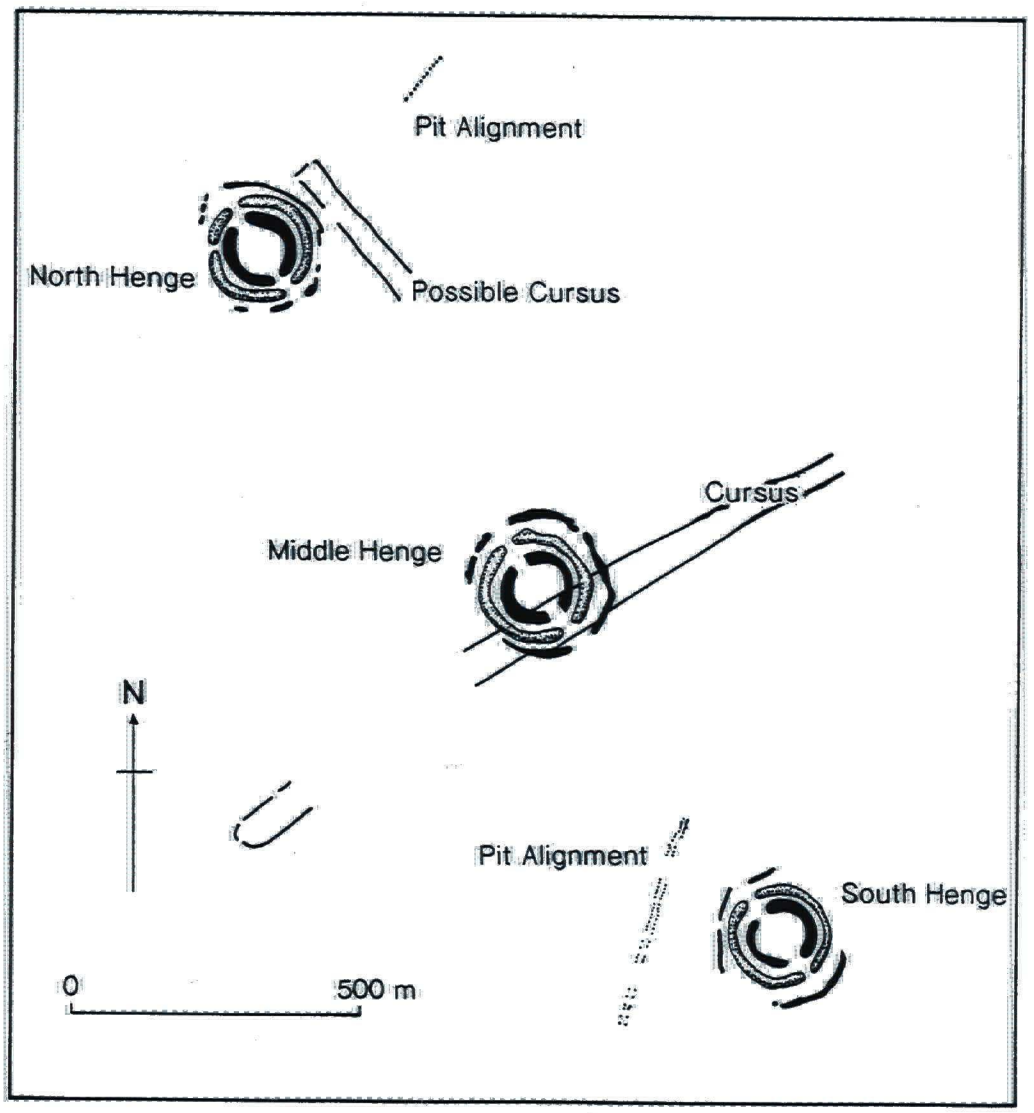
Vale of York Neolithic Landscape Project

Interim Report 1994: Thornborough



Department of Archaeology, University of Reading

2/045
2/170

NYS 8214
NYE 1807(FW)
NYE 270 (GEO)
NYE 1808(TT)

TABLE OF CONTENT

Surface collection at Thornborough

INTRODUCTION

One of the primary aims of the Vale of York Neolithic Landscape Project was to assess the relationship between the monuments at Thornborough and wider patterns of settlement. A long-term programme of fieldwalking across this extensively ploughed landscape will provide significant information, and as such would complement the high levels of surface collection achieved around the Stonehenge and Cranborne Chase complexes in southern England (Barrett et al 1991; Richards 1990). The study zone selected for fieldwalking encloses a landscape approximately 3km from east to west and 2.5km from north to south *(Fig.1)*. At the centre of this zone are the three henge monuments, with the middle site located upon an earlier cursus (Thomas 1955). These monuments were built upon the long axis of a plateau defined by the 45m contour, and this was surrounded to the east and south by a lower-lying area. To the bottom of the study zone the landscape slopes down to the banks of the River Ure, while along the western edge lie the rising slopes of a steep ridge. These topographic variations divide the landscape into clearly differentiated parts, and the long-term programme of surface collection aims to examine each as extensively as possible. During the first season, between 10th September-1st October 1994, eight ploughed areas were selected for fieldwalking, and these were generally from the low-lying zone which surrounds the central plateau *(Fig.2)*. Each area was divided into 15m transects which were then differentiated by 30m stints. This enabled the detailed locational recording of the 175 flaked stone pieces collected from these eight areas. While there is evidence for Mesolithic activity, the chronological and cultural affinities of the assemblage are Neolithic and later in date.

