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Times fade away. The neolithization of the southern Netherlands

Verhart, L.B.M.

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4 Neliske, a Michelsberg settlement near St. Odiliënberg, borough Ambt-Montfort (L.).

4.1 Introduction

This chapter features the Michelsberg site ‘Neliske’ (fig. 4.1)¹. The approach differs from that of the previous chapters. Due to the extensive amount of data in the core region Roerstreek and the fact that the investigation in the region is still in progress, we have decided not to use the regional approach of the excavations discussed above for the discussion of this site. Outside the framework of this Ph.D. thesis, this will occur at a later stage. The site ‘Neliske’ may be considered a Michelsberg settlement typical for the sands of the south and is a valuable addition to the results of the research at Linden.

4.2 Discovery

In the seventies Mr. Tim Dziurawski, a member of the local history society Heemkunde Vereniging Roerstreek (HVR), discovered a large number of Neolithic sherds and pieces of flint in a field along the Berkenallee, north of St. Odiliënberg. In previous years occasional artefacts had been gathered here by HVR-members René Theunissen, Toon van Pol and Herman Slangen.

The site lies in the core region Roerstreek and has been recorded by HVR as number HVR-22. The site is called ‘Neliske’ after the inhabitant, Nelis Hendriks, of an originally nearby farm. At the end of the second World War this farm was destroyed by bombing.

After the first finds, the area was visited regularly and a small collection of Neolithic material was built up over the years (fig. 4.2-4.4). Most finds date from the Middle Neolithic and convey the impression that the site is one of the few in the Roerstreek with a limited length of use. Sites in this area are characterized by the presence of much, chronologically highly diverse material, indicative of a wide range of activities over time, concentrated in a single location.

The terrain lies in an area rich in Stone Age sites and has been and still is diligently searched by members of HVR. Until 1970 hardly any artefacts had been recovered at Neliske. By that time the area had become the property of Mr. H. Slangen, an up-to-date farmer. Using machines that were considerably heavier than in the past he worked his fields, with the result that the plough reached deeper and part of the until then undisturbed subsoil came to the

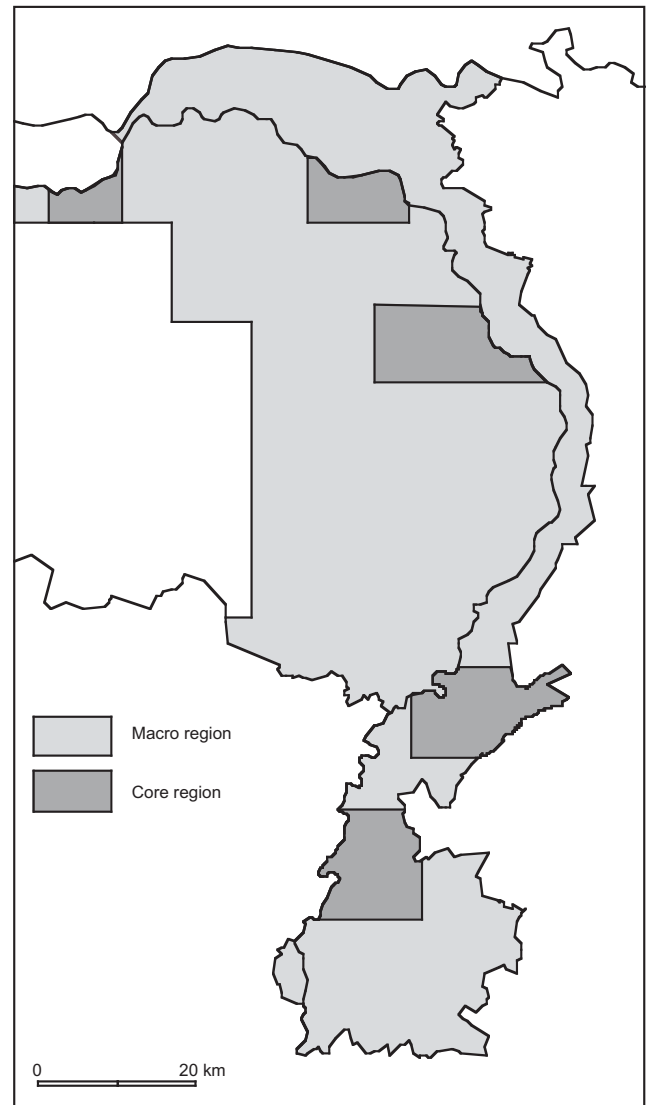


Fig. 4.1 The macroregion and location of the core region Roerstreek indicated with a black line.

surface. Shortly afterwards Mr. Dziurawski discovered the prehistoric artefacts. The finds had been at the surface only shortly, so weathering had not yet played an important part,

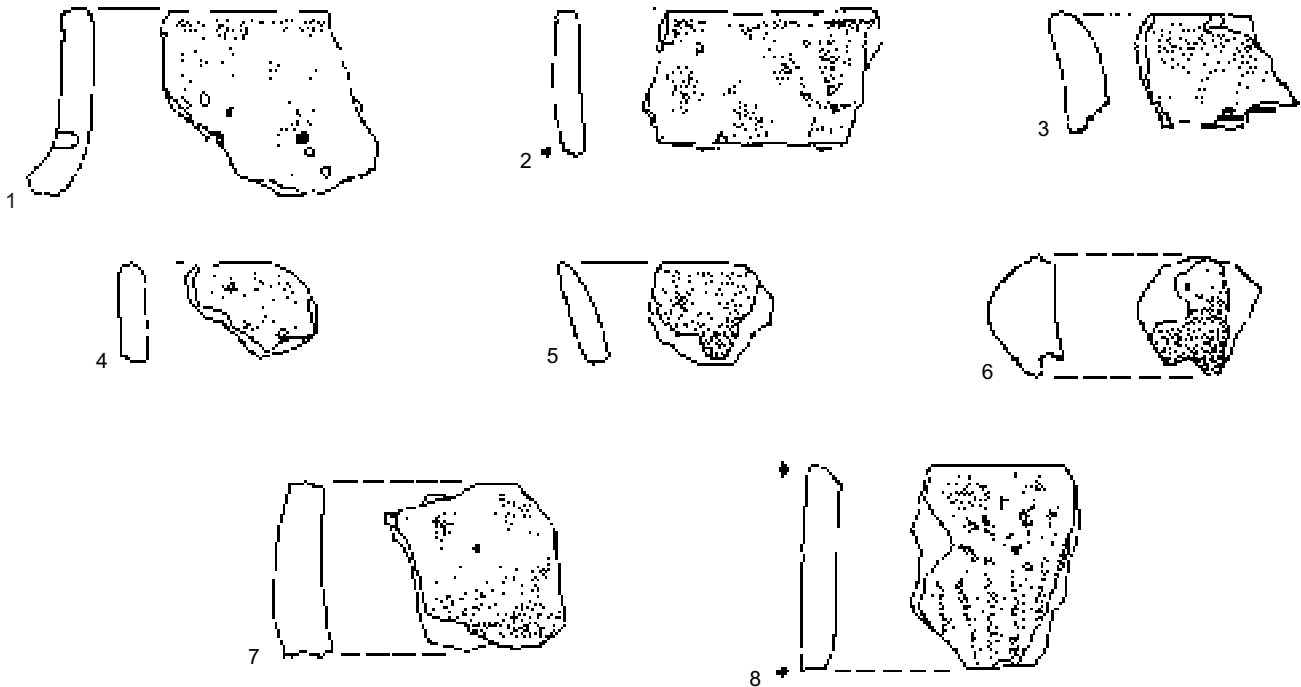


Fig. 4.2 Surface finds, pottery. 1 Middle Neolithic B, 2-8 Middle Neolithic A. Scale 1:2.

which is why so much relatively well-preserved pottery has been recovered at Neliske. Generally pottery is under-represented on surface sites in the Roerstreek.

In the late eighties an inventory was made of the collection of surface finds, approx. 100 pieces of pottery and approx. 300 pieces of flint. The pottery mostly consists of wall sherds with few morphological features. It has been tempered with quartz, chamotte and sand. In a number of sherds a coiled construction is visible, which is typical for Middle Neolithic pottery. A wall sherd with a rusticated surface and a lug may be considered Middle Neolithic as well (fig. 4.2). The late stage of the Middle Neolithic (WSV) is represented by a sherd with edge perforation. Finally, some 20 Iron Age sherds deserve mention here as well. The flint is dominated by waste. The tools comprise axes, arrowheads, scrapers, pointed blades and retouched flakes and blades (fig. 4.3, 4.4). The frequent occurrence of Rijckholt-type flint is remarkable.

The oldest dated fragments are a Federmesser-point and two small Early Mesolithic A-points. The absence of Mesolithic material is remarkable. The majority of the flint material can be attributed to the Middle Neolithic, the most striking artefacts being leaflike, teardrop-like and triangular points with semi-surface retouch, pointed blades and macrolithic tools. Although in the pottery Middle Neolithic phase B does occur, flint tools from that period are barely recognizable.

Only a single small pine-like point has been retrieved that can be attributed to this phase. An indication for Late Neolithic/Early Bronze Age activities is provided by a tanged point with overall surface retouch, also provided with straight wings.

4.3 Terrain and geology

The site Neliske lies in Leropperveld, a fossilized valley plain of the Late Glacial Roer. This valley plain has been preserved as a terrace or plateau, characterized by a strong alternation between high and low areas. It is the remnant of a meandering river system that was preserved by a northward shift of the modern course of the Roer. This shift of the Roer has been linked to tectonic processes, as a result of which the plate between the Peelhorst and Beegden faults has subsided. This subsidence was greater in the north than in the south, causing the Roer to find its way to the Meuse in the northern, lower part. On the basis of geological and palynological observations this change in the course of the Roer can be assigned to the beginning of the Holocene². After the Roer had withdrawn from this area and cut into its present course to a depth of over 3 metres, Leropperveld has hardly changed geologically. The disturbing processes will have been human reclamation efforts and associated erosion. The site Neliske is situated on a small rise, almost completely surrounded by depressions (fig. 4.5). The

