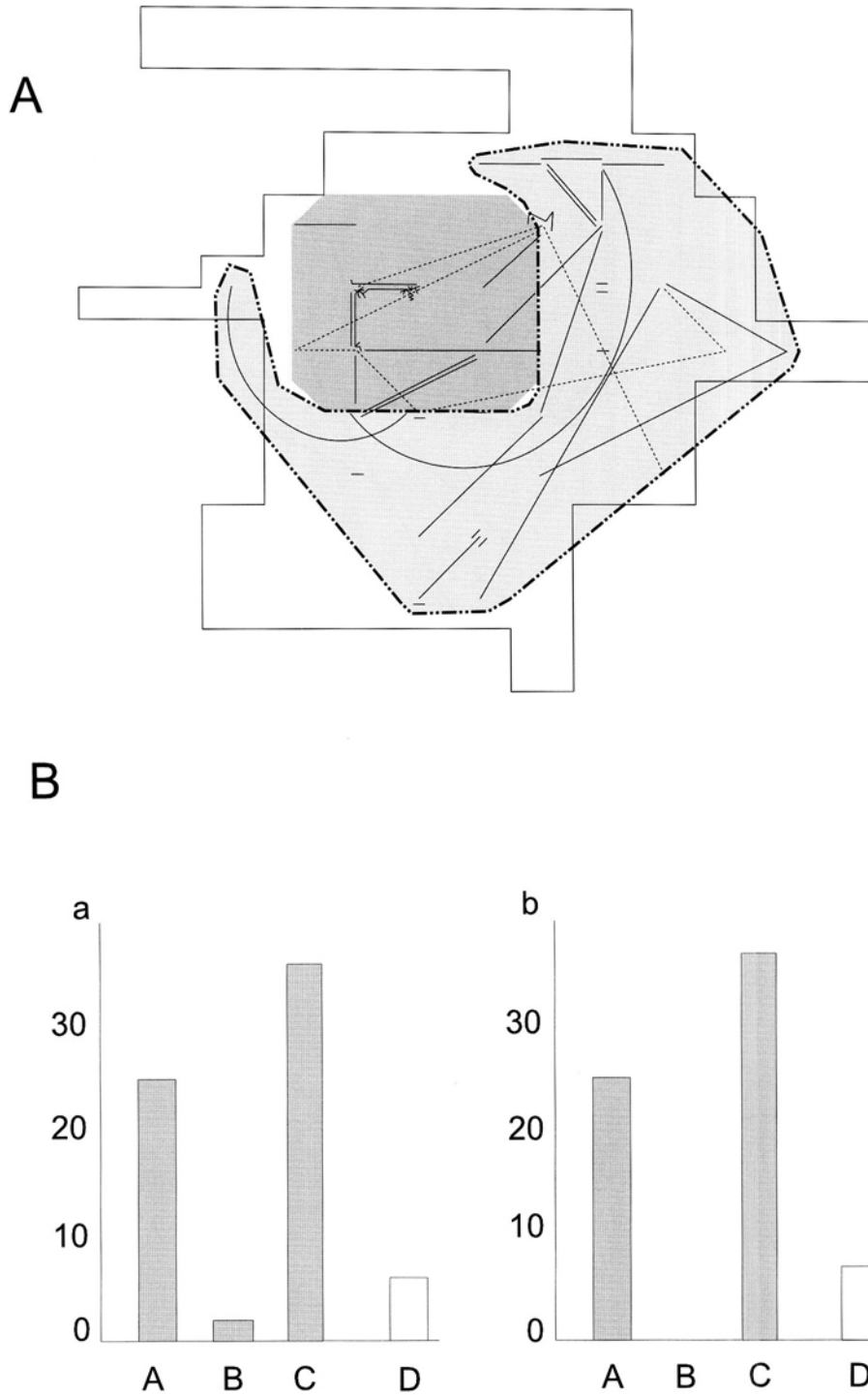


Fig. 2 A: The two complementary refitting zones at Aggemose. The lighter zone is proposed to be the area outside a habitation, the darker one inside it. The proposed dwelling area has here been enlarged with half a metre to the west compared to figure 1. Dash-and-dot lines show the two series of refits which connect the hypothetical dwelling area with the area to the east of it. B: The numbers of refittings of the categories mentioned in the text ( $\Sigma=69$ ); B, a - the values for the dwelling floor suggested in 1993; B, b - the values for the modified dwelling.