RESULTS

The small size of the collected assemblage obviously limits discussion, but some significant variations are immediately apparent. Most strikingly, the quantity of flaked flint and chert appears to increase as one moves away from the shared alignment of the three henges *(Fig.2)*. The largest concentrations- in *Areas 2 and 5* - are found approximately 800m from the nearest of these monuments. It is significant that from the location of these relatively high density scatters the henges are partly obscured by

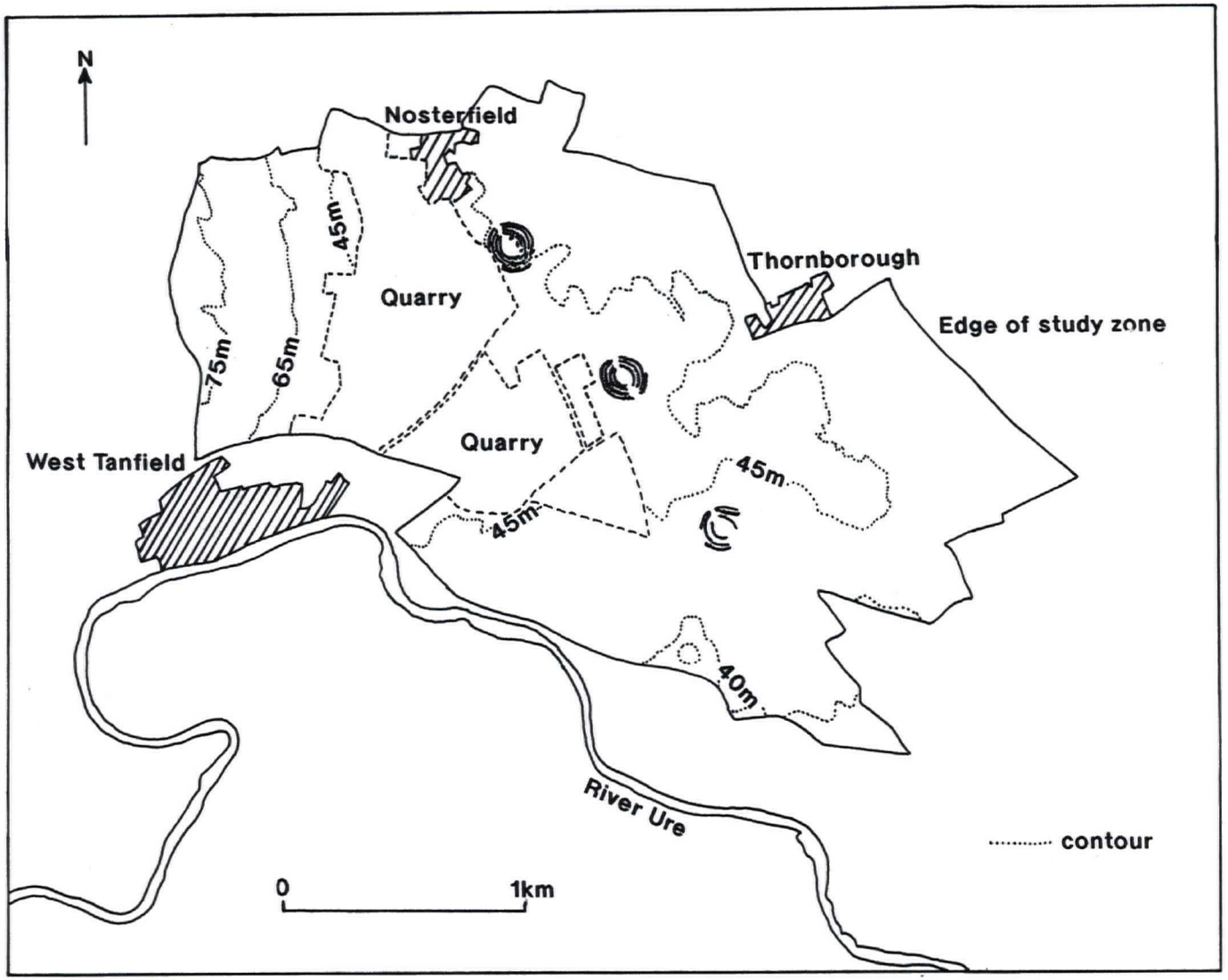


Figure 1: the Thornborough study zone illustrating the three henge monuments

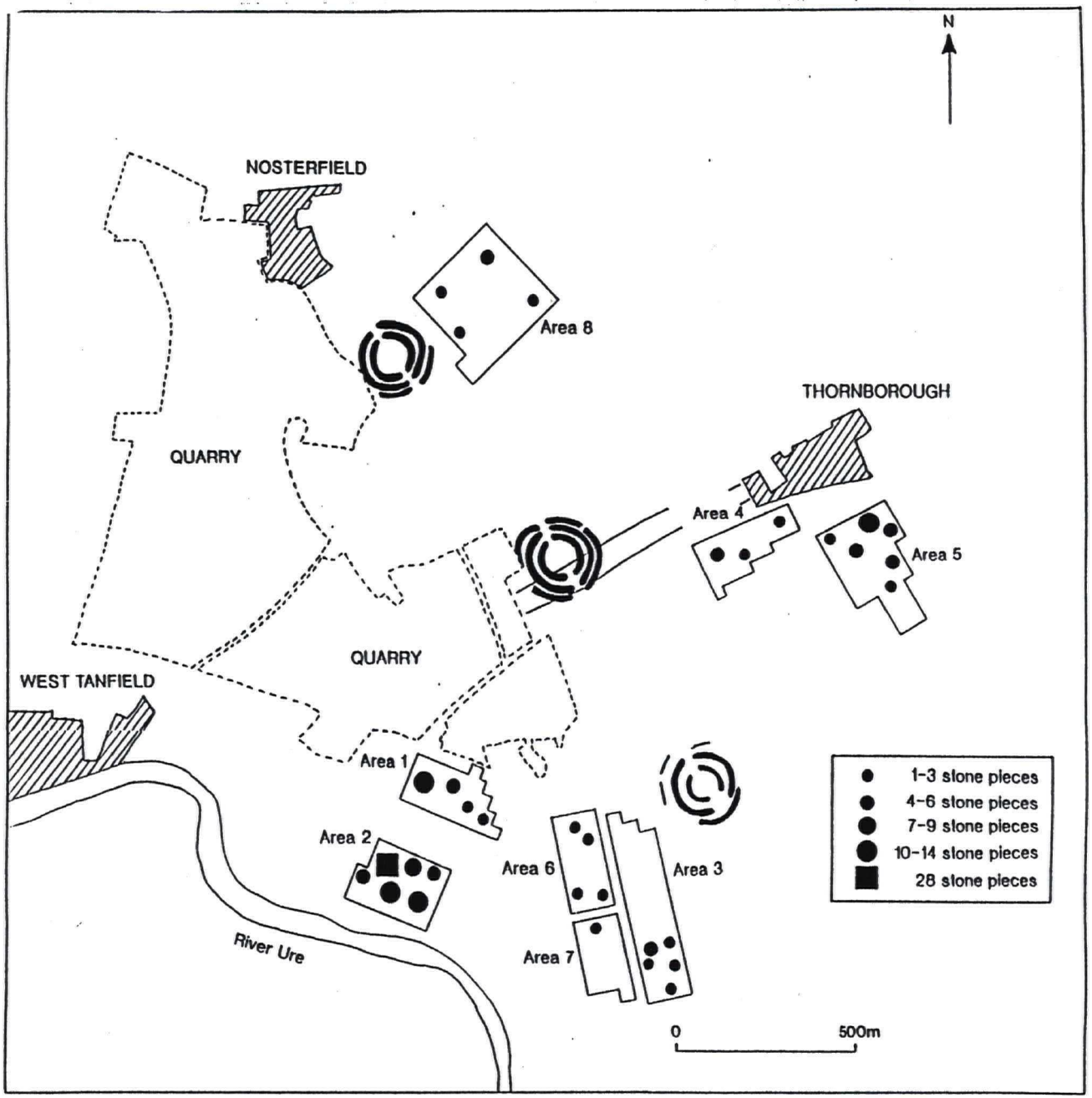


Figure 2: the frequency of flaked stone pieces from the areas fieldwalked in 1994