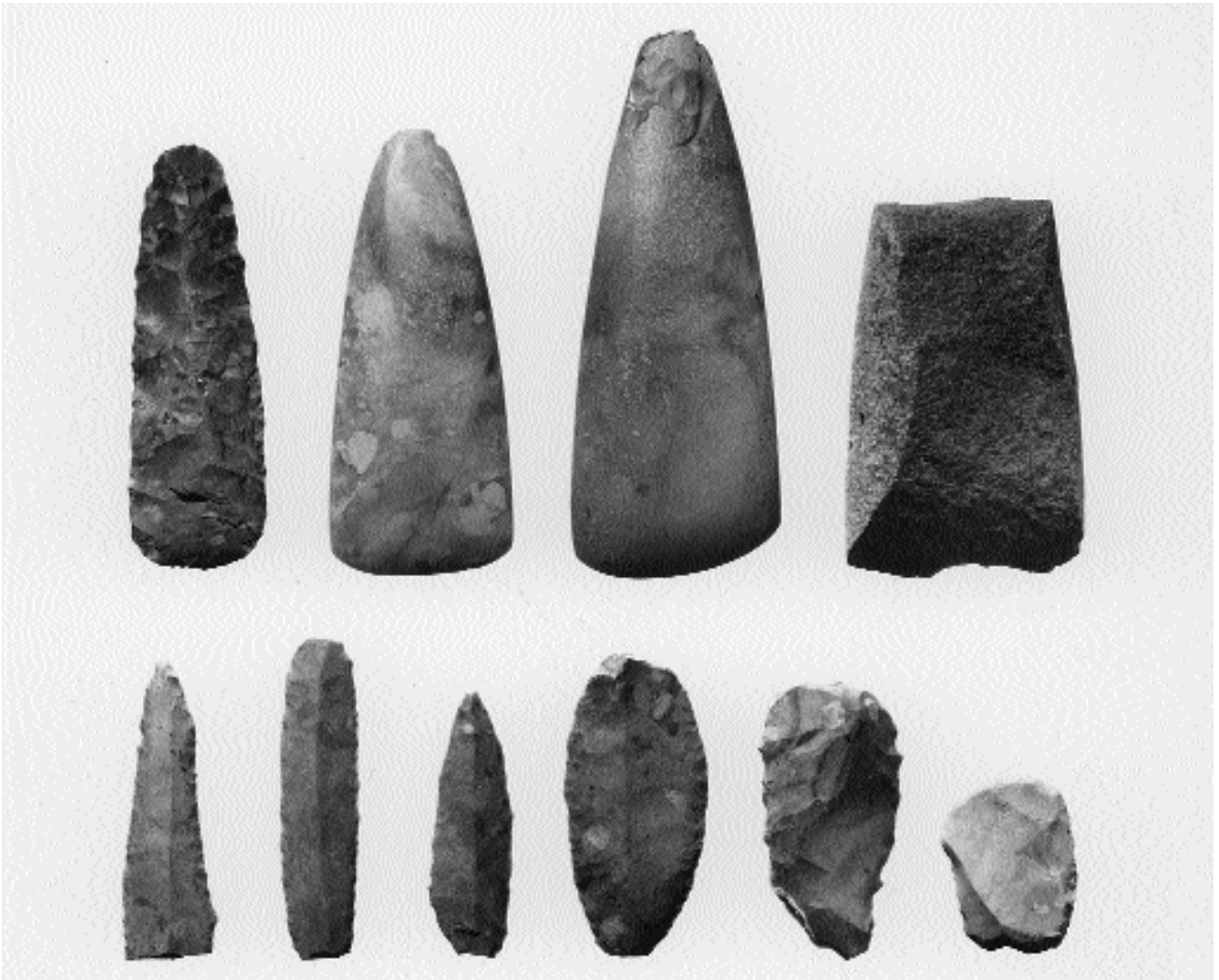


Fig. 4.3 Surface finds, flint. Scale 1 : 2.

difference in height between the deepest part of the depression (24.00 + NAP) and the top of the rise (26.20 + NAP) is quite striking. The rise measures approx. 100 by 40 metres. The rise is a typical fluvial deposit, consisting of coarse river sand with some gravel admixture. In the lower areas finer sediments have been deposited, outcropping on the flanks as well. This sediment is absent on the top. In the northeast and north the Roer flows (fig. 4.6) with a valley plain of approx. 500 metres wide, while in the southeast, south of Overen, a large infilled meander lies. We attempted to find a pollen sample that would allow a reconstruction of Middle Neolithic vegetation, in the vicinity of the excavation, both in the Holocene Roer valley and the meander³. In both cases the result was disappointing. The

meander has been filled with gyttja, with a peat layer at the top. It has been infilling since the Middle Ages, older sediments have not been recovered.

The sample point in the Roer valley yielded a peaty filling, approx. 2 metres below ground level. The pollen diagram allows the inference that the forest on the plateau was dominated by oak and lime. Hazel pollen indicates the presence of open areas as well in the vegetation. A small amount of ribwort plantain, common sorrel and cereal pollen is indicative of small-scale agrarian activities. The pollen spectrum may be attributed to the transition Subboreal/Subatlantic, in other words the Bronze Age.

Due to the absence of a suitable location close to the excavation, a point was sampled at a distance of approx.

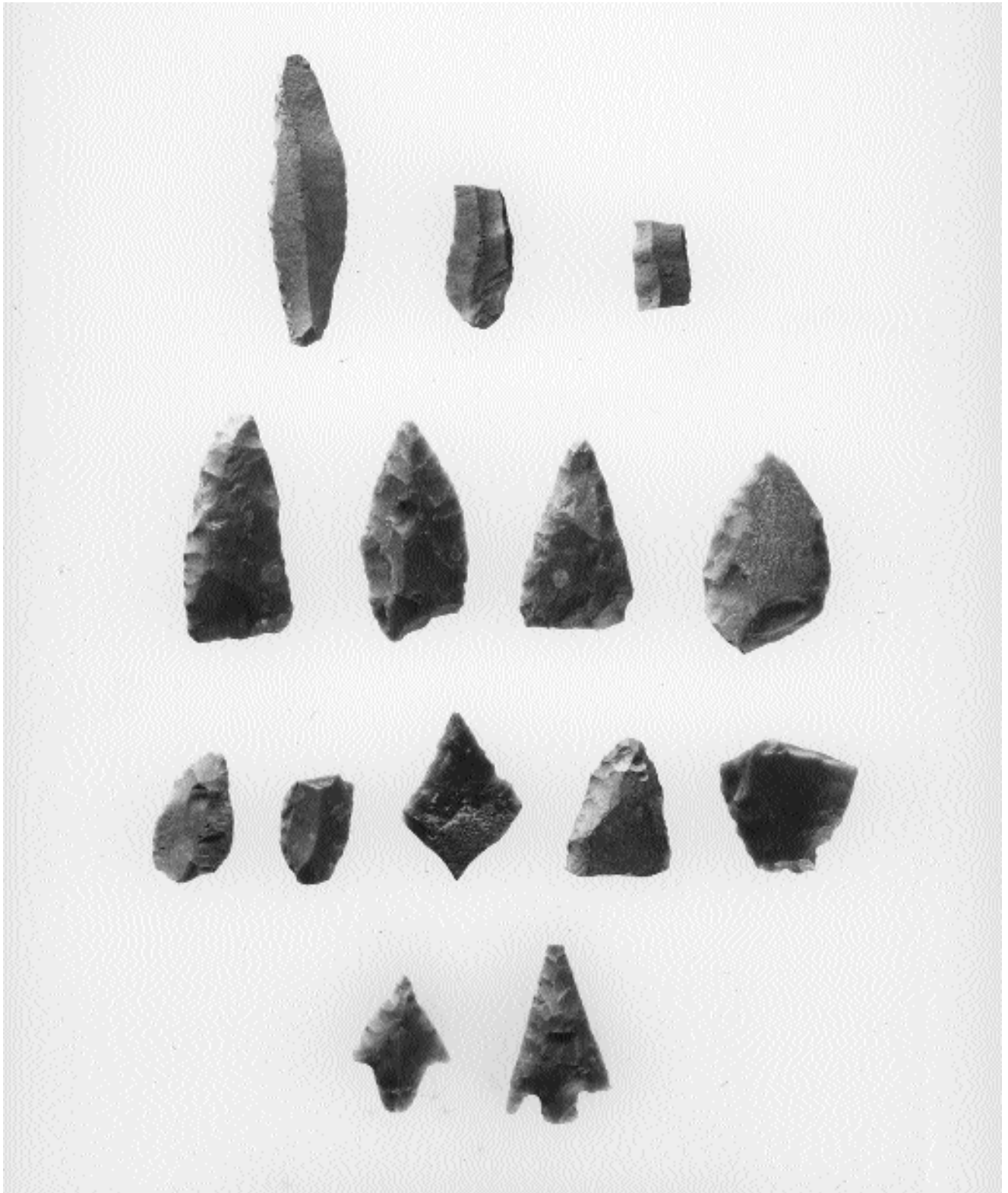


Fig. 4.4 Surface finds, points. Scale 1: 1.

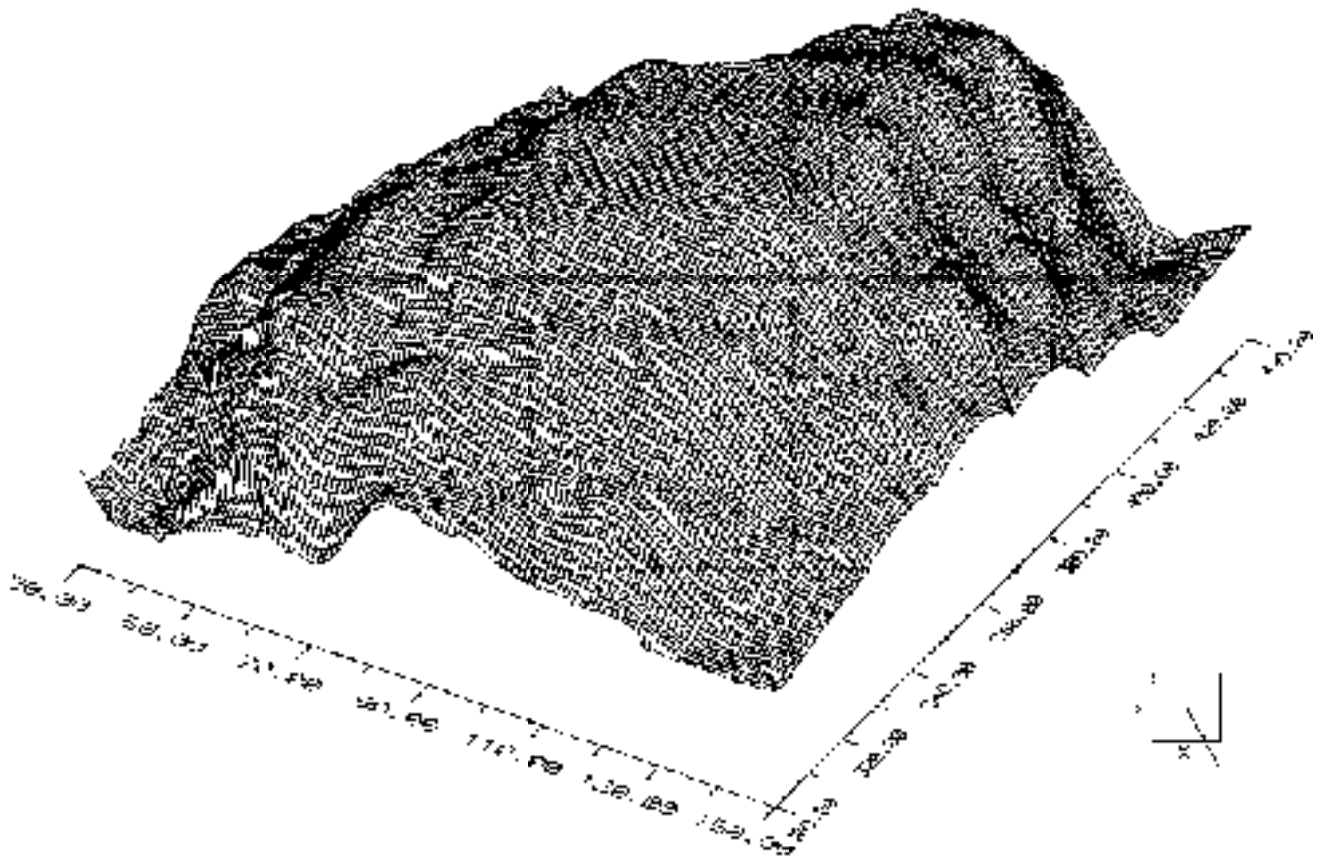


Fig. 4.5 Contour map of the excavation site Neliske. Scale in metres.