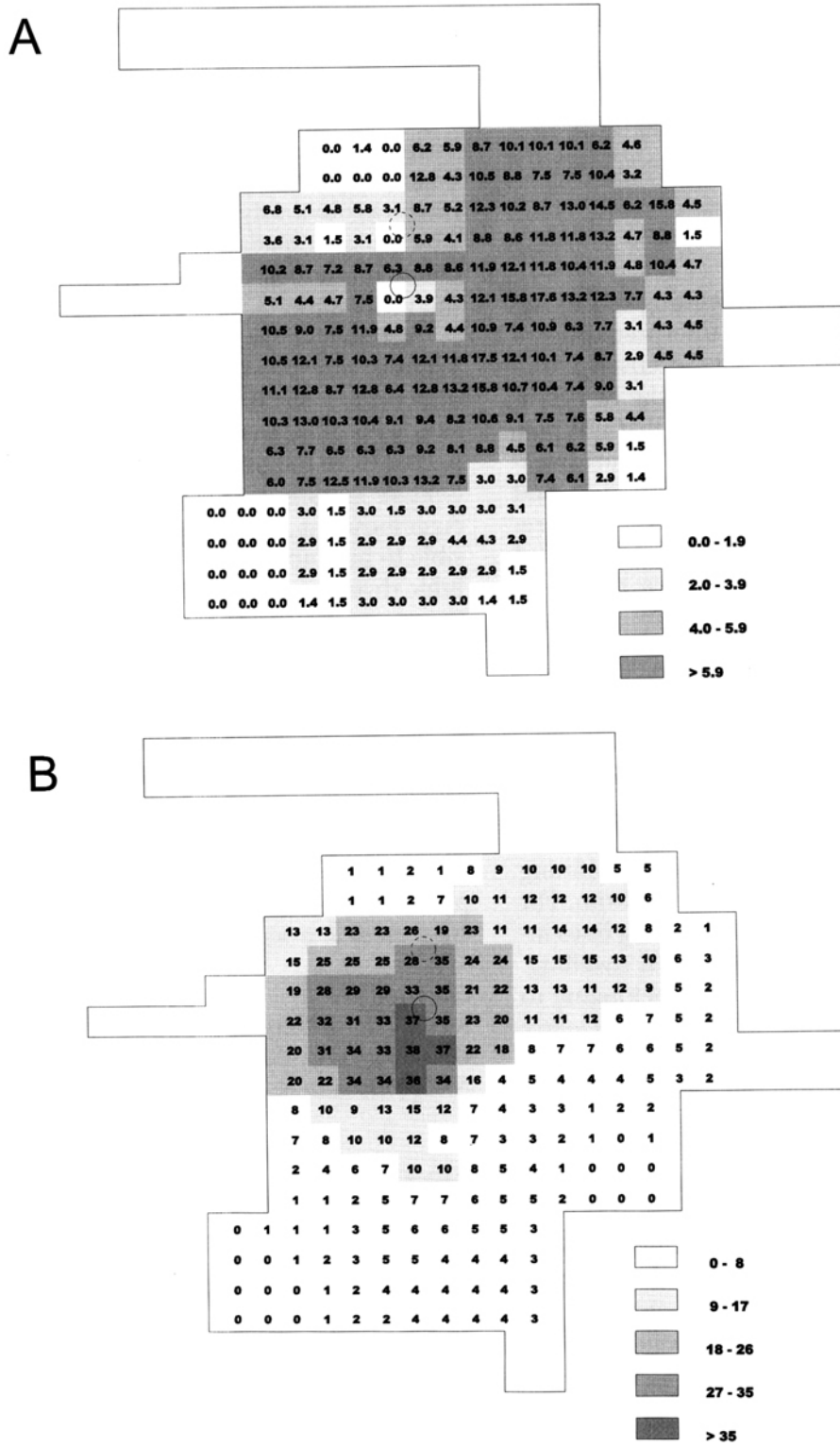


Fig. 3 A: The hypothetical dwelling outline is moved through the excavated area in half-metre steps. For each step the percentage of B-refits out of the total number of refits has been placed in the center cell. B: The same as A, but with C-refits replacing B-refits.

outline in the northern position, by contrast, cuts through the central part of these features. Such a border should at least have been observable where it cuts through the preserved part of the culture layer in the shallow pit.

## CONCLUSION

The information obtained by refitting of the Aggemose material supports the interpretation we have already presented (Grøn & Sørensen 1996). The significant dichotomy between the two complementary refitting zones indicates that it is possible to observe the effect of a Kongemosian dwelling wall on the cultural items deposited in and around it. This is known as “wall effect”. In respect of this analysis it is important to keep in mind that, even though refitting lines are shown as straight lines, this does not necessarily have any bearing on their “geographical” movements on the settlement surface.

The basic approach has been to distinguish “refitting zones”, zones which appear as closed units with regard to refittings. Where such zones outline with concave parts, such as the zone adjacent to the Aggemose “dwelling zone” (fig. 2A), their refitting lines may *cut through* other refitting zones which they are actually separate from. For the Aggemose site, three straight refitting lines intersect the outline of the hypothetical dwelling. Had they not been distinguished as belonging to another category of refittings from those clearly inside the “dwelling area”, they would have made the observation of wall effect on the site difficult.

Since one must expect that many Stone Age habitations contain an “inside” and an “outside” refitting zone, and the latter will often be of a concave shape surrounding the dwelling, it is not unlikely that the problems in distinguishing proper wall effect may rather reflect a general misunderstanding of the meaning of the lines which visualize the refittings than the absence of walls and wall effect.