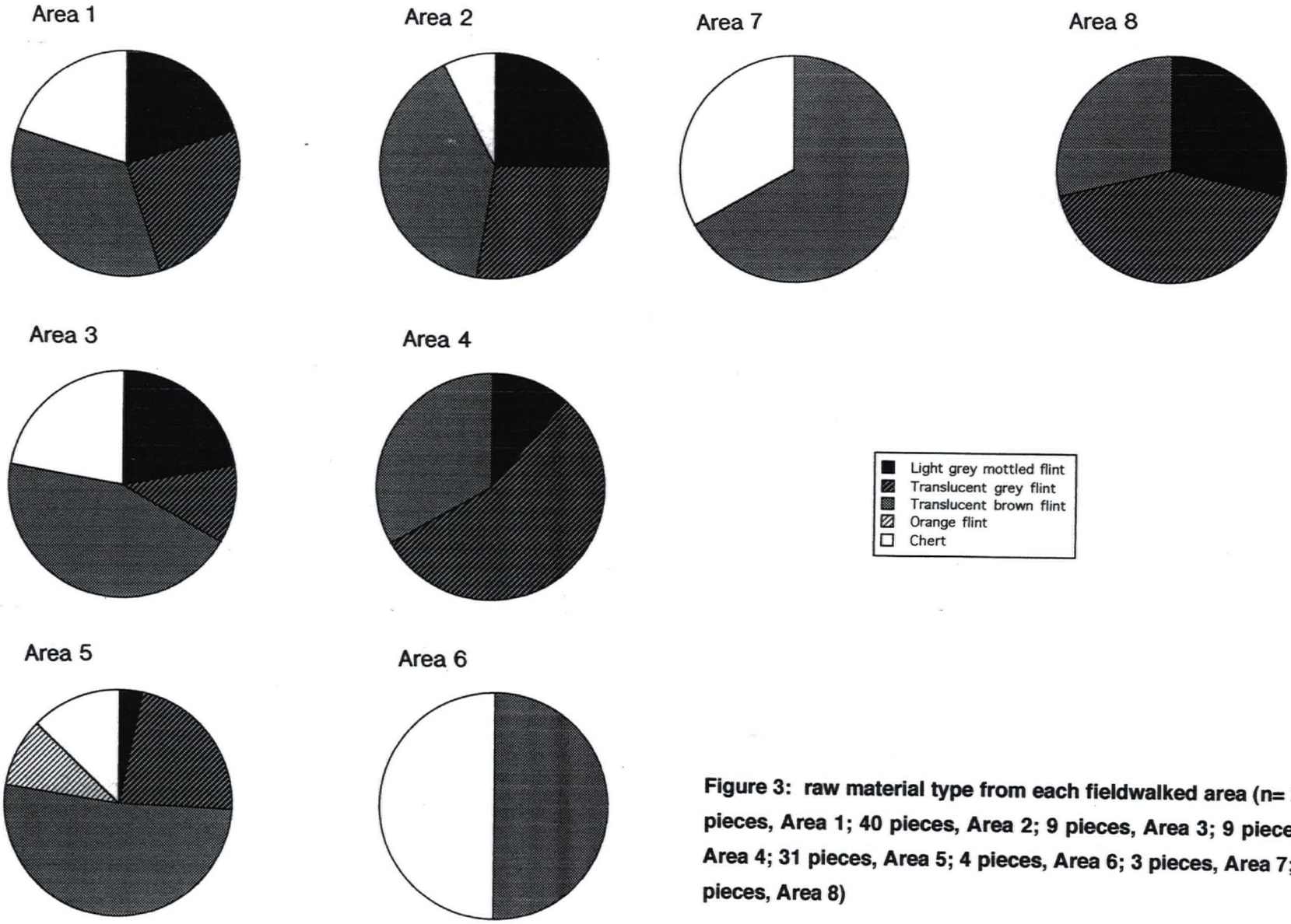


Figure 3: raw material type from each fieldwalked area (n= 20 pieces, Area 1; 40 pieces, Area 2; 9 pieces, Area 3; 9 pieces, Area 4; 31 pieces, Area 5; 4 pieces, Area 6; 3 pieces, Area 7; 7 pieces, Area 8)

the undulating topography. This was not apparent with the other fieldwalked areas. The concentration in *Area 2* lay downslope on a river terrace, and although *Area 5* lies alongside the central plateau it was located on one side of a slight rise blocking much of the view towards the monuments. Furthermore, the character of these two flint concentrations appears to be distinctive *(Table 1)*. Scrapers constitute 14% of the *Area 5* assemblage, but only 4.3% of the total flints from *Area 2*. On the other hand, there are no cores from *Area 5*, but this artefact type represents 8.5% of the *Area 2* assemblage. The relatively high incidence of cores on a low-lying river terrace is also reiterated in *Area 3*.

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Total number	26	70	13	11	35	6	3	11
% of retouch pieces	23%	15.7%	23%	0	17.1%	33.3%	66.6%	18.2%
% of scrapers	7.7%	4.3%	7.7%	0	14%	10%	0	9%
% of cores	4%	8.5%	15.4%	0	0	0	0	9%

Table 1: a summary of the assemblage of worked stone for each fieldwalked area

The distinction between the flat landscape which flanks the River Ure and the higher ground to the north is not only reflected by the differing nature of the two flint concentrations, but also by variations in the type of raw material collected from each field *(Fig.3)*. It is evident that in *Areas 4 and 5*, near the central henge, there was little of the local light grey flint found more readily downslope, and the latter of these fields produced orange flint and a large concentration of high quality brown flint which probably derived from distant boulder clay sources. Moreover, there was a relatively large amount of good quality grey flint from *Areas 4 and 8* located near to the central and northern henges. This material is rarer on the lower-lying river terraces, and as such its distribution could reflect the use of a better quality raw material in the immediate vicinity of the monument complex. This material is likely to have originated from the Yorkshire Wolds. The contrast between these topographically distinct areas is also illustrated by the total absence of chert from *Areas 4 and 8*.

Thornborough South Site 1: the double pit alignment

INTRODUCTION

Recent excavations at Milfield North, Northumbria, and Cranborne Chase, Dorset, have demonstrated the association of timber avenues with Neolithic and early Bronze Age monument complexes (Green 1994; Harding 1981), and aerial photography has discovered what appear to be a number of similar features elsewhere. One of the most impressive of these possible avenues was discovered in 1975 to the west of the south Thornborough henge (St. Joseph 1977). Two rows of pits extended for some 350m on a NNE-SSW alignment, and at one end were two matching groups of nine close-set narrow trenches *(Fig.4)*. This unusual terminal feature was not far from the site of a round barrow and was just short of the axial line of the southern henge monument. A similar relationship with a henge monument can be observed at Milfield North (Harding 1981, 132). There was also an outlying pair of pits some 80m further to the north east of the Thornborough terminal feature. At the other end of the pit rows, south of the old railway track, was a further ploughed-out round barrow. This ring ditch is adjacent to what appears to have been the last of the paired set of pits.

The south Thornborough alignment is extensive in its length, and it was estimated, on the basis of the aerial record, that the diameter of each pit could be as much as 3m (St. Joseph 1977, 145). This illustrates the impressive nature of the pit rows, and their relationship with the southern henge further emphasises the significance of the site. However, while the alignment was clearly an integral part of the monument complex it is not possible to determine from the aerial photographs whether the pits held uprights. At the same time, the possible avenue remains undated, as do the two associated ring ditches. It was therefore decided that the importance of the alignment justified small-scale excavation as part of a long-term programme which aimed to produce a structural and chronological sequence for the Thornborough complex. An intensive magnetometer survey was initially undertaken in order to locate individual pits. Prospection was limited to the south of the old railway for two reasons. This conserved the scheduled area which lay to the north of the track. It also enabled the investigation of the most indistinct part of the pit rows. It was noted by St. Joseph (1977, 144) that it was not possible to determine from the aerial photographs the