2 km. This location is in the north of the valley, east of Lorberg in Melick, currently borough Roerdalen⁴. The deepest sediments contain pollen indicating a Younger Dryas age. The percentage of pine in this period is still high. Apparently the extensive pine forests from the preceding Allerød had hardly diminished in the Younger Dryas. Peat formation started at the transition to the Holocene. At the beginning hazel was quite prominent in the pollen diagram, and later in the profile the emergence of oak is apparent. Birch gradually disappears, but pine manages to hang on quite well. In the Boreal elm, lime and ash settle the area. In the Roer valley alder marsh forest develops. Open water occurs as well, where spiked water-milfoil (*Myriophyllum spicatum*) and false bulrush (*Typha latifolia*) grow. This vegetation is constant until the Early Atlantic, when the pollen sedimentation stops. The period of Middle and Late Atlantic, exactly the time of Neliske habitation, is a gap. The diagram finishes in the Subboreal. In this region generalized data will have to be used to reconstruct the vegetation. In the Atlantic quite dense forests consisting of oak, elm and lime covered the dry sands. On

open areas in the forest, created by fallen trees and along brooks, ash and hazel had a chance as well. The vegetation in the damp part of the area, particularly the Roer valley, had a more open character. Here riverine forests may have grown and where conditions were even wetter marshy forests, mainly composed of alder and willow.

4.4 Pilot study

In the autumn of 1991 ten possibly Middle Neolithic settlement areas in the Roerstreek were explored by means of digging an exploration trench. One of these areas was Neliske. In the highest part of the rise, in the area where according to Mr. Dziurawski most finds had been recovered, a pit was dug mechanically, 45 metres long and 2 metres wide. The plough soil was mechanically removed and the undisturbed level was shovelled manually. Soil traces were drawn and finds measured. In the area where most finds occurred, the level was deepened another 5 cm. The first impressions of this exploration were that beneath the plough soil a thin scatter of finds was still present, sherds had been preserved, the material was predominantly

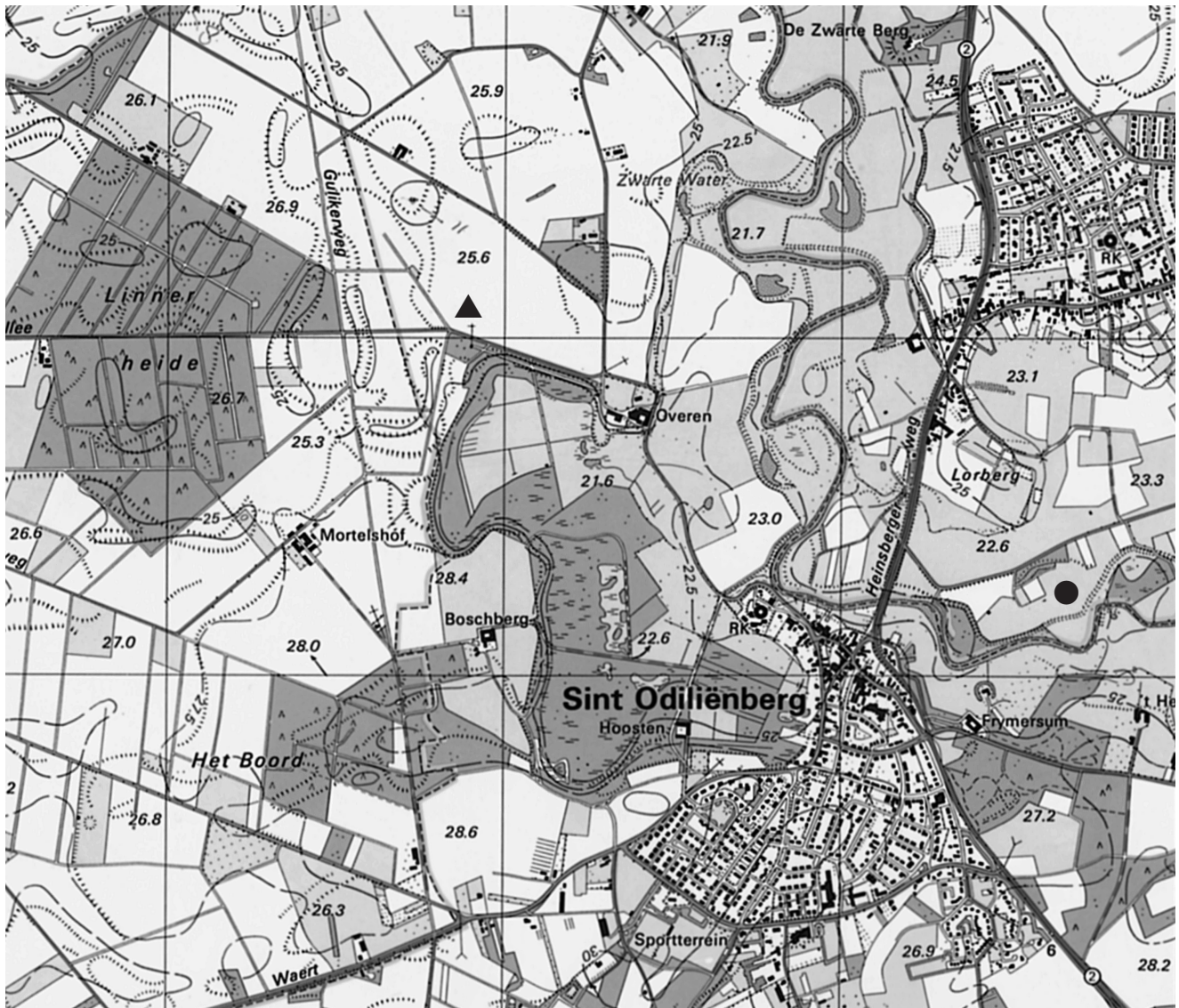


Fig. 4.6 Topography of the vicinity of the excavation site Neliske. Triangle: excavation; dot: pollen sample.

of Middle Neolithic age, traces of earlier or later habitation were absent and that the size of the site was limited. For the sandy areas in the south these were encouraging results and in the early spring of 1992 a second exploration was conducted, this time a drilling study. The procedure was identical to that used at Linden⁵, the sole difference being the selection of a finer drill grid of 10 by 10 metres. An Edelman drill with a diameter of 20 cm was used. The purpose was to determine the size of the site, so an idea could be formed of the (excavation) technique, time and money required, ahead of the actual excavation. In the highest part of the rise finds turned out to be still

present, as well as on the slopes. Flint was most numerous (fig. 4.8a). This occurs predominantly in the southern part of the rise and on the slopes. The find density varies widely. There is no gradual increase in density, which might indicate a settlement. The distribution of other find categories is also not indicative of the presence of a settlement (fig. 4.8b-c). Pottery has been found only occasionally and charcoal occurs in almost every drill sample, with a concentration in the northwest corner. The small number of finds from the drill study matches the observations from the pilot study. This is a Neolithic find spread with a small amount preserved beneath the plough



Fig. 4.7 The 1991 pilot study.

soil. Despite the small amount of finds the area deserves excavation. The site is one of the few containing almost exclusively Middle Neolithic material, without large amounts of older or younger habitation traces. This is rare in the Roerstreek and the south of the Netherlands. There is a possibility that soil traces may be recovered here that can provide information on the type of dwelling and how the surrounding area was exploited. A second reason for excavation was the fact that due to modern farm practices shortly nothing will remain of the site.

4.5 Excavation

In cooperation with HVR-members the excavation of the site began on 5 October 1992. The excavation lasted until 14 November. Over that period an area of approx. 4800 m² could be uncovered. After the plough soil had been removed mechanically, the uncovered level was shovelled (fig. 4.9). The finds that were recovered were initially collected in squares of 50 by 50 cm. Due to the small number of finds the artefacts were at a later stage measured

in three dimensions with the aid of an infrared theodolite (fig. 4.10). The soil traces that were present were drawn. In the area with relatively many finds the level was shovelled for another 10 centimetres. This area had a surface of approx. 1900 m². Although it was soon obvious that only a tiny part of the bottom of the original 'culture layer' had been preserved, the level was still deepened, in order to collect more dateable material. These finds might be useful for a functional interpretation of the site. In the remainder of the area, a surface of 2900 m², the topsoil was mechanically removed, the level shovelled, soil traces drawn and cut.

4.6 Soil traces

Overall, 42 soil traces could be documented (fig. 4.11). This includes traces that may be referred to as prehistoric on the basis of their content, shape and colour, traces that did not contain any finds and may be considered recent on the basis of their colour, shape and depth and finally traces that may be interpreted as the remains of tree falls.