Waste layers and dumps may appear as zones that are not connected to their immediate surroundings but to more distant zones such as, for instance, dwelling areas. Had the waste layer on the Aggemose site been excavated, the obvious thing to do would have been to operate with this as a third zone. Flintknapping was obviously carried out in the “dwelling zone”. The “missing blades” observed by Sørensen may well create numerous connections between the latter and the waste zone.

A strategy must be designed for each site analyzed. Without any preserved dwelling remains it may be difficult to construct fruitful hypotheses. Obviously sites with more than one habitation phase can be expected to be too blurred to allow for the distinction of delicate features such as wall effect. In the case of the Aggemose site, however, it seems that it has been possible to produce a coherent reconstruction of a mesolithic dwelling. Of course one can reject the interpretation in the absence of conclusive proof. But the majority of the generally accepted models for economy, social organization, trade systems and even typological development in archaeology would have to be rejected if such demands for objective proof were to be insisted upon. Even refitting cannot *prove* but only indicate contemporaneity of material, just as very distinct and meaningful distribution patterns can only *indicate* that we are dealing with an isolated activity phase. In the uncertain world of archaeology, the Aggemose site seems to be a fortunate case.

Ole Grøn  
 NIKU (Norsk Institutt for Kulturforskning)  
 Dronningens gt. 13, P.O.Box 736 Sentrum  
 N-0105 Oslo.

## REFERENCES

- Grøn, Ole & Sørensen, Søren A. 1996: Aggemose. An Inland Site from the Early Kongemose Culture on Langeland. *Journal of Danish Archaeology*, vol. 11, 1992-1993: 7-18.