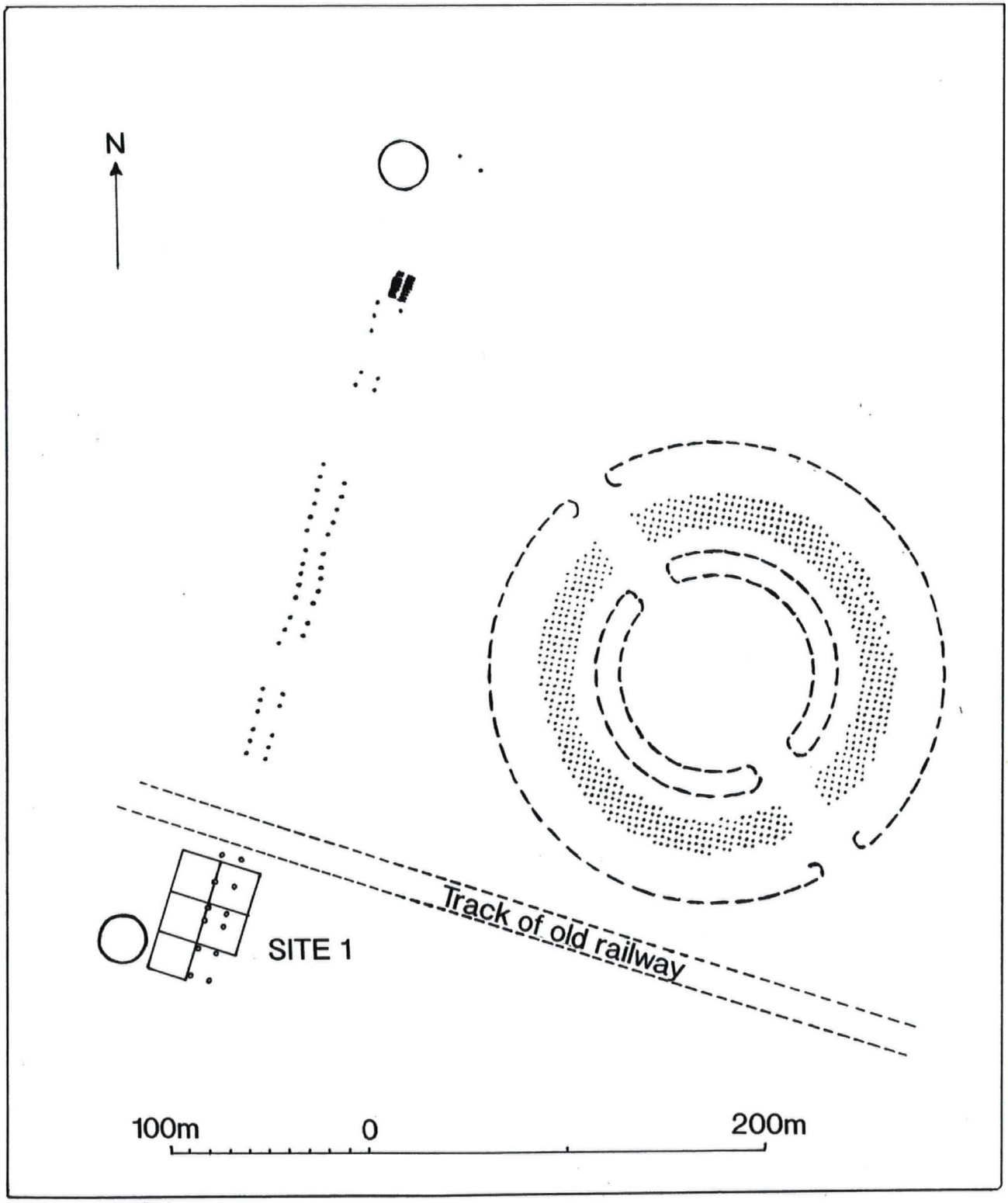


Figure 4: the south Thornborough double pit alignment and the magnetometer survey grid (after St. Joseph 1977, Fig.1)

exact position and size of the pits in this area, and those marked in *Fig.4* convey no more than a general impression.

THE MAGNETOMETER SURVEY

The area in which the southern end of the double pit alignment was approximately located was divided into five 20m by 20m survey squares *(Fig.4)*. A Geoscan FM36 Fluxgate Magnetometer was employed with a reading interval of 0.5m along every 1m transect. The survey located a number of anomalies although the relatively deep river terrace drift material appears to have weakened their magnetic response. While the overall alignment of most of the high readings did not compare with the plot which was produced from the aerial photographs- the former located approximately 10m to the east of the latter- the spacing between individual anomalies is strikingly similar to the layout of the double pit rows. The aerial photographs indicate that the distance between the rows varies from 10m to 12.5m, and the paired high magnetic readings lie at a similar distance from each other. The photographs also illustrated that at the middle of each of the rows to the south of the old railway were two adjacent pits which were more closely sited. It is notable that three high magnetic anomalies are comparable in their location.

THE EXCAVATIONS

Areas for small-scale excavation were identified on the basis of the magnetometer survey. Two defined blocks of high magnetic readings were selected for the location of the evaluation trenches *(Fig.5)*. Each of the former defined an area approximately 2m by 2m, and this seemed an appropriate size for limited excavation (Trench 1 was slightly enlarged). A substantial part of a large pit was found in each of these two trenches *(Fig.6)*, and as I will discuss below, while there were no indications of a post-pipe in their sections, both produced evidence for the original existence of a timber upright. It seems likely that the feature in Trench 1 formed part of the western side of the alignment, while immediately to the south in Trench 2 was one of the paired pits on the eastern side.

