

TECHNICAL SECTION

THE LEVERHULME PROJECT ON DECAY AND DETECTION ON ARCHAEOLOGICAL SITES: PROGRESS REPORT

This year saw the end of the programme, and it is with gratitude that the Leverhulme Trust's forbearance and support of a formidably difficult project must be acknowledged. The Leverhulme Trust has also kindly agreed to sustain funding for Lorraine Stewart, the Research Student in the Department of Chemistry, University of Birmingham, for one more year, in order that analytical work can be completed.

As for the results produced in the last year, the most important new developments centre around the continued use of ICP (Inductively-Coupled Plasma Emission Spectrometry) analysis on soil samples from the site – especially from the burial chamber beneath Mound 2. The preliminary work is described in Bethell and Miles, 1988, and in more detail in a forthcoming paper (Bethell and Smith). This relates how the material from one of the Sutton Hoo 'sandman' burials had been subjected to ICP analysis, and a clear distinction found in the elemental/trace elemental concentrations of the body as opposed to the natural sand. It was suggested that if the chemical 'signature' of the body material was to be found elsewhere, where no visible traces remained, it would be indicative of the former presence of a decayed inhumation *in situ*. To this end, a series of samples from the very heavily robbed burial chamber located in Mound 2 (excavated in 1987 – 8) was analysed.

The floor of the chamber was sampled on a 10cm grid, at a level just below the original interior floor, ie in undisturbed natural sand. 490 samples were analysed by ICP for the same set of elements as the control 'sandman': Al, Fe, Mg, Ca, Na, K, Ti, P, Mn, (as % oxides) and Ba, Ce, Co, Cr, Cu, La, Li, Mo, Nb, Ni, Sc, Sr, V, Y, Zn and Zr (as parts per million). It had been established that clear enhancements were shown in the body silhouette over the background for Al, Ca, P, Ba, Ce, Co, Cr, La, Mo, Sc and Y. Diminutions over background had been noted for Fe, Na, K, Ti and Cu. Thus the repetition of this pattern, at least for those elements with stronger variations, should be an indication of the presence of a body directly above the location of the enhancement/diminution.