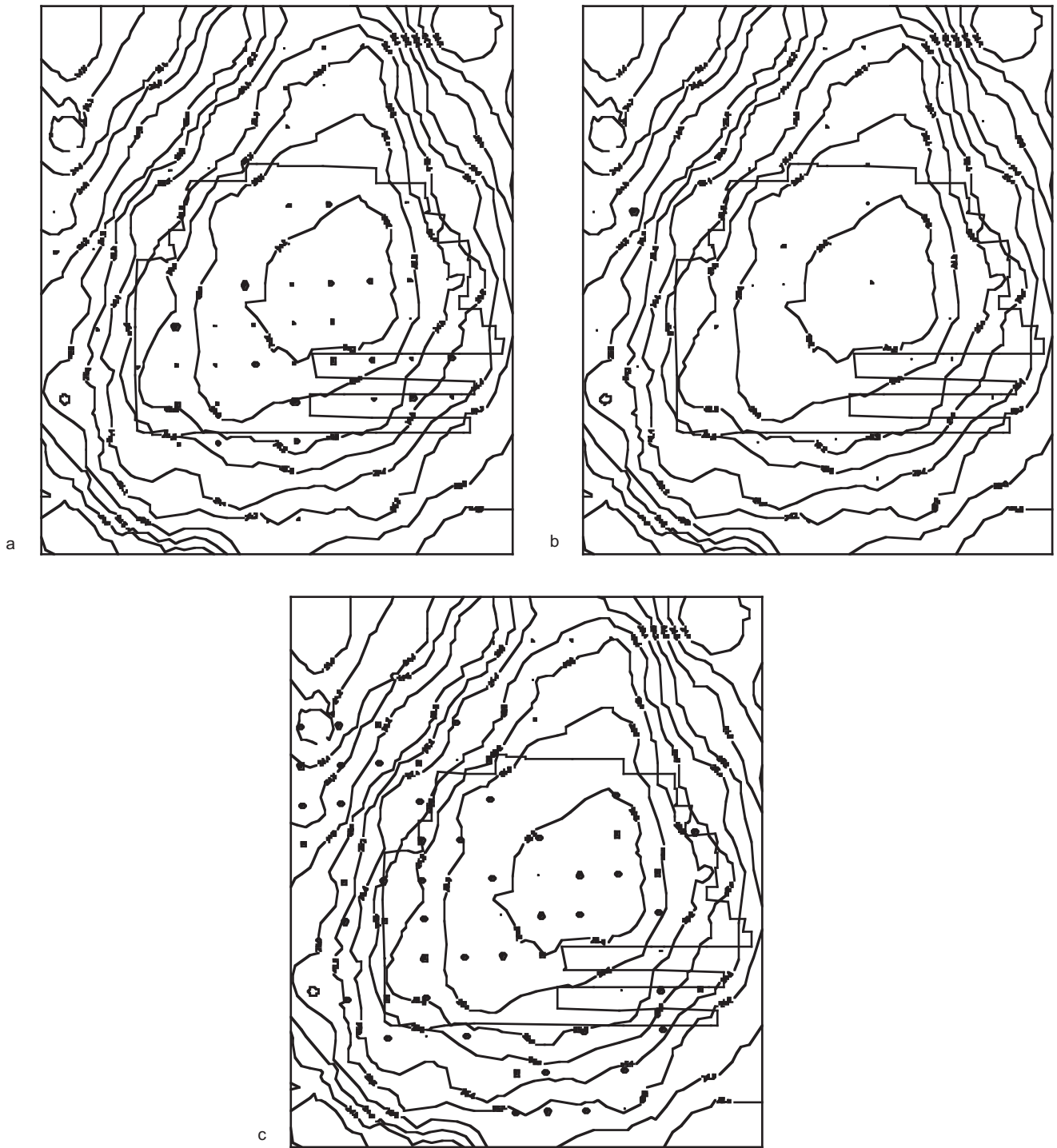


Fig. 4.8 Drill points and results of the exploratory drill study. a: relative density and distribution of flint. Maximum number of finds per drilling 4 items, b: relative density and distribution of pottery. Maximum number of finds per drilling 9 items, c: presence or absence of charcoal.



Fig. 4.9 Shovelling the level.

4.6.1 PREHISTORIC TRACES

This group consists of pits, post traces and a grave (table 4.1). These have been attributed to this group on the basis of the contents of the trace, if any, texture, finds and colour. The pits and post traces display patchy, brown to deep grey traces. The grave was also deep grey, but quite patchy and contained remains of a human cremation.

	n
post traces	7
post traces(?)	3
pits	2
graves	1
indeterminate	5
Total	18

Table 4.1 Distribution prehistoric traces

The post traces are more or less round, with a maximum diameter of 50 cm and a minimum diameter of 20 cm (fig. 4.12). The discoloration was not always obvious. In two

traces the post's outline could still be discerned in the pit as a faint discoloration (traces 10 and 17). These posts have a diameter of approx. 20 cm. The depth of pits and posts is at most 31 cm below the drawn level.

A small group of traces was more difficult to explain, but may have been posts as well. These are shallow, faintly discernible in the cut and have dimensions that match those of the posts.

The pits are rounded to elliptical, with a maximum size of 84 cm. Their depth is approx. 25 cm. The upper part of the filling is often a dark colour, while the trace becomes increasingly faint with depth. Hardly any finds have been recovered from these pits.

Finally there is a group of 5 traces that are faintly visible in the soil and have therefore been considered prehistoric. It was impossible to distinguish between post or pit. These are very shallow discolorations that might be the result of less deeply dug pits or posts.

Many Neolithic settlement areas in the west of the Netherlands are characterized by their inextricable pattern of post traces. On the other hand, most Neolithic sites in the south of the Netherlands are characterized by a complete absence of soil traces. Such spreads only rarely allow a reconstruction of any kind of building. In this respect the



Fig. 4.10 Recording the finds and traces with the aid of an infrared theodolite.

pattern of prehistoric post traces in St. Odiliënberg appears different at first glance. The soil traces are small in number and close together. The area with traces is located in the eastern part of the excavation, over a length of 24 metres and a width of 2 metres.

An important question of course is the relationship between the soil traces and the association with the Neolithic find material. On the basis of shape, position and relation to the find pattern there appears to be a connection, which might imply that the soil traces are Middle Neolithic as well. Due to the lack of sufficient amounts of charcoal for conventional dating, two small samples were sent off for AMS-dating. The first sample, from trace 23, yielded an age of 3630 ± 50 BP (UtC-2641), the second sample, from trace 30, an age of 3270 ± 60 BP (UtC-2642). This would imply that both pits date from the Bronze Age, but are not of the same age. However, no material was found on the site that was typical for that period. This raises the question whether the decision to use these small samples was correct. Obviously the tiny pieces of charcoal have no relation with the Middle Neolithic habitation and may have entered the trace as a result of post-depositional processes like e.g. bioturbation.

The pits might also be connected to an activity which left no archaeological traces. In order to test these hypotheses, samples of the post traces and the pits containing charcoal were sent off once again (table 4.2).

Trace	Expected		UtC-nr	Age BP	STD
	age	Type			
7	preh.	post	4911	3260	38
10	preh.	post	4913	3269	41
17	preh.	post	4909	2635	32
23	preh.	pit	2641	3630	50
30	preh.	pit	2642	3270	60
24	rec.	pit	4912	4410	60
38	rec.	pit	4910	4445	45

Table 4.2 Summary of ages of prehistoric and recent traces in relation to expected age.

The results are quite surprising. The ages are indeed all prehistoric, but younger than expected and they show little interrelationship.

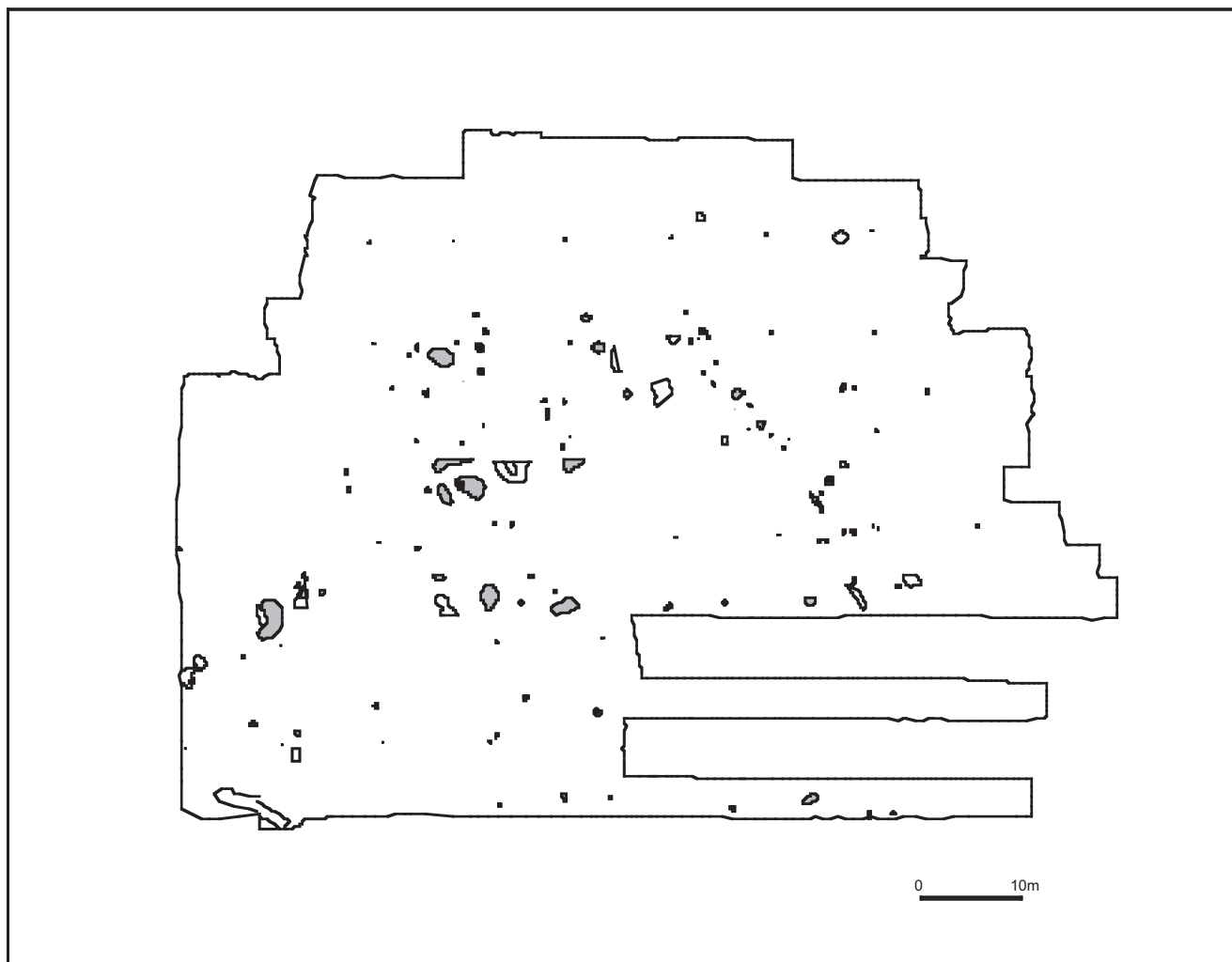


Fig. 4.11 Summary of all traces. Prehistoric traces in black.

An AMS-dating determines the age of the charcoal, but the association of the charcoal with the trace is crucial. The results of the dating indicate that there were fire activities on the terrain in the Late Neolithic, Bronze Age and Iron Age. Hardly any artefacts have been recovered from these periods, so it is unlikely the traces date from these periods. An additional argument is provided by the fact that the post traces do demonstrate a relationship with the Middle Neolithic finds and may be considered a single moment of use, whereas the dates point to the contrary. We therefore assume that the charcoal is secondary and entered the traces as a result of natural processes such as bioturbation. The Late Neolithic charcoal in the pits with a recent filling corroborates this assumption. On the basis of the relationship between the traces, the lack of overlap and the distribution of the Middle Neolithic finds,

we want to associate these traces with the Middle Neolithic artefacts and therefore assign these to the Middle Neolithic.

The grave⁶

Apart from pits and post traces there was one trace that could be interpreted as a grave. This is a cremation that was immediately obvious when the topsoil was removed mechanically, as a dark, patchy spot with many pieces of white, burned bone. As the grave lies on the highest, flat part of the rise, erosion appears to have been slight. The original depth of the grave will have been approx. 35 cm. No traces of a pit were visible and although the concentration was carefully investigated, no finds were recorded that could indicate the age of the grave. Hardly any charcoal was present, so this is probably a deposition and not the cremation of the body in situ.