The possible existence of substantial features was indicated at an early stage of the excavations. Beneath the topsoil, in the upper part of what appears to have been an old land surface *(layer 2)*, was a discrete area of grey and dark yellowish brown mottling. This material continued throughout the complete depth of *layer 2*, but became more

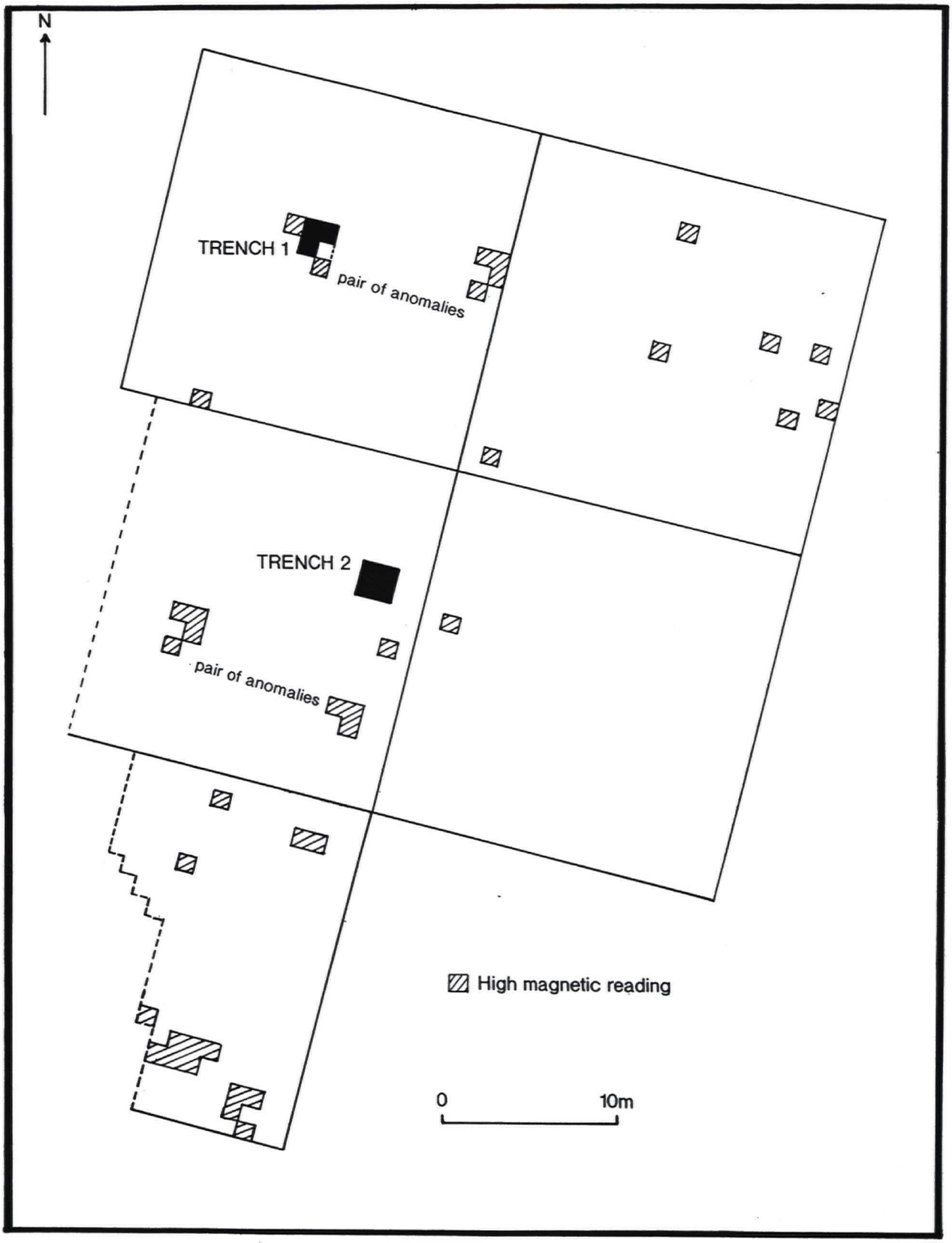


Figure 5: the magnetometer survey grid illustrating anomalies and the location of Trenches 1 and 2

widespread and mixed with slight traces of burning. It was initially thought, at an early stage in the excavations, that this deposit could have been displaced material from an underlying feature, and the existence of considerable disturbance across *layer 2* is illustrated by ard-marks and a small assortment of finds from Trench 1 which included Roman pottery sherds and a later Mesolithic rod microlith. The area of mottling was certainly similar in colour and texture to the upper fill of the pits. At the same time, it coincided in Trench 1 with the highest reading from the recorded anomaly, and in both trenches this material contained the only stones of reasonable size throughout the old land surface. However, the relationship between this mottling and the pit features proved to be more problematic. It is noticeable that much of this material did not coincide with the top of the features. The deposit in Trench 1, approximately oval in shape, was alongside the top edge of the pit, while in Trench 2 it was away from the area under which the bulk of the fill deposit occurred. It was rather located near to the top edge of the pit cut in a band which was sometimes as much as 1m in width. Interpretation of these areas of mottling await a detailed soil description.

The outlines of the pits were ill-defined during excavation. The signs for pre-modern cultivation in *layer 2* would certainly account for the uneven and gradual edge of the features, and this would also explain the lack of a visible cut through the old land surface. At the same time, the pits can only be partially described since their full extent was not located within the evaluation trenches *(Fig.6)*. The feature in Trench 1 appeared to be generally oval-shaped and at least 1.6m across. In Trench 2 the pit was similarly shaped although its outline was more straight in appearance. The squared sides were probably a necessity due to the comparatively unstable nature of the pocket of gravel through which the pit had been cut: there was only a small patch of this material on the north west side of the feature in Trench 1. The area of the pit excavated in Trench 2 was 1.7m by 1m at its top. The pit in Trench 1 was U-shaped in profile, although the northern side of the feature was more gently sloping. In contrast, the Trench 2 pit was V-shaped, its differing profile again illustrating the realities of digging into unconsolidated gravel. The bottom of each of these pits was fairly consistent in depth, although its calculation can again only be approximate due to the problems associated with identifying the top of each feature. The pit in Trench 1 had a minimum depth of 0.66m, while in Trench 2 the feature was at least 0.88m deep.

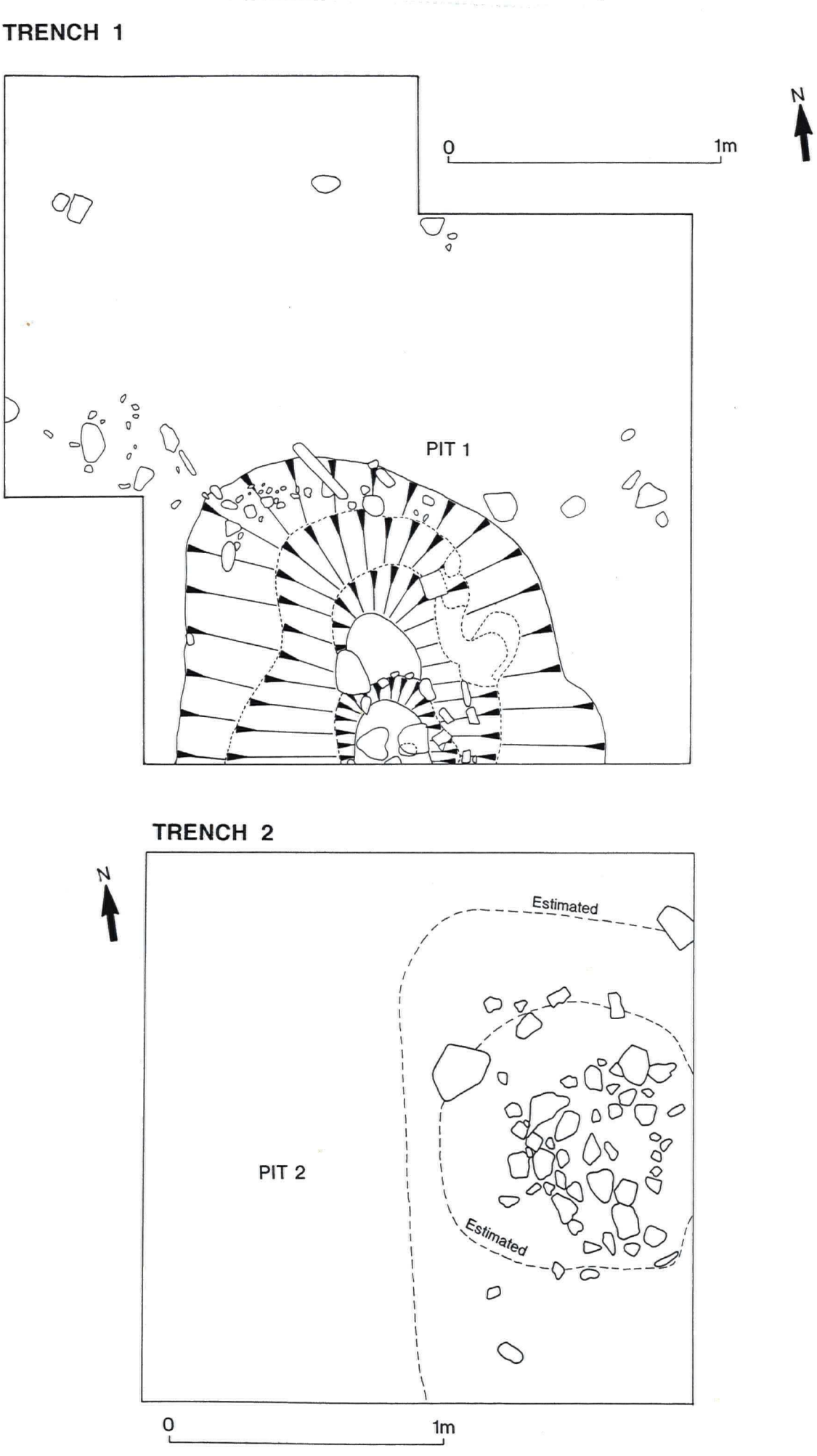


Figure 6: plans of the excavated trenches illustrating the pit features

It seems likely that both pits were rapidly cut and backfilled. While the gravel sides of the pit in Trench 2 would have probably collapsed if left open for any length of time, the absence of complex internal stratigraphy and distinct basal deposits indicates the immediate filling of the features. It is possible that the pits could have originally held timber uprights. This is indicated by the quantity of small to very large stones which were found in each feature. They could have been packing for uprights, especially if we consider the location of this material. The stone was not only found at the base of each of the pits, but also at a higher level: it was concentrated nearly at the top of the Trench 1 pit, and about halfway down the fill in the other excavated area. It is certainly apparent that while shallower than the comparable features excavated at Milfield North (Harding 1981, 115-6), the pits at Thornborough were of a sufficient depth to have held posts. In Trench 1 the cut of the feature slopes down into a steeply-sided central area with a flat bottom which is approximately 0.25m across and continues under the section *(Fig.5)*. This could be a possible post socket, especially when we consider its association with a concentration of stone. It is also evident from the plan that there is an adjacent flat area at a shallower depth. There was no indication that this was part of a later cut, and it perhaps seems more likely that it could indicate a second post setting. Furthermore, it was directly below a number of substantial stones in the upper pit fill. In Trench 2 the bottom of the pit is approximately 0.5m across, but it is noticeable that there is a smaller patch at its centre which is surrounded by most of the stone. This is comparable in size to the possible sockets in Trench 1.

It therefore seems that the Thornborough pit alignment could indeed be similar to the timber avenues at Milfield North and Cranborne Chase. It was concluded by the excavator at the former site that there was contemporaneity between the alignment and the nearby henge monument (Harding 1981, 117). Likewise, the pit rows at Thornborough are closely related to a henge, and the small number of artefacts found in each of the excavated pits serve to indicate the general contemporaneity of these two sites. The available dating material was limited, but both postholes contained a very small quantity of late Neolithic/early Bronze Age pottery. From the lower fill of the pit in Trench 2 there were four sherds from the rim of a convex-sided vessel. This appears to be Grooved Ware, although there is no surviving decoration. The upper pit fills in Trench 1 contained two conjoined fragments of an arrowhead, and while the base of this piece is missing it seems most likely that it was an ogival leaf-shaped