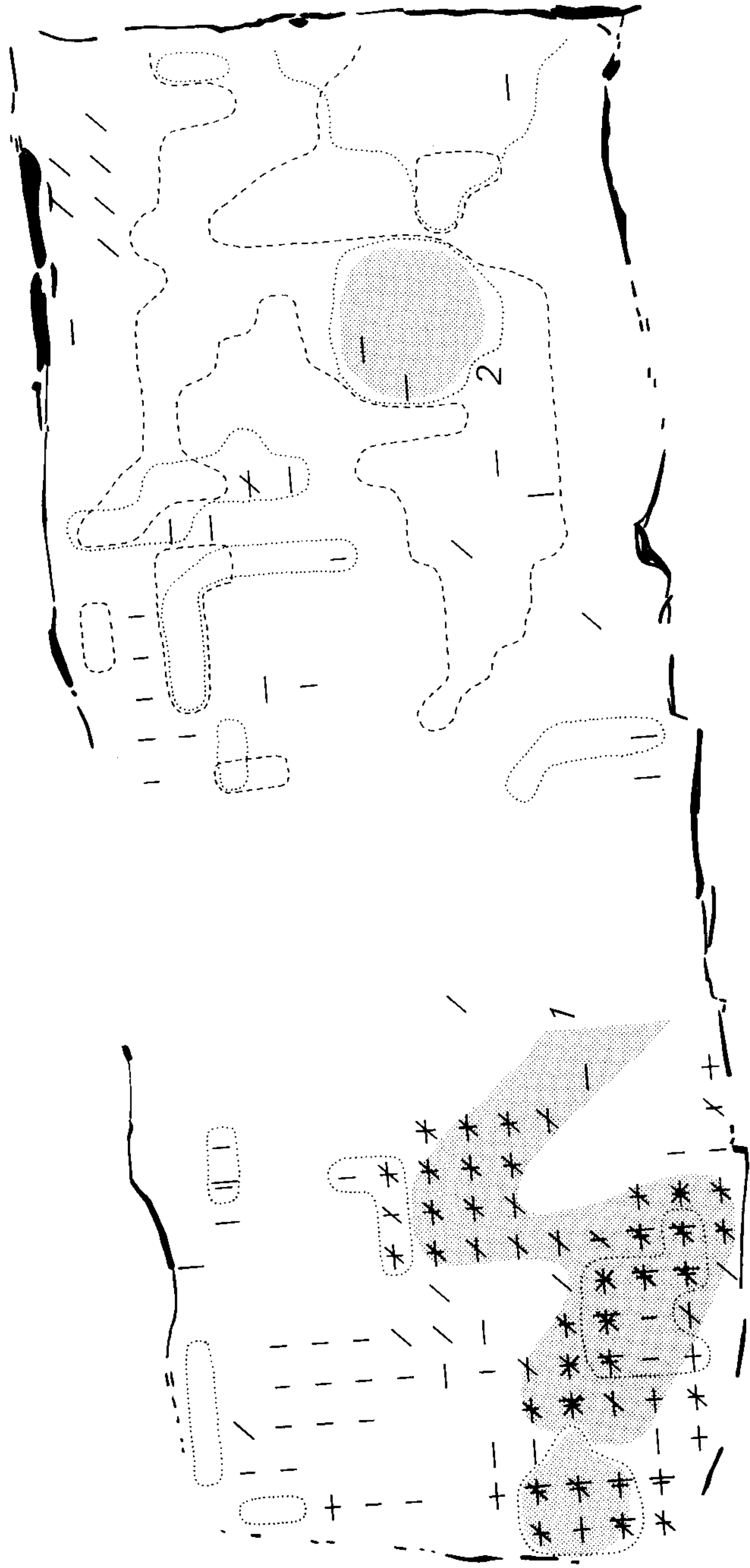
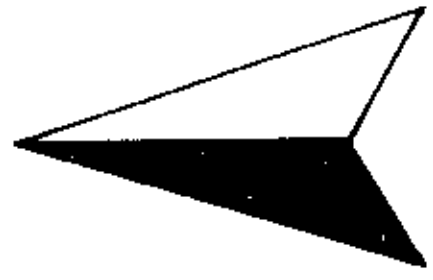
Initial mechanical plotting of the results for Al, Ba, Cu, Fe, La, P and Sr indicates a clear area of enhancement of all those elements in the SW corner of the burial chamber. It is postulated that this is indicative of the presence of a body in that area (Fig. 11). Al, Ba, La and P are elements shown to be enhanced over background in the 'sandman' analysed above. Fe and Cu appeared to be present in smaller quantities in a 'sandman' than in grave fills. Their enhancement in the case of the burial chamber may possibly indicate the presence of iron and bronze grave goods with the body – there are also clear enhancements of these two elements over the eastern half of the chamber, where the bulk of the grave goods are supposed to have been. It must be pointed out that the absolute levels of enhancement are less than those discernible in the control burial, but this is only to be expected. No body traces of any kind were visible under standard excavator's enhancement procedures. The chemical enhancement, however, argues convincingly for the former presence of a decayed body.

Another, smaller experiment should also be noted here. This involved material from a site at Hacheston, Suffolk, excavated by the Suffolk Archaeological Unit. Samples were taken from an Anglo-Saxon burial which showed clear traces of a coffin, but absolutely none of a body. ICP analysis of these samples showed clear elemental enhancements over the fill from the wood residues, and also from several apparently 'blank' samples, located at approximately the level where a body might be expected. There was also a very clear enhancement of most elements over the concentrations noted in the natural soil. The preliminary assessment of these results must be that while enhancement at the general 'body level' is clear, it is not yet certain whether this is the result solely of material from the coffin being still present, or of breakdown products from the body being absorbed by the wood residues. Calcium and Phosphorus enhancements over background would suggest the original presence of a body. Again, more detailed analysis is needed. The interest of this particular piece of work was in the application of the methodology to a rapid, rescue situation.

These are obviously most exciting developments, in that they seem to indicate that the faintest traces of an inhumation can be detected. They may also serve to add fuel to the fire of controversy surrounding the 'Was there a body?' question in the original ship-burial, by showing that all visible traces of a body can disappear in the Sutton Hoo soil. However, the results noted here for Mound 2 require more thorough (computer-based) spatial analysis before firm body contours can be drawn.