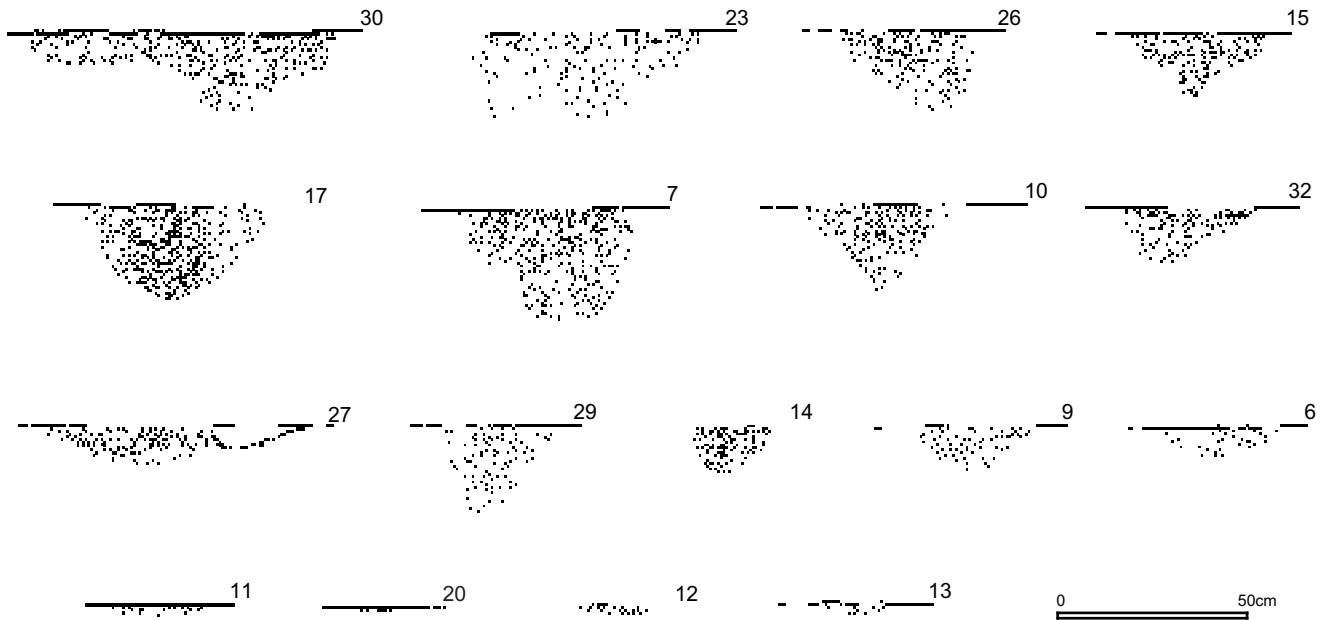


Fig. 4.12 Cross-sections of prehistoric traces. Scale 1:20.

The contents of the grave were sieved on a 1-mm sieve. Apart from the cremation remains themselves, a piece of burned flint and some pieces of charcoal were collected. The cremation remains were subjected to a physical-anthropological investigation⁷. The total amount of burned bone is a mere 300 grammes. This amount and the size of the bone remains are indicative of an incomplete and highly fragmented cremation. Only one bone fragment provides a clue to the sex; if this is representative, it would concern a female between 40 and 60 years old. The small pieces of charcoal have been used for an AMS-dating. The cremation has an age of 1980 ± 50 BP, in calendar years between 32-15 cal BC and 9 cal BC-80 cal AD (UtC-2640).

4.6.2 NON-PREHISTORIC TRACES

A number of traces (15), containing no finds, are more distinct than the prehistoric traces. These are mainly black to grey, with a highly patchy pattern. Two traces are pink. The traces have a depth of up to 20 cm and the maximum dimension is 60 cm. The absence of finds makes dating these traces difficult. The spread of the traces provides no indication of age either.

Two traces have been considered recent in the field and contained some pieces of charcoal. The C14-results, however, yielded an age of approx. 4400 BP. Here, too, it is questionable whether the charcoal represents use or whether this is secondary, older charcoal that has entered the trace as

a result of post-depositional processes. The latter appears the more likely, as the filling of the traces was of a 'fresh' nature.

4.6.3 TREE FALLS

In the northern part of the shovelled area some traces have been found with irregular shapes and a large number of Middle Neolithic finds, including pottery. Almost all of the traces have a brown to dark brown filling. In the level their maximum dimension is approx. 2,5 metres, and a depth of approx. 55 cm. The find spread in these traces is not even, but zones with concentrations can be discerned. In the profile a band can sometimes be distinguished that is oblique to square to the horizontal find layer. In the level a horseshoe-shaped find spread can sometimes be discerned. Such traces may be interpreted as the remains of tree falls⁸ and natural depressions. The position of the sherds in these tree falls is an indication that these occurred after the habitation.

4.7 Finds

4.7.1 POTTERY

In general the pottery is highly fragmentary, especially in the shovelled level. Sherds from soil traces, particularly the tree falls, are usually larger and often better preserved as well. The overwhelming majority of the sherds does not weigh more than 10 grammes; the largest sherd weighs 63 grammes. Almost all material may be considered Middle Neolithic, with

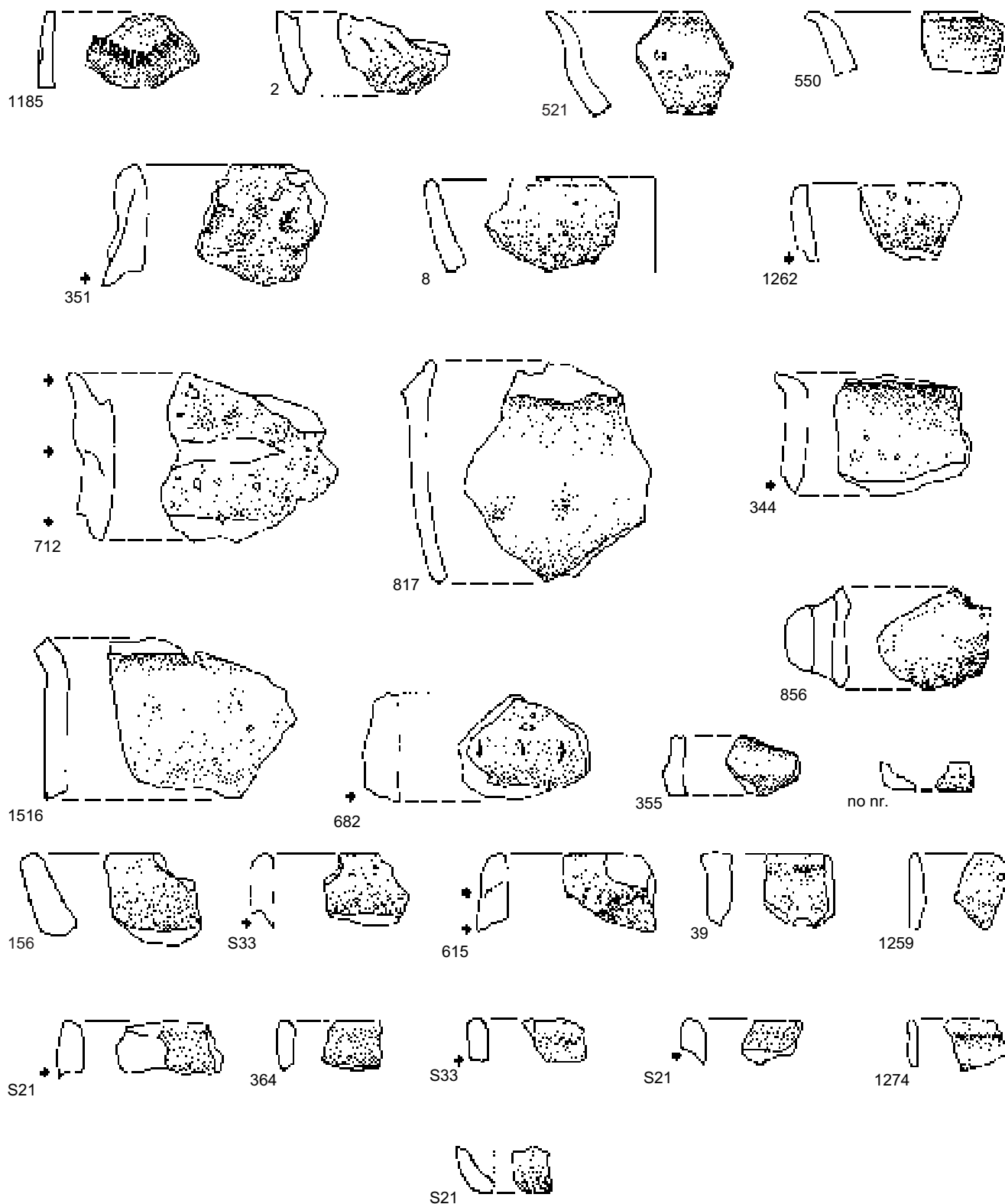


Fig. 4.13 Pottery. Top: sherds from the shovelled level, 1185: sherd of unknown age, 2: edge sherd with herringbone decoration, all others Middle Neolithic; bottom: sherds from traces (S-numbers). Scale 1:2.

the exception of some Iron Age sherds, an EGK-sherd and a sherd of indeterminate age.

The Iron Age sherds have hardly any recognizable morphological features, but may be distinguished on the basis of technical features and the baking. The lack of features does not allow a more specific attribution than Iron Age or possibly Late Bronze Age.

More or less in isolation a sherd was found with a herringbone decoration outside the find concentration (fig. 4.13:2). Such sherds are considered to be EGK. EGK-material is quite rare in the south of the Netherlands and is mainly known from grave settings. A good instance is provided by some complete pots found in the round barrow group in Swalmen⁹. Traces of a (flat) grave, however, have not been found in St. Odiliënberg.

The majority of the sherds has a (Middle) Neolithic age. The sherds have been tempered with quartz, chamotte and a small amount of sand. The pottery was constructed from coils and fired hard.

Partly due to the fragmentary nature of the pottery the number of design features is small. Barrel-shaped pots occur, as well as pots with outward bending rims (fig. 4.13). A bowl/plate with an inverted rim and carination can be distinguished, but rim sherds without inverted rim occur as well. Bottom sherds have not been distinguished, apart from a single fragment. Decorative motifs are almost completely absent, with the exception of a single rim sherd with a pushed up rim supplied with a 'Tupfenleist', a subcutaneously perforated lug and a sherd with nail impressions. The latter sherd might be assigned to the Late Bronze Age, but on the basis of the coiled construction a Middle Neolithic age (Hazendonk 3-phase) is more likely. Other decorative motifs typical of the Hazendonk 3-phase do not occur, however. The Middle Neolithic material can therefore be attributed to the Hazendonk 2-phase. During the excavation no pottery from the WSV-phase has been recognized.

4.7.2 FLINT (fig. 4.14-4.15)

Part of the flint has been imported from Rijckholt and Valkenburg. Another part must have been collected in the immediate vicinity, possibly the Meuse channel or outcropping Meuse terrace gravel. The combined use of imported high-quality flint and locally collected flint is a recurrent phenomenon in Middle Neolithic settlement areas. Traces of primary processing of imported flint do not occur, only cores of locally collected flint are present.

The overwhelming majority of the flint is waste. A small percentage displays traces of use and some tools have been recovered. The four arrowheads are from three periods. The oldest is a small triangle that can be assigned to the second part of the Early Mesolithic/first part of the Middle

Mesolithic. Two arrowheads, points with semi-surface retouch, date from the Middle Neolithic A. The first fragment is the tip of a point whose shape can no longer be ascertained; the second fragment is the base of a leaflike point. The fourth arrowhead is a transverse point and can be assigned to the WSV-phase.

The macrolithic tools, in particular scrapers and pointed blades, date from the Middle Neolithic A. The exact date of the axes is hard to determine. Although amateurs have collected a small number of axes over the years, no complete specimens have been recovered during the excavation. Four small flakes of axes have been found, a top and a large central fragment. The flint used is quite diverse. One axe fragment has been made of Lousberg flint, two other fragments of Valkenburg flint, the rest of Rijckholt flint.

4.7.3 STONE

Among the large amount of stone excavated only two fragments of tools can be discerned. These are a small fragment of a grindstone and part of a millstone (fig. 4.16). The remainder are river cobbles, complete or broken.

4.8 Distribution patterns

The small number of finds, thin scattering and concentration of finds in depressions and tree falls make a detailed spatial analysis pointless. The general image is that the finds are concentrated in the natural depressions and tree falls. The remaining finds are more or less evenly scattered over the excavation area, with the exception of an area to the west of the cluster with post traces. In the latter area finds are rare and pottery in particular is almost completely absent (fig. 4.18). This empty zone is also apparent in the distribution of flint (fig. 4.19), the group of materials least susceptible to weathering.

The empty zone lies at the top of the rise. It is not likely this emptiness is the result of erosion, as the rise is too flat for this to occur. The emptiness might be related to the post traces found exactly to the east of the empty zone. In that case we might be dealing with a yard that was kept clean¹⁰.

4.9 Interpretation and conclusions

The overall amount of finds of the excavation Neliske is not such as to allow important and far-reaching conclusions to be drawn. The importance of the site is in particular the fact that the location has been used only shortly and therefore provides us with a relatively 'sharp' picture of the activities deployed there. Of course there is the tantalizing question whether the row of posts may be associated with the Middle Neolithic activities. If so, these might be the remnants of a Middle Neolithic house.

If we are dealing with a house, many post traces have disappeared and only a fragment remains for reconstruction.

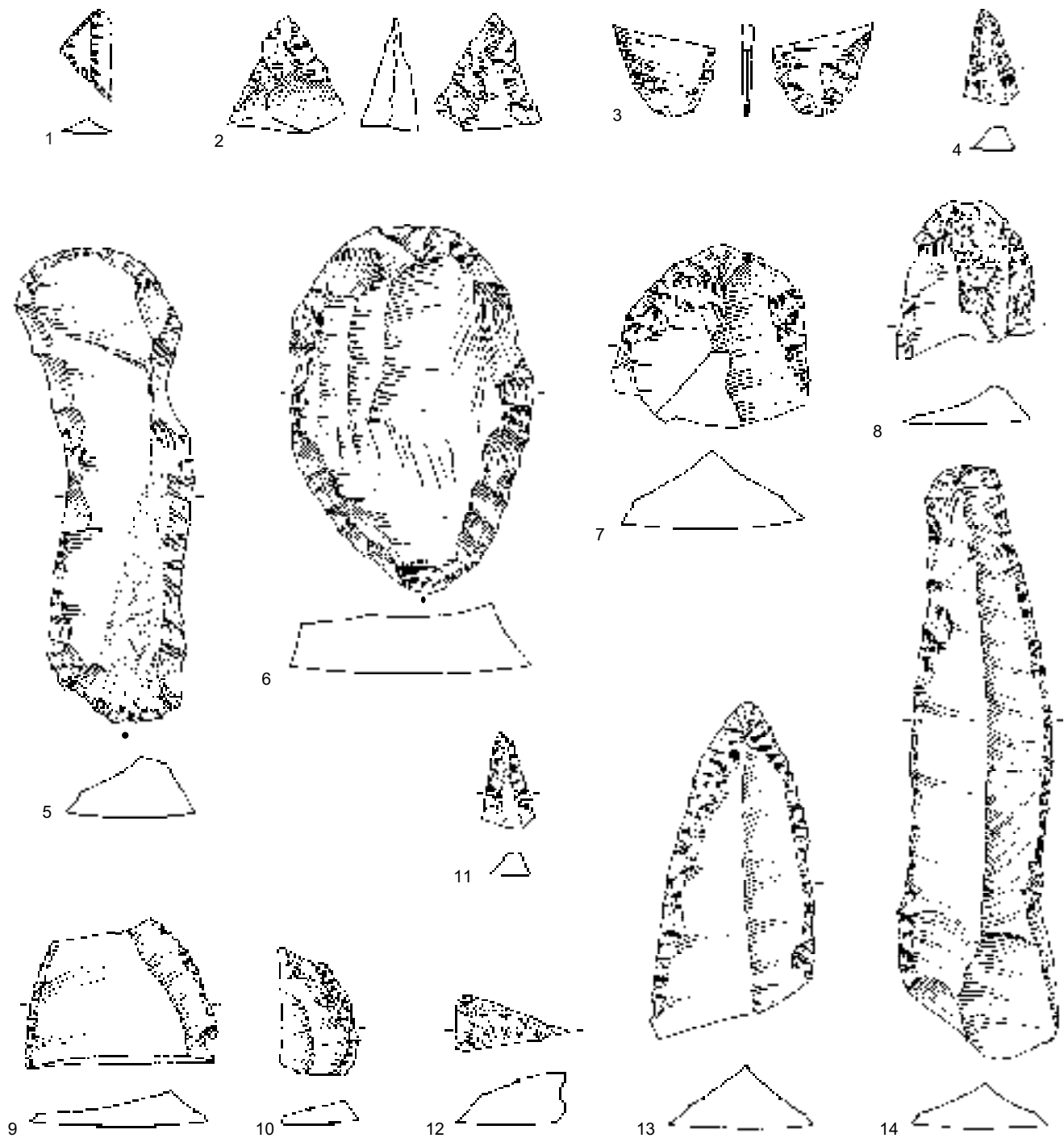


Fig. 4.14 Flint. 1 Mesolithic triangle; 2 tip triangular point; 3 base leaflike point; 4 transverse point; 5-8 scrapers; 9-10 retouched flakes; 11 tip pointed blade; 12-14 retouched blades. Scale 1:1.

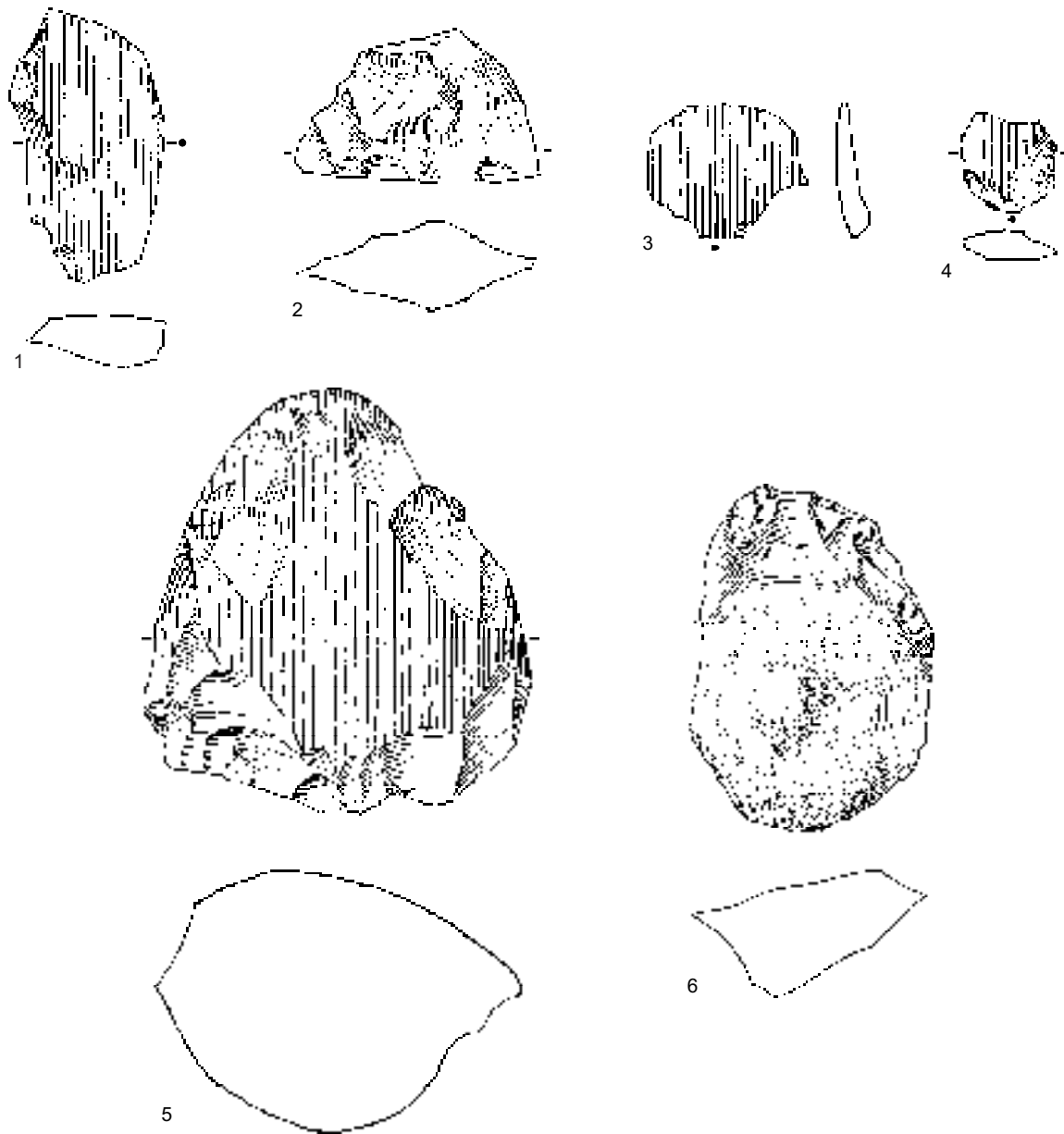


Fig. 4.15 Flint. 1-5 axe fragments; 6 core. Scale 1:1.

This occurs regularly on Middle Neolithic areas in the south of the Netherlands¹¹. Although some posts appear to be aligned on the site Neliske, no regular intervals can be discerned, not even when the assumption is made that some posts traces are absent because these were dug less deeply. It does not appear to be the case that only the heavy posts of the central standards have been preserved. A trussed rafter construction is as unlikely, nor do the traces resemble floor plans of dwellings and other constructions known from the

Middle Neolithic¹², despite the wide range of floor plans known. We can therefore — unfortunately — not prove that there was a Middle Neolithic building on the site Neliske in the Middle Neolithic. For the interpretation of the site we are therefore left with the material remains that have been excavated and the geographical position. The age of the pottery is an indication that the site has been used for a short while during the Hazendonk 2-phase. On the basis of the artefact composition and the size of the site it would have

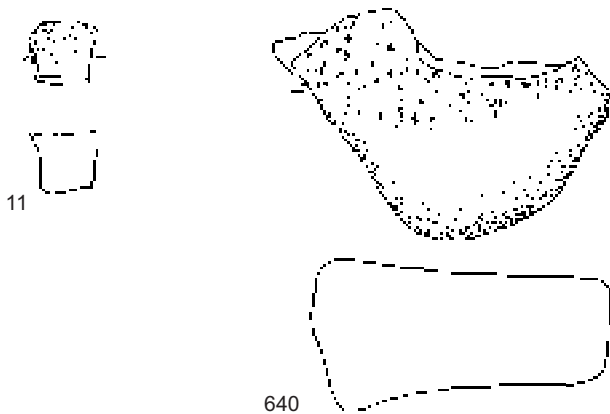


Fig. 4.16 Stone. 1 fragment grindstone; 2 fragment millstone. Scale 1:3.

been a settlement with a primarily agrarian function. The small number of arrowheads leads us to suspect that hunting was of minor importance. No statements can be made on the contribution of livestock.

Two options are available to ascertain the length of use. The first is that the area was left because the soil of the fields

surrounding the settlement was exhausted. When yields dropped, it became necessary to develop new fields. Regional pollen data from the south of the Netherlands demonstrate that human influence in the terrain was not large in this period¹³. This indicates that the fields were not used over long periods, their size was not large and relatively soon fields were developed elsewhere, on a small scale. The forest had the opportunity to resettle the deserted fields soon. How often a settlement would have had to relocate depends on the area developed around the settlement and the contribution the crops would have made to the food supply. For the coversands in the south of the Netherlands no data are available on this matter, so it is hard to ascertain the minimum length of use, if any, of a settlement.

A second option is based on the assumption that the age of a farm building was the decisive factor for relocation. Experiments have shown that the life span of a prehistoric house may be estimated to have been between 10 to 40 years, depending on the construction material employed¹⁴. The construction of houses in the MK-phase does not appear to have received the care that was used for instance in the LBK-phase, which might mean that the building materials were not of good quality. In that case the settlement will

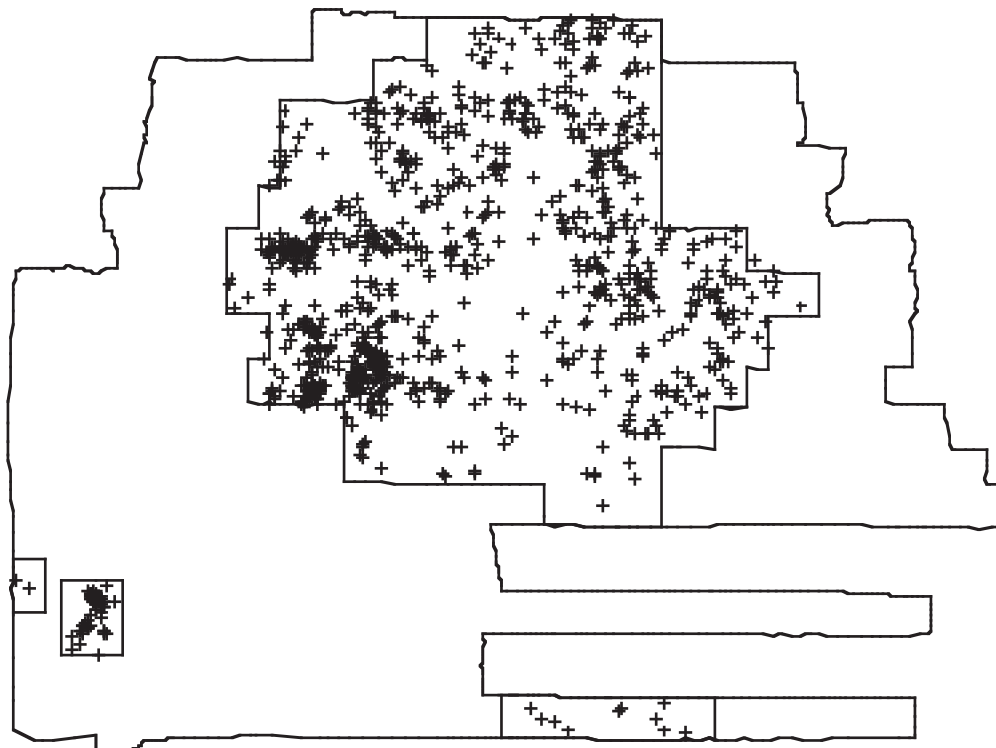


Fig. 4.17 Distribution of all finds in the deepened areas.

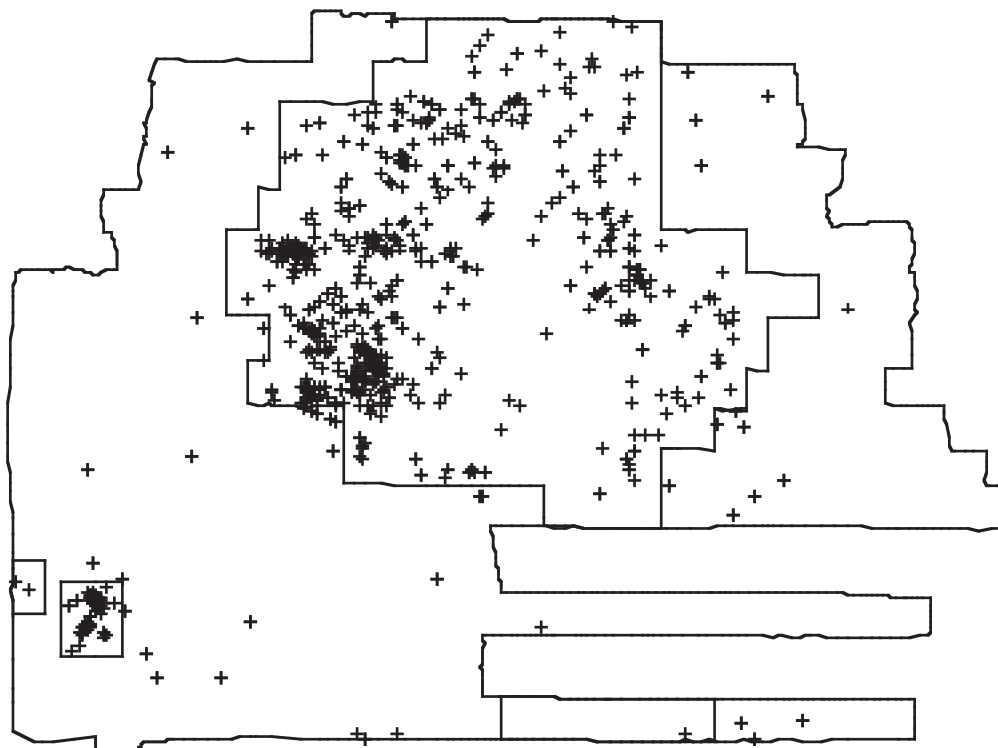


Fig. 4.18 Distribution of pottery in the deepened and not-deepened areas.

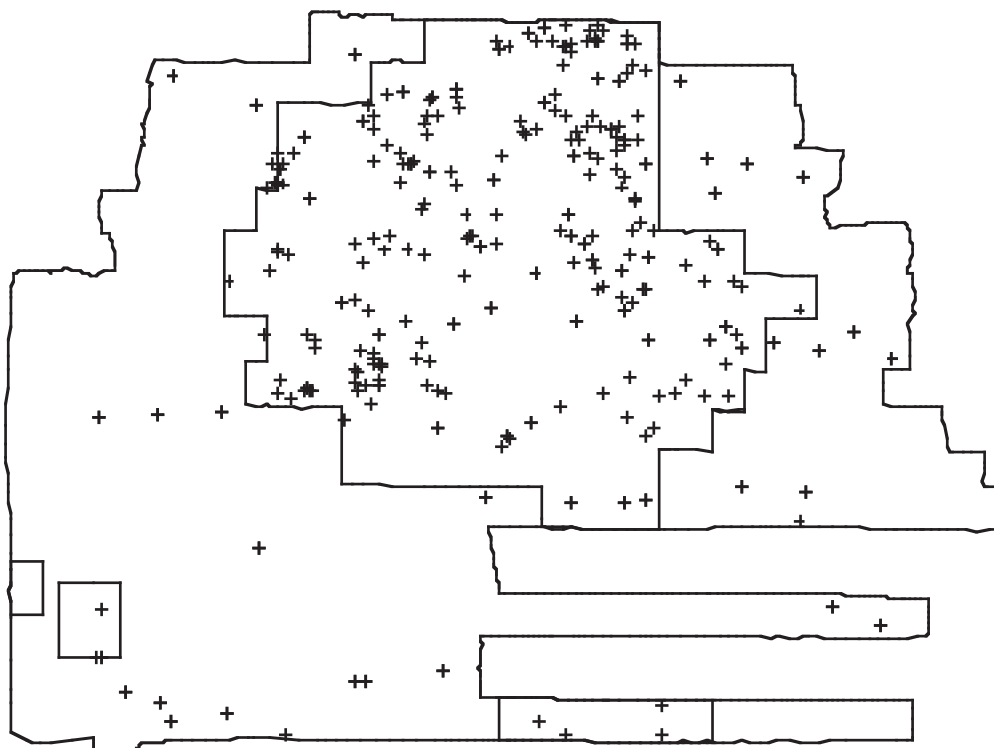


Fig. 4.19 Distribution of flint in the deepened and not-deepened areas.

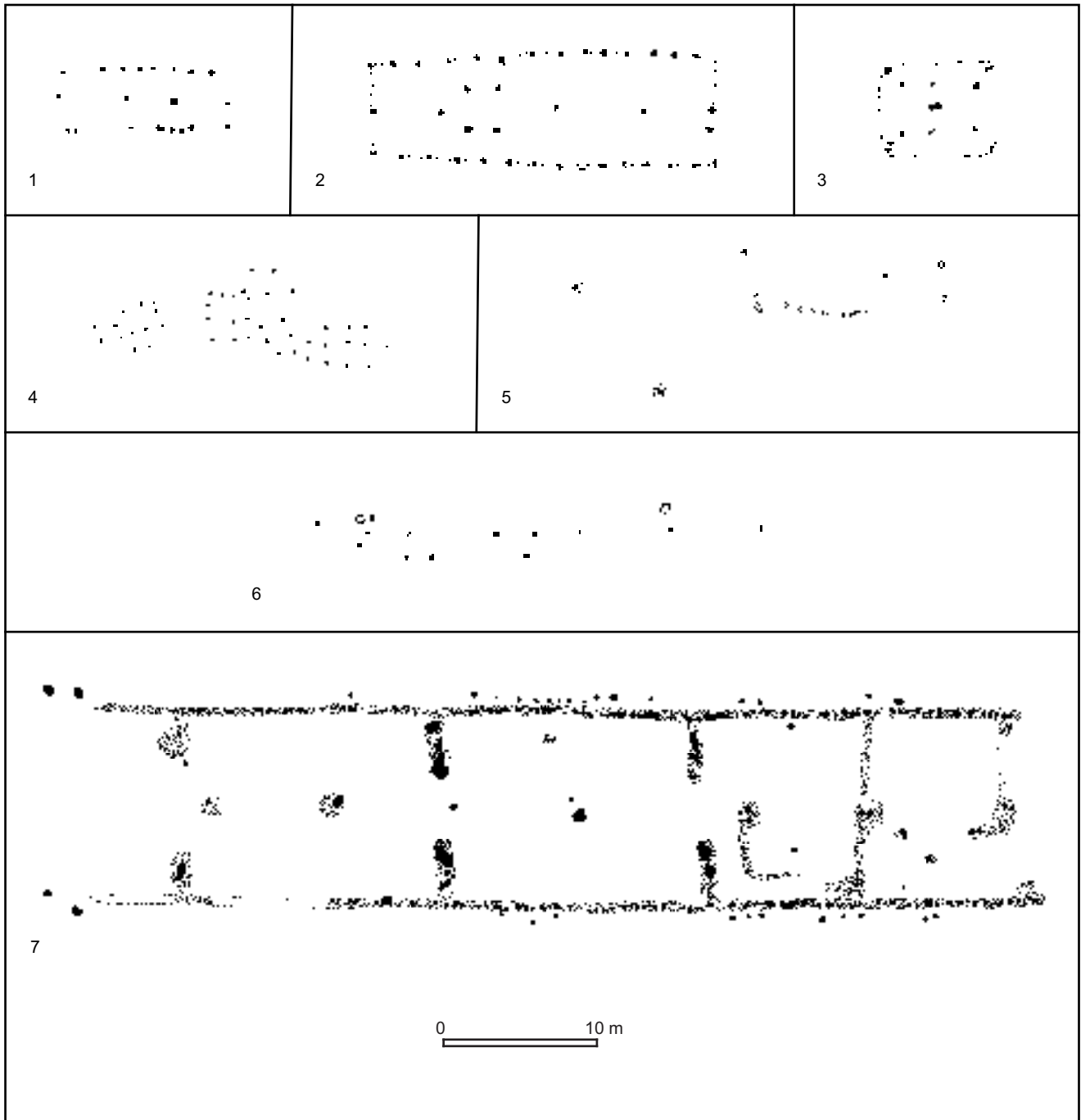


Fig. 4.20 House plans and fragments of building (?) floor plans from the Middle Neolithic. 1 Wateringen, 2 Zeewijk, 3 Urmitz, 4 Thieusies, 5 Schorisse, 6 St. Odiliënberg, 7 Mairy.

have been moved relatively soon, every 10 years rather than 40.

This leads us to conclude cautiously that the site Neliske may be considered the remains of a 'single house site'.

If the Neliske data are representative for the MK-phase in the Roerstreek, it would be plausible to reconstruct a settlement system with single house sites that are repeatedly relocated. A relatively quick exhaustion of the agrarian land



Fig. 4.21 Palaeogeographic reconstruction of the location of the site Neliske. White: open landscape; grey: dense forest..

surrounding the settlement is assumed here, causing a relocation of the settlement to new farmlands. The deserted settlement and farm areas would soon be resettled by forest. After the forest had regrown, this might be used for new farmland once again, if desired.

The choice of location and exploitation models that have been developed for these types of agrarian communities¹⁵, provide an indication of the habitation intensity and size during the MK-phase. The Neliske settlement was on the edge of the Roer valley (fig. 4.21). Open water was at a distance of at most 500 metres, but if the meander west of

Overen was already present, the distance to water would have been approx. 100 metres. Within a radius of 5 kilometres of the settlement were the old fluvial deposits and the Holocene Roer valley. The arable fields may have been on old fluvial deposits. The valley may have been used for grazing as well as hunting. The Roer itself and the Meuse provided the fishing, the Meuse would moreover have been important for traffic.

In such a situation the entire Roerstreek could only accommodate 3 to at most 5 single house sites simultaneously which would meet the settlement criteria mentioned

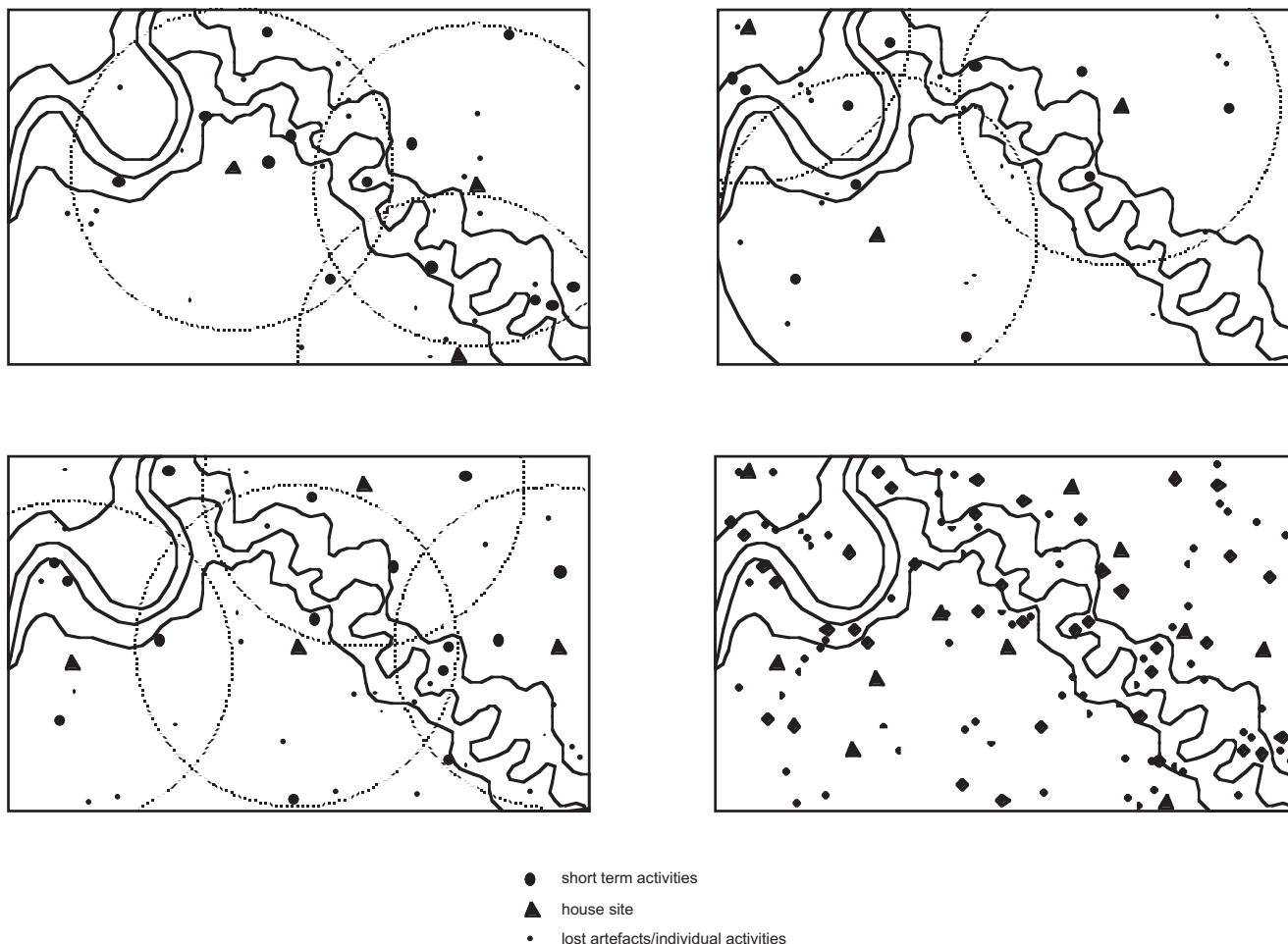


Fig. 4.22 Model for the distribution of MK-sites in the Roerstreek over time, for three specific points in time, and overall result.

above. As a result of the repeated relocation of settlements during the period of the Michelsberg culture (approx. 800 years) a dense pattern of settlements formed. This relocation may be represented in a model (fig. 4.22). In this instance we decided on three points in time, but depending on the selected length of use a settlement might have been relocated 80 to 20 times over the 800 years of the MK-phase. The distribution of sites over the entire area will not be even, however, as the location best suited to the conditions attached would be selected every time. These ideal locations will therefore have been re-used repeatedly. These are the MK-settlements in the Roerstreek containing large amounts of artefacts, for instance HVR-16¹⁶. There will have been non-site-related activities as well, however, such as documented in the microregion Linden, that influenced the distribution of artefacts. As a result, over time a pattern has developed with clusterings, interspersed with empty zones.

The hypothesis of settlements consisting of a single house being relocated relatively frequently, can also be inferred from the distribution pattern of Middle Neolithic sites in the Roerstreek and fits the first analysis of site data¹⁷. What we are waiting for is a site with enough soil traces to confirm this hypothesis, but we wonder whether the soil archive has by now been so severely affected that this aim can no longer be achieved.

notes

- 1 A preliminary report was published in the archaeological record of Limburg over 1992 and 1993 (Wansleebeen & Verhart 1993).
- 2 Van der Beek in prep.
- 3 Van Dinter n.d.

4 This site has been sampled as early as 1971 by the Staring Centre in Wageningen. At that time the deposits were investigated palynologically by Mrs. K.K. Koelbloed (Pers. comm. H. van der Beek).

5 See chapter 3.

6 Verhart & Wansleeben 1992b.

7 This investigation was carried out by drs. L. Smits.

8 Crombé 1993; Kooi 1972.

9 Lanting & Van der Waals 1974.

10 This phenomenon occurs more often, in particular in much better-preserved terrain. Good instances are the house plan of Sloodorp in Noord-Holland (pers. comm. J.-W. Hogestijn) and the bell beaker settlement Ottoland-Kromme Elleboog (Wassink 1983). In both cases remarkably few finds were recovered from the locations where the houses stood.

11 a.o. Beers, Kraaienberg (Louwe Kooijmans & Verhart 1990); Grave, Pater Berthierstraat (Verhart 1988); Helden (Modderman & Deckers 1983), Koningsbosch (Van Haaren & Modderman 1973), Roermond (Verhart & Wansleeben 1999).

12 Wateringen (NL) (Raemaekers 1995, 1997, 1999); Zeewijk (NL) (Van Ginkel & Hogestijn 1997); Koslar 10 (G) (Aldenhovener Platte 1981); Thieusies (B) (Vermeersch & Walter 1975, 1978, 1980); Schorisse-Bosstraat (B) (Vermeersch, Goossenaerts & Velghe 1991); Mairy (F) (Marolle 1989, 1990).

13 Bakels 1992; Kalis 1988.

14 Bakels 1978; Harsema 1980, 1983.

15 Bakels 1978; Ellen 1982; Higgs 1972, 1975.

16 Louwe Kooijmans 1985b.

17 Wansleeben 1987, in prep.