arrowhead. It is not typical for such an arrowhead to be found at sites with Grooved Ware, but since this type was used over a considerable length of time it adds little chronological information. There are also comparisons between Milfield North and Thornborough when considering the history of activity at the sites. The substantial posts in the two excavated pits at Milfield North seem to have eventually been extracted (Harding 1981, 117). This could have also been the case at Thornborough. There is some indication that the possible stone packing in both pits has slumped inwards, and it is also apparent that the upper fills of these features were dug into at a later date to a maximum depth of 0.25m. The excavation of depressions around timber uprights would have obviously aided their extraction.

Future fieldwork in 1995

There are extensive areas of ploughed land around the monument complex at Thornborough which have yet to be fieldwalked. The intention is to continue the programme of surface collection for at least a further two seasons, and it is proposed that in 1995 the plateau surrounding the central and northern henges will be more extensively sampled. Fieldwalking will also commence along the ridge on the western side of the study zone *(Fig.1)*. During this season it should be possible to treble the amount of land from which surface collection was undertaken, and this will enable a more detailed comparison of the differentiated topography surrounding the monument complex.

The fieldwork at Thornborough South Site 1 is part of a long-term programme which aims to provide information about the date and structural sequence of the monument complex. The 1994 excavation took the form of an evaluation, and problems clearly remain with achieving a more detailed chronology for this site. While a small quantity of cattle bone from the secondary fill of the pit in Trench 1 will be submitted early in 1995 for a single radiocarbon determination, the proposed season of excavation later in this year will hopefully increase the quantity of available dating material. The magnetometer survey illustrated an area of high magnetic readings at the southern end of the pit alignment *(Fig.5)*. This was adjacent to the ploughed-out round barrow, and the frequency of high magnetic responses could demonstrate the possible existence of

a complex southern terminal feature. During the 1995 season I intend to excavate these anomalies, opening an area approximately 6m by 4m in size.

Dr. Jan Harding
December 1994

Acknowledgements. I would like to express my gratitude to the University of Reading, the British Academy, the Prehistoric Society, and the Society of Antiquaries for funding the 1994 season. Thanks must also go to the team of students who undertook the fieldwork, and to Nicola Bestley for the illustrations.

Bibliography

Barrett, J.C., Bradley, R.J. & Green, M. 1991. *Landscape, Monuments and Society. The Prehistory of Cranborne Chase*. Cambridge: Cambridge University Press.

Green. M. 1994. Down Farm. *Current Archaeology* 138, 216-25.

Harding, A.F. 1981. Excavations in the Prehistoric ritual complex near Milfield, Northumberland. *Proceedings of the Prehistoric Society* 47, 87-135.

Richards, J. 1990. *The Stonehenge Environs Project*. London: English Heritage Archaeological Report No.16.

St. Joseph, J.K. 1977. Aerial reconnaissance: recent results, 43. *Antiquity* 51, 143-45.

Thomas, N. 1955. The Thornborough Circles, near Ripon, North Riding. *Yorkshire Archaeological Journal* 38, 425-45.

Appendix 1: financial statement for 1994

Paid	Received
£1432 (Accommodation)	£1000 (from British Academy)
£302 (Car hire)	£1000 (from Society of Antiquaries)
£453.77 (Petrol/travel costs)	£1104 (from University of Reading)
£368.89 (Food)	£160 (from Prehistoric Society)
£144.02 (Maps and aerial photographs)	
£5.92 (Photographic film)	
£120 (Specialist report)	
£218.55 (Miscellaneous)	
£3045.15 TOTAL PAID	£3264 TOTAL RECEIVED

£218.85 balance on 31st December 1994