Further work has also been done on the feasibility of finding element-specific indicators for locating such remains. So far, Aluminium (Al) is the element which has been studied in depth, because it had the largest absolute concentration of those elements noted as enhanced in the body residue, and was also suggested by Biek (Biek, 1969) as a possibly useful element to examine. The levels of exchangeable and extractable Al were measured, and the use of Eriochrome Cyanine dye as an indicator was investigated. There were problems with the performance of the indicator at different acidity levels, and with different extractants, making the possibility of indicating Al in the ground rather unlikely. A fairly simple field test

CHEMICAL MICROSURVEY IN MOUND 2 BURIAL CHAMBER



CHEMICAL ENHANCEMENT

Preliminary assessment using above-average readings

—	Al	} Indicative of bone residue
—	La	
—	Sr	
—	P	
—	Ba	
—	Cu	
—	Fe	

- 1 Suggested position of body
- 2 Bucket or cauldron
- Burial chamber walls as excavated

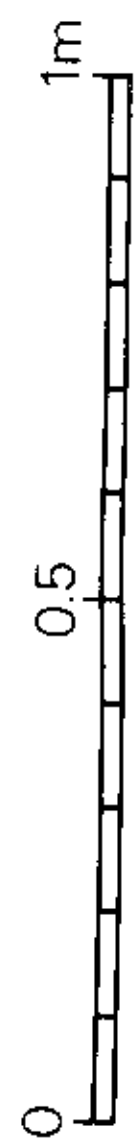


Fig. 11: Chemical microsurvey in Mound 2 burial chamber (Royle/Carver/Bethell).

for Al, rather than a ground spray, may be a more likely development. However, below a certain concentration of Al the indicator does not work very well, suggesting that differentiation between samples with small amounts of Al may be difficult. It is suggested from this work that indicator sprays may have too strong an effect on the whole array of elements in the soil, as opposed to the specific one being sought, and thus may not prove to be such a useful approach.

Work in Oxford at the Radiocarbon Laboratory has produced some conflicting results. We hoped to be able to fractionate the humic material from the 'sandmen', and eventually to understand the various sources of this material, ie whether or not it is derived directly from the body, thus providing a possible route for dating the bodies. However, the fractions gave a whole series of random dates, and it is not apparent how this can be resolved, although more work will be done.

Chemical investigation of archaeological residues is clearly a very valid area of research. Hopefully this work will be continued, and the Leverhulme Trust project at Sutton Hoo has laid some foundations for future study.

Phil Bethell

PRELIMINARY REPORT ON GEOPHYSICAL SURVEY PROGRAMME 1988/9

In the period September to December 1988, three new geophysical surveys were initiated at Sutton Hoo; a magnetic susceptibility investigation over turf within the scheduled area (Zone A); a further magnetic susceptibility survey on the eastern perimeter of the site (Zone F); and a resistivity survey which will be extended to cover the eastern and southern perimeters of the scheduled area to a width of 100m (Zone F, D). The first of these surveys was intended to investigate the degree of susceptibility contrasts that could be detected through well established turf, and the latter two constitute elements of the overall programme of remote mapping within the recovery template given by the research design (Carver 1986, Fig. 37).

This report is effectively a preliminary outline of the work done so far and an initial broad appraisal based on simple on-site data analysis.

MAGNETIC SUSCEPTIBILITY SURVEY OF THE PERIMETER OF INT. 44

Five 20m grids were surveyed to cover the southern and western perimeter of INT. 44 at traverse and sample intervals of 0.5m using the Bartington MS2D magnetic susceptibility meter with direct data logging to a Psion Organiser. The use of the 15mm diameter probe in preference to the 185mm diameter coil was dictated by the density of the turf, and readings were registered manually with zeroing to air between each station to eliminate drift as far as possible.

Susceptibility measurements were typically in the range 1 to $10 \times 10^{-8} \text{SI/kg}$, with areas of enhancement up to $c.300 \times 10^{-8} \text{SI/kg}$. Initial data processing using Geoscan Geoplot dot density graphics has indicated sensitivity to the following anomalies: –

- (a) Areas of known modern activity, eg positions of site huts on site 1965 – 67.
- (b) Areas of moss (*polytrichum* sp) indentified by vegetation survey (Copp 1984).
- (c) Areas of metallic deposition identified by metal detector survey (Royle 1984).
- (d) Susceptibility enhancement as yet unsupported by visual or alternative remote sensing techniques (possible ancient features).

An additional programme of work is required within the excavated area to identify and quantify more closely the susceptibility contrasts encountered between known geological and archaeological contexts.

MAGNETIC SUSCEPTIBILITY SURVEY ON THE EASTERN PERIMETER OF THE SCHEDULED AREA

This project covered an area 180m x 100m over cultivated land immediately to the east of the scheduled area (Zone F). Instrumentation was that employed in the previous susceptibility survey, but at traverse and sample intervals of 1m. Commencement of this survey coincided with the emergence of the crop of winter barley and as the coil diameter exceeded the drill width of the crop it was decided to use the probe in order that consistency could be maintained in the event of the work continuing into the spring.

At the southern extremity of the survey (commencing at SW 200/060) measurements were typically in the range 35 to $95 \times 10^{-8} \text{SI/kg}$, decreasing northwards to approximately 50% at SW 200/240. Within this

overall gradient are areas of consistent enhancement in the range c.80 to 110 x 10⁻⁸SI/kg and it is currently considered that these are associated with the sites of spoil heaps of Interventions 32 and 39. Furthermore, there is a significant comparison of the trends in the dot density plot with soil stains, apparent in aerial photographs, which are currently deemed to be associated with part of the ploughed out anti-glider ditch complex.

In addition to the above there are indications of more localised linear anomalies and the data relating to these are to be investigated in more detail, with particular regard to counteracting any field effects that may be caused by surface indentation and compaction associated with directional consistency in cultivation.

RESISTIVITY SURVEY

This work commenced in mid-November and is anticipated to continue to early March 1989. The aim of this survey is to cover the complete eastern and southern perimeters of the scheduled area to a distance of 100m at traverse and sample intervals of 1m, followed by a 0.5m investigation of areas where initial survey suggests an archaeological presence. The 1m survey will cover 70,000m² of which 20,400m² had been completed by mid-December on the eastern boundary northwards from SW 200/060, using the Geoscan Research Ltd, RM4 twin probe configuration and DL10 direct data logging.

Initial plots show very clearly the degree of compaction that has taken place over at least 15 years of unidirectional cultivation, and these effects will need to be overcome before interpretation. However, it is anticipated that the survey will be completed by early March, before the crop reaches maximum height and in order to minimise the high probe contact resistance encountered on this site during the drier months.

Kate Clark

PRELIMINARY COMMENTS ON THE OCEANFIX INTERNATIONAL LTD SIR SURVEY AT SUTTON HOO

A subsurface interface radar survey was carried out on two of the Anglo-Saxon burial mounds (Mounds 6 and 7) at Sutton Hoo in January 1988 by Oceanfix International Ltd (Baker 1988). Radar transects were taken at 1m intervals in a north-south direction across the whole of both mounds. The method used was extremely quick and the survey was completed in about a day and a half.

This remote sensing method involves towing a ground probing impulse radar across the surface. The radar transmits energy over a frequency band, using the soil as a transmission medium. The radar can operate at ranges of tens of centimetres to metres, depending on the transmitted power of the antenna. Whenever the antenna detects a reflected radar pulse, this electromagnetic signal is transmitted to the receiver. The signal is processed, and output as a continuous readout on a black and white graphic recorder or a colour videotape, which can be viewed as the survey progresses.

The requirements of the survey were threefold:

1. To demonstrate the capability and possible future use of SIR in the field of archaeology.
2. To present the radar data in a form which can be readily assimilated by any staff on the archaeological team without any previous experience of interpreting radar data.
3. To linearise all the raw data in both chainage and depth, and to remove the gradient effects of the mound structure.

The results of the survey were clearly presented, in colour (with additional notes), and were quite easy to understand. The removal of the gradient effect of the mounds was an improvement on previous methodology (Gorman 1985), enabling us to see the true outline of the mound (as opposed to an inverted reflection), and the chainage and depth measurements to be clearly seen.

So far the results look quite promising. Several possible features have been identified as robber trenches, ditches and the level of the buried soil beneath the mounds. Numerous other targets have also been identified, but until the excavation of Mounds 6 and 7 progresses further, we will not know how accurate these results are. When INT. 44 has been completed we will be able to compare our excavation results with the SIR data and hopefully have a 'reference collection' of target characteristics which can be applied to SIR surveys of the other burial mounds.

It will probably be some time before SIR becomes a commonplace remote sensing method in archaeology, and much further research will need to be done. However, the potential of this method to produce 3-dimensional pictures of archaeological remains hidden beneath the ground surface will be well worth the time and effort invested in it. This test survey at Sutton Hoo is a step in the right direction, and we are grateful to Oceanfix International for all their help and interest.

Cathy Royle

EVALUATION UP-DATE: FEATURE SURVIVAL IN ZONE A

Using the dimensions of the roundhouse structure already defined beneath the buried soil of Mound 2 (see p.13 above), an attempt was made to predict prehistoric feature survival outside this sealed environment. The object was to account for variation in the concentration of features mapped across the excavation of Intervention 41, and to quantify the depth of erosion of the subsoil surface between these areas.

The results are plotted in diagrammatic form (Fig. 12). The hearth F220 was sitting in, rather than cutting the buried soil, but all the remaining features were first defined against the subsoil surface of Horizon 7, including the complete roundhouse. However, if the subsoil is eroded to the depth recorded outside the sealed environment of Mound 2 only three features would survive and these would be of a smaller size and shape (Fig. 13). If we apply the same criteria to the excavated fenceline which was also beneath the buried soil of Mound 2, the results are dramatic. None of the postholes would survive.

These results seems to imply that coherent interpretation of the prehistoric settlement is possible only beneath burial mounds, since outside the protection of the buried soil the subsoil is generally lower by 0.25m. Various factors must have contributed to this remarkable situation. There is evidence from the recent excations within INT. 41 that relatively deep (? Medieval) ploughing has disturbed the subsoil between Mounds 2 and 5. The large scale stripping of the ground surface around the mounds to provide material for their make-up has been suspected by other fieldworkers (Phillips 1940, Bruce-Mitford 1975, Longworth and Kinnes 1980). Indeed recent work has suggested that the volume of sand removed from the quarry ditch of Mound 2 would not have provided all the make-up of the mound (above, p.5).

The dramatic landscape reorganisation that occurred during the Early Medieval period as the burial mounds were being constructed, and the subsequent impact of an arable farming regime probably both contributed to the erasure of the prehistoric settlement between the mounds. Surface survey (INT. 30) and subsequent enhancement by IBM suggest this activity may extend over much of Sector 1 (Fig. 1).

Andrew Copp

ROUNDHOUSE RELATIVE DEPTHS OF COMPONENT FEATURES

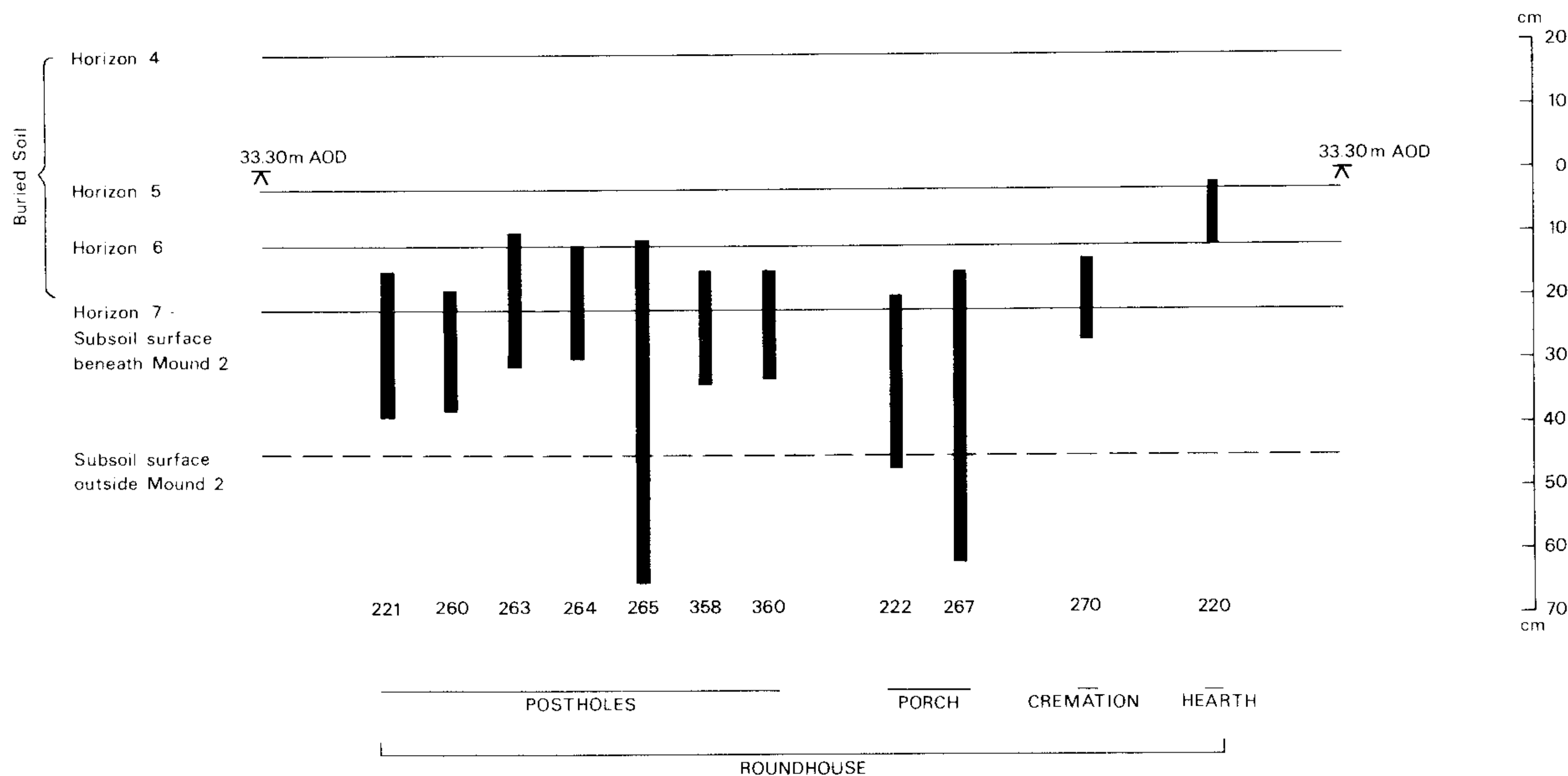
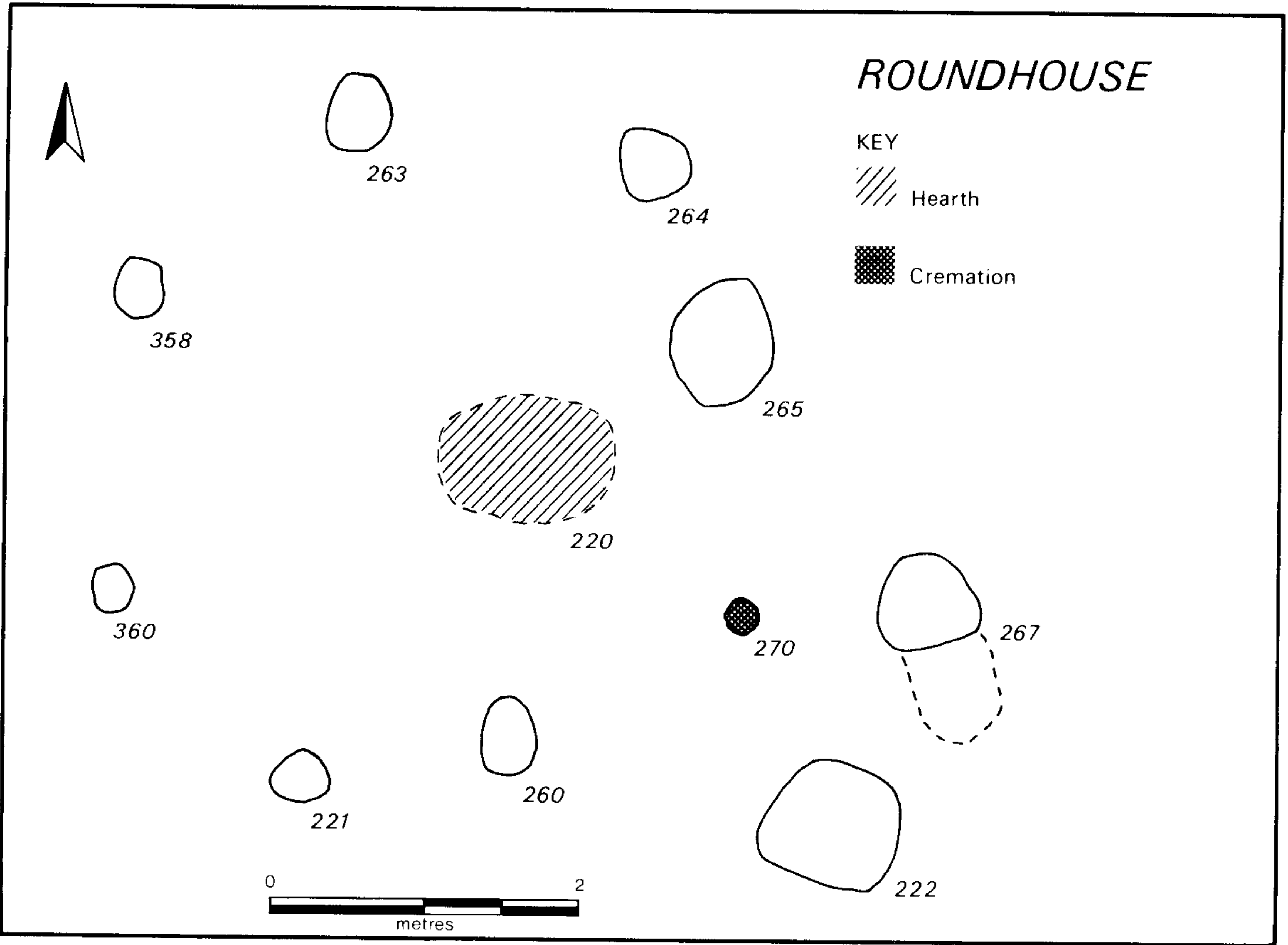
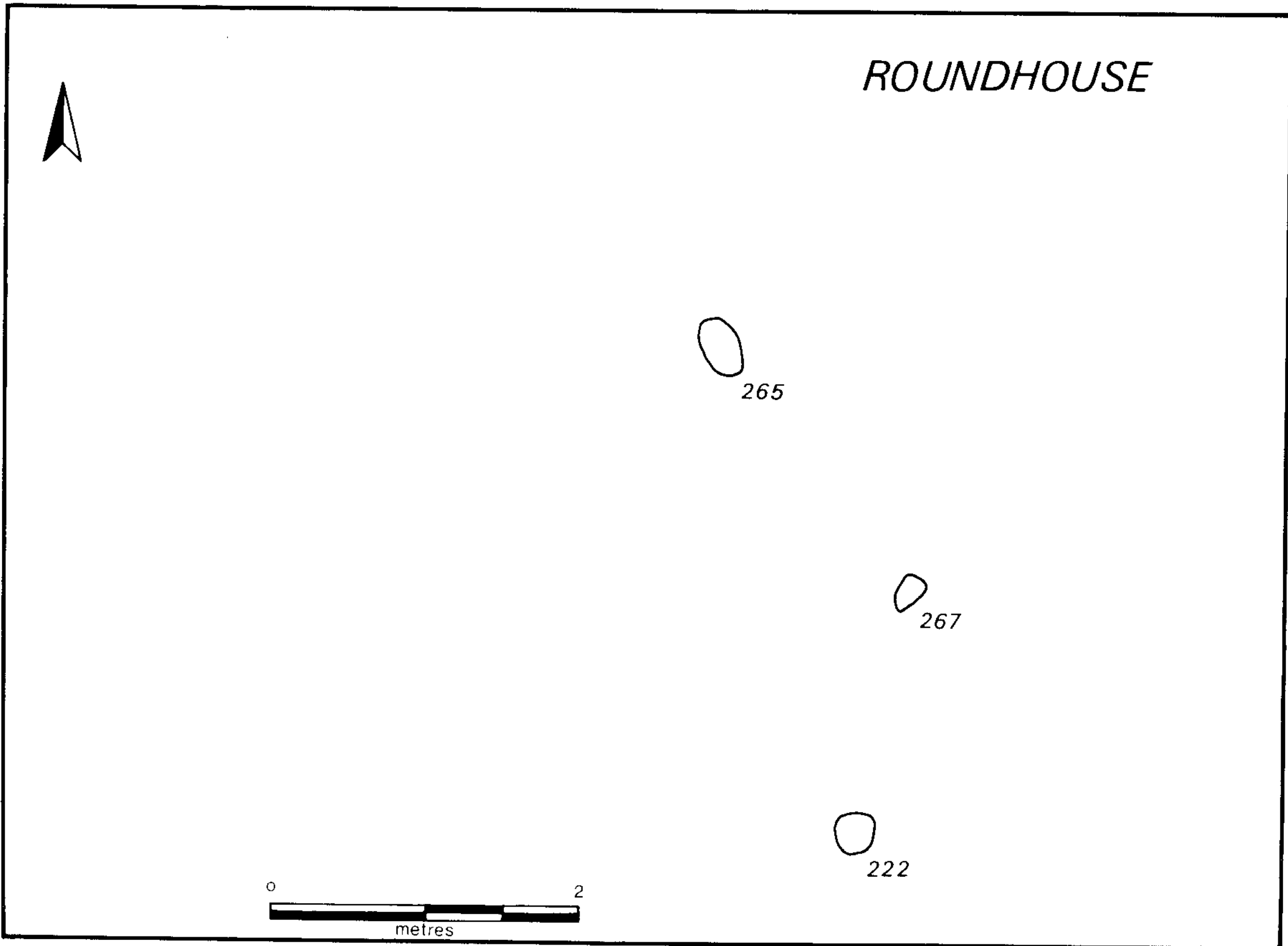


Fig. 12: Relative depth of roundhouse features (Copp).



(a) As seen at subsoil surface beneath Mound 2



(b) Projected survival at subsoil surface without the protection of an overlying mound

Fig. 13: Beaker period roundhouse (Copp).

CHRONICLE

NEW LOOK TRAINING EXCAVATION

The interest of University of York students and a review of training by a committee of the Institute of Field Archaeologists, prompted a major reconsideration of what Sutton Hoo offers fieldwork trainees. The result has been the creation of a *Field School*, with a highly structured and ambitious training programme presented in three week courses.

The Training Supervisor, Dr Madeleine Hummler (formerly of the Universities of Bâle, Birmingham, Oxford and York), has revolutionised the concept of field training and devised a sequence of personal tuition in all aspects of excavation. All project staff contribute specialist instruction and the high point is a number of field trips carefully arranged and executed by Jenny Glazebrook. The result is a well-monitored certificate which should give students the chance to enhance their degree-courses and get started in a career in the field. The *school* got off to a flying start in 1988 and will, we hope, become a permanent fixture. Publicity and joining instructions are available from Jenny Glazebrook.

ARCHIVE

A NOTE ON THE DATA BASE

Excavation data from INT. 41 is being entered onto a Sanyo microcomputer, on 5¼" floppy disks, using DBase II. An IBM PS2 has recently been acquired, to replace the ageing Sanyo. Information from INT. 44 will be entered onto the IBM 3½" diskettes, using DBase III Plus. It is hoped that at a later date, all data prior to INT. 44 will be transferred from the 5¼" disks to 3½" diskettes, so that all Sutton Hoo data can be accessed and manipulated using DBase III Plus. This should also facilitate use of such data by the Department of Archaeology at York, and the University system generally, through JANET.

REPORTS HELD IN ARCHIVE

The following complete reports are now held in archive:

- Z4/2(46) L. Baker: *Report on SIR Survey on Archaeological Site A, Sutton Hoo* (1,500 words 43 figs)
Z1/15(1) J. Rogers: *Examination of Skeletal Remains from Sutton Hoo F148 and F55* (300 words 1 fig)
Z6/4(1) M.N. Newton: *The Royal House of East Anglia and its Scions* (An annotated genealogy, 1 table)
Z8/4(6) H. Newey, S. Dove and A. Calver: *Synthetic Alternatives to Plaster of Paris on Excavation* (3000 words 2 figs)
Z8/7(2) P. Reilly: *Data Visualisation, Recent Advances in the Application of Graphic Systems to Archaeology. IBM UKSC Report 185* (47 pp inc. 30 figs)
Z8/5(4) P. Bethell and J. Miles: *Leverhulme Project: Interim Report 1987* (45pp and 22 figs)
Z8/5(5) P. Bethell: *Leverhulme Project: Interim Report 1988* (28 pp inc. 3 figs)

PUBLICATIONS

- Bethell, P. and Carver, M.O.H. 1988: 'Detection and Enhancement of Decayed Inhumations at Sutton Hoo' in N. Garland, R.C. Janaway and A. Boddington (eds) *Death, Decay and Reconstruction*
Bethell, P. and Smith, J.U. forthcoming: 'Trace element analysis of an inhumation from Sutton Hoo, using inductively-coupled plasma emission spectrometry (ICP): an evaluation of the technique applied to analysis of organic residues' *Journal of Archaeological Science* 16
Carver, M.O.H. (ed) 1988 a: *Bulletin of the Sutton Hoo Research Committee* 5
Carver, M.O.H. 1988 b: 'On and Off the Edda' *Saxon* 8:4
Carver, M.O.H. 1988 c: 'Sutton Hoo's Ancient Ancestor' *Saxon* 8:3
Carver, M.O.H. forthcoming: 'Sutton Hoo' *Blackwell Companion to Anglo-Saxon England*
Carver, M.O.H. forthcoming: 'Princely Burials' *Blackwell Companion to Anglo-Saxon England*
Carver, M.O.H. forthcoming: 'Kingship and Material Culture in early Anglo-Saxon East Anglia' in S.R. Bassett (ed) *The Origins of the Anglo-Saxon Kingdoms*
Carver, M.O.H. forthcoming: 'Pre-Viking Traffic in the North Sea' in S. McGrail (ed) *Maritime Saxons, Frisians and Celts*
Carver, M.O.H. and Dowse, K. 1988: 'The Siraf-Type Tank' *Saxon* 7:4
Carver, M.O.H. and Glazebrook, J. 1988 'Sutton Hoo 1987' *Saxon* 7:1-4
Glazebrook, J. 1988: 'High Winds, Hard Work, and Hailstones' *Saxon* 7:5-9
Reilly, