

EARLY MESOLITHIC SITES AT ZONHOVEN - MOLENHEIDE

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The presence of archaeological remains at Zonhoven-Molenheide was brought to our attention by Mr. Roger Maes, who made intensive surface surveys of the region around the Roosterbeek. Based on these surface indications and upon the results of a preliminary testing program, excavations were carried out at the site during the summer of 1993. These investigations were organised by P.M. Vermeersch of the Laboratory of Prehistory, *Katholieke Universiteit te Leuven*. Fieldwork was directed by D. Verbruggen (*Katholieke Universiteit te Leuven*) with the collaboration of the province of Limburg and the *Instituut voor het Archeologisch Patrimonium* and with the assistance of a number of undergraduate students. Funding has been provided by the Belgian Interuniversity Attraction Pole nr. 28.

1. Excavations

Surface collection revealed the presence of a single concentration of archaeological remains dating stylistically from the Mesolithic period. In addition, some year ago, Early Mesolithic sites were excavated at the nearby Kapelberg (HUYGE 1985a & b, 1986) and Termolen (HUYGE 1987). At Zonhoven Kapelberg five distinct

artifact concentrations could be identified, all of them from the Early Mesolithic of Epi-Ahrensburgian tradition. At Zonhoven-Termolen no real excavations took place, but a single well-defined artifact concentration was present. It also fits into the Early Mesolithic

Excavations at Zonhoven-Molenheide (*Sectie D 3e blad 124n23*) were designed to define the horizontal extent and possible functional relationships between the artifact concentration and the nearby Kapelberg and Termolen sites. The preliminary survey at Zonhoven-Molenheide suggested that information concerning site size, contents, function, and organisation might be forthcoming, and the excavations were initiated with these objectives in mind.

2. Geomorphological Setting

The site of Zonhoven-Molenheide is situated on the eastern edge of the Kempen Plateau (fig. 1). A deeply incised valley, the Roosterbeek, drains this western part of the Kempen Plateau. From this valley some dry, first order, valleys extend in southern direction. The site is located, on the flat

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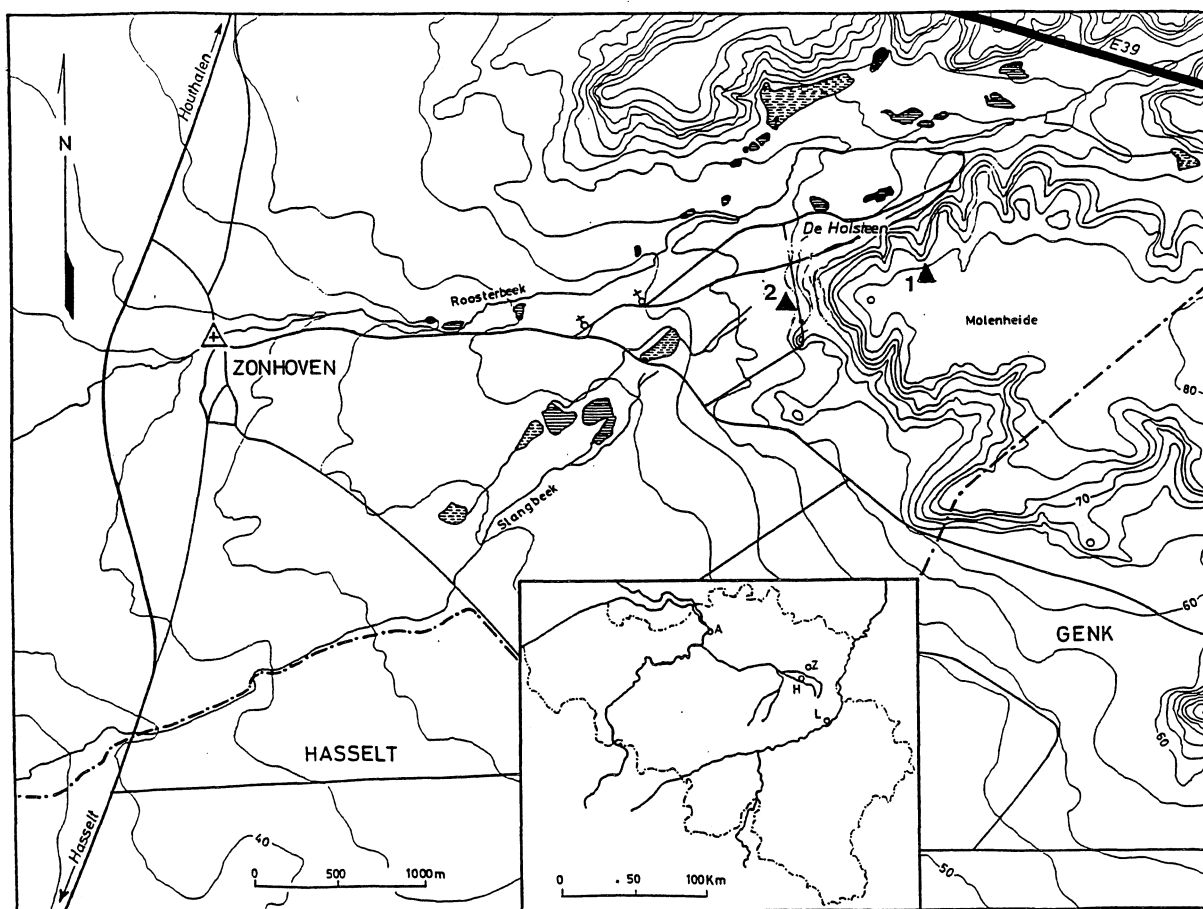


Fig. 1. Situation plan of Zonhoven-Molenheide (1) and Zonhoven-Kapelberg

plateau surface, near the head of one of those valleys. This valley head receives water from a diffuse well creating a limited peat swamp. Auguring of this swamp suggests that the peat is of recent age as it is underlain by a dry podzol. The original landscape is still more or less preserved because it is situated in a camp of the Belgian Army and probably never was cultivated. It suffers, however, intensively from pit digging by soldiers who utilise the place for manoeuvres. The landscape has a vegetation cover of secondary open wood with birch and pine.

Deposits on the site consist of coarse fluvial sands, sometimes homogeneous, sometimes mixed with fluvial gravels that

appear in patches. No analyses have yet been performed, but it seems that those sands and gravels belong to river deposits that were deposited by the River Maas, building up the Kempen Plateau. Such a substrate is somewhat different from that of most of the Mesolithic sites in northern Belgium (VERMEERSCH 1989), where they are generally situated in a Tardiglacial dune landscape.

At the surface a humic-iron podzol (spodosol) developed with its characteristic horizons (fig. 2). It is obvious that the A2 horizon is more pinkish (5 YR 7/1) in colour than the A2 from a podzol under heather

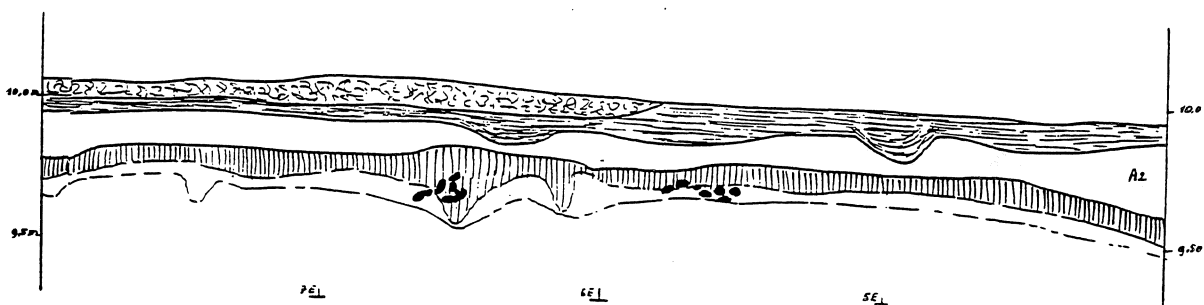


Fig. 2 - Soil profile in the eastern concentration

vegetation (2.5 YR 6.5/1). This can be an indication that the landscape was never, or not for long time, under heather vegetation cover. On some places, the whole soil profile seems to be present with its A0 and A1. Sometimes, the A1 was disturbed by wheel tracks or diggings. All over, however, the soils horizons were well preserved, what is rather exceptional in our country. In the light of the numerous problems with postdepositional processes in sandy grounds (VERMEERSCH 1977), this situation was encouraging for further work on the site. Especially the vertical distribution of the artifacts will receive ample inspection. This should result in a better understanding of where was the original living floor.

3. Archaeological Features

Two discrete artifacts concentrations have been found (fig. 3 & 4). A first - we will refer to it as the western concentration - was discovered by Roger Maes in an army pit. Part of the concentration was destroyed before the excavation started. Moreover, only part of it could be excavated. The second artifact concentration, the eastern one, was completely excavated but its eastern part was

also destroyed by diggings. Preliminary distribution plans suggest that the eastern concentration has an oval shape with some small clusters of higher artifact densities.

4. Archaeological Materials

Only flint artifacts have been recovered. No Wommersom quartzite was present. Some of the raw materials clearly originate from the outcropping River Maas terrace gravels. Other chert qualities, such as some soft black flint, are certainly imported, from an unknown source. At a preliminary inspection, blank from the same core seems to occur in the western as well as in the eastern concentration. Some blanks have been produced on the site whereas other seems to be introduced from outside.

There are no clear-cut technological nor typological differences between the assemblage from the eastern and the western concentration. Debitage clearly intended to produce large bladelets and small blades generally from opposed platform cores. Core rejuvenation products, most often crested blades, attest a sometimes very careful core preparation. Blades are of better quality than

Table - Tool inventory list.

	west	east	Total
8. Other end-scraper on a flake	0	1	1
12. Thin denticulated flake	2	0	2
15. Thin truncated flake	1	0	1
16. Thin retouched flake	2	3	5
21. Dihedral burin	1	1	2
22. Truncation burin	4	0	4
24. Splintered piece	1	0	1
25. Other tools (common tools)	0	1	1
27. Blade with a straight trunc.	2	3	5
30. Blade with continuous ret.	6	7	13
42. Bladelet broken in a notch	0	1	1
44. Bladelet with a straight truncation	1	0	1
48. Obliquely truncated point	8	18	26
51. Unilaterally backed point	2	1	3
106. Indeterminate microlith	0	3	3
Total	30	39	69

what is generally designed as Coincy-debitage but of more irregular shape than blades obtained by the Montbani-debitage (ROZOY 1968).

Tools (fig. 5) are represented by large items and very small microliths. Large tools are often on imported blanks whereas microliths seems to have been made on local blanks. Burin spalls are present. Microburins are fully absent.

An important part of the artifacts has been burned, suggesting that some fireplace(s) was present on the sites. However, no structural fireplace has been recovered. Spatial analysis of burned pieces may indicate if concentrations of such materials, suggesting the position of a fireplace, occur.

The typology of the assemblages is characterised by a high percentage of oblique truncations. In many cases those truncations

are clearly related to microlithic points, the so called Zonhoven points; however, some of the truncations have been performed on larger blanks or on blanks that now are broken. A single tanged point, somewhat similar to an Ahrensburg point, has been recovered. In addition to retouched blades and flakes some burins occur. Those burins are mostly burins on a break but also some burins on truncation and even a dihedral burin. Rather strange is the presence of a straight backed bladelet in a rare flint quality; It seems to be Magdalenian related.

5. Conclusions

The assemblages from Zonhoven-Molenheide are probably related to an extraction camp. Its location on the edge of the Kempen Plateau offered the possibilities of exploitation of two different landscapes: that of the dry Kempen Plateau and that of sandy wetlands to the West. It is possible that

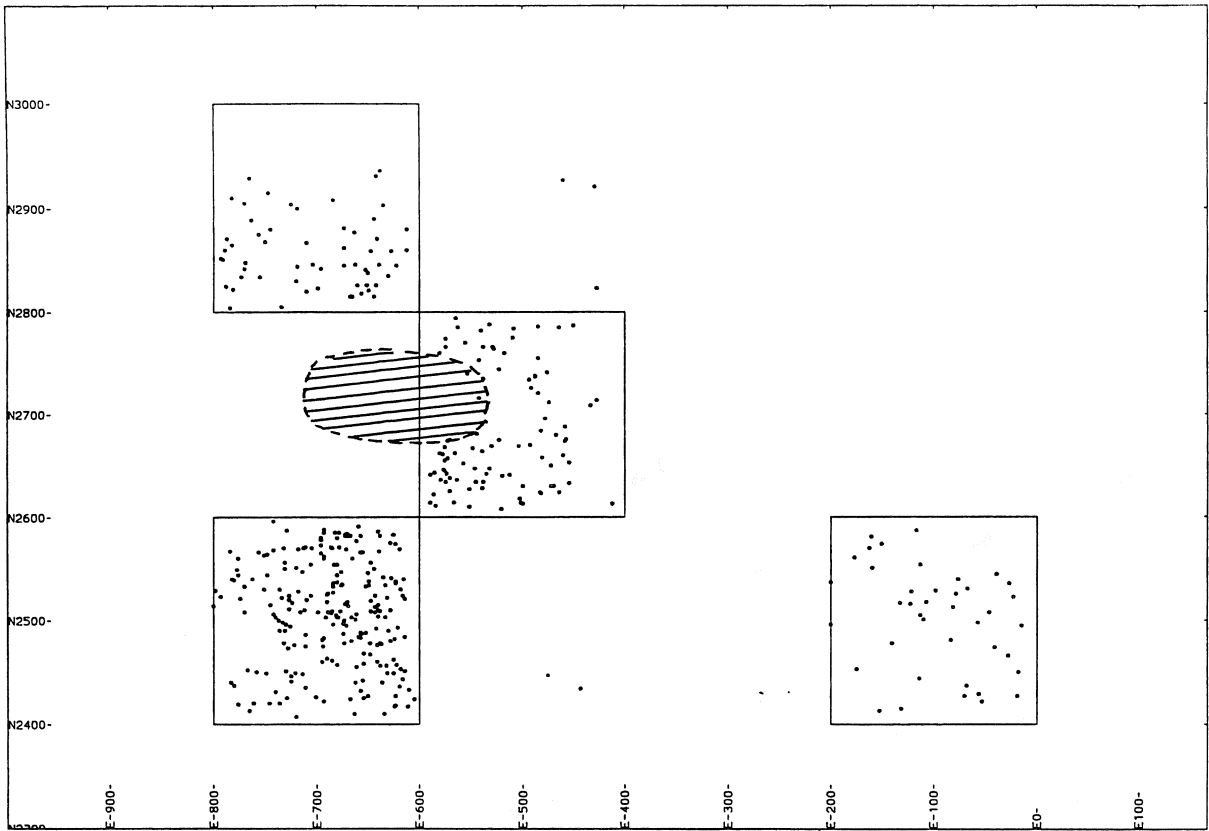


Fig. 3 - Artifact distribution in the western concentration

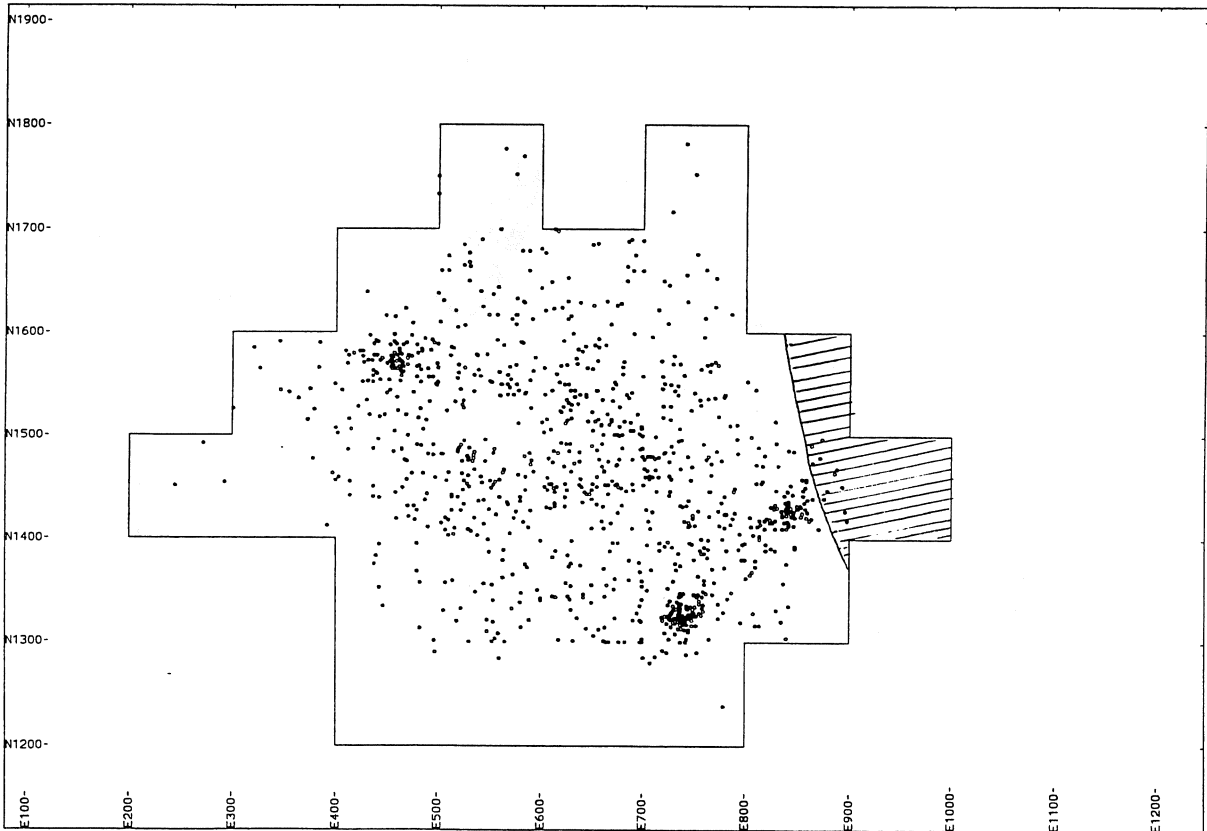


Fig. 4 - Artifact distribution in the eastern concentration

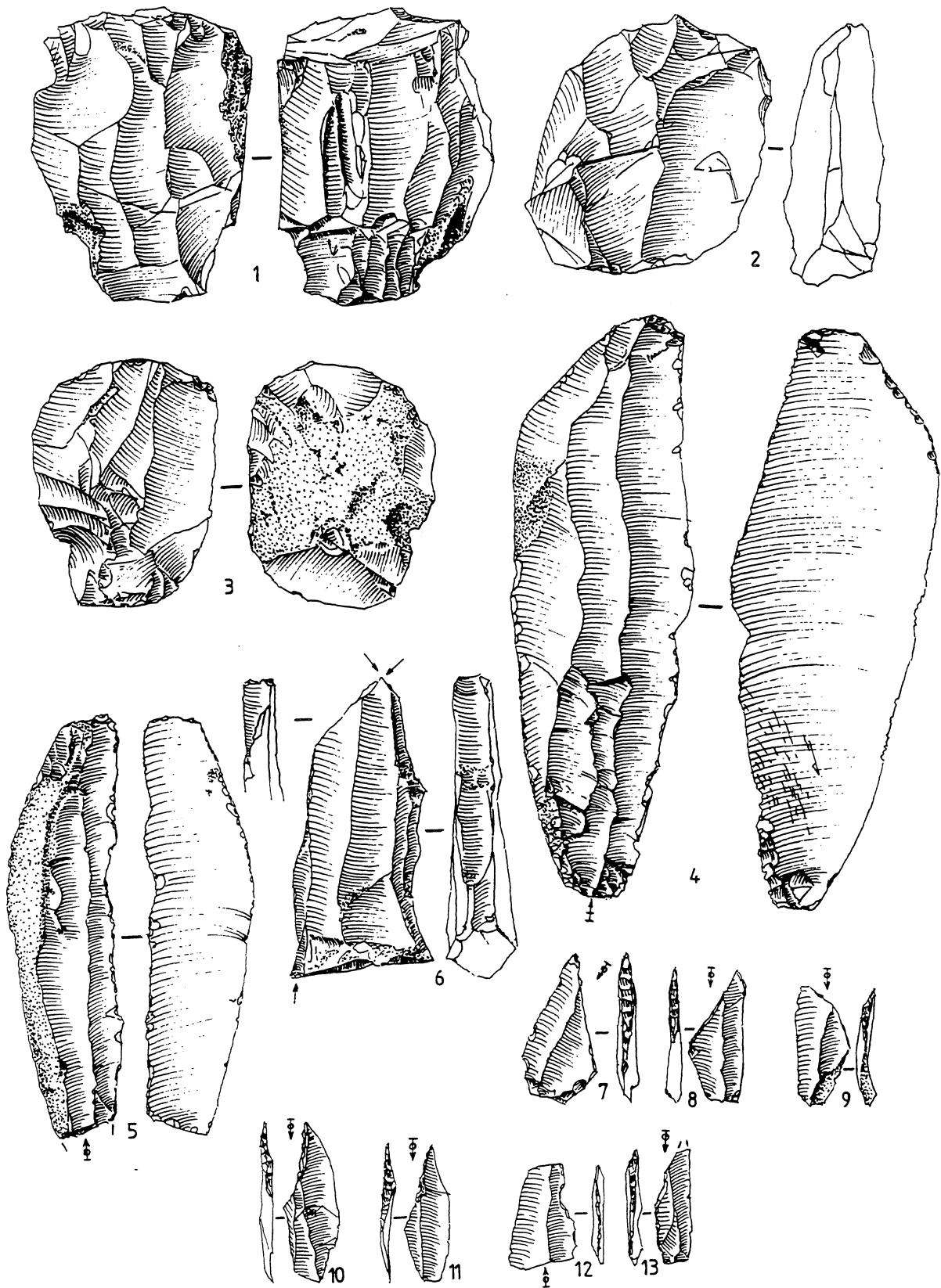


Fig. 5 - Artifacts from Zonhoven-Molenheide (scale 1:1)

at the time of the occupation some well water was present just near the site.

The people who were overnight at Zonhoven-Molenheide imported some high quality blanks and tools. Most of the burins were made in such flint materials. Their presence suggests that some bone tools, such as harpoons (VERHART 1990), were made or curated at the site. The hunters collected also some local flint pebbles that were easily available in the River Maas terrace deposits but that are of inferior quality. Those pebbles were used for blank production which served for making Zonhoven points. The Zonhoven points can be interpreted on the one hand as refuse from curating activities on arrows and on the other as newly prepared points, left on the site. Possibly, retooling took place around a fire place. It seems that there will be some refit connections between the two concentrations.

The assemblages from Zonhoven-Molenheide are very similar to those from Zonhoven-Kapelberg (HUYGE 1985) and Zonhoven-Termolen (HUYGE 1987). They fit in an Early Mesolithic context with some reminiscence of the Ahrensburgian culture. Provisionally the assemblages from Zonhoven-Molenheide can be dated around 9300 BP and would fit in a Preboreal landscape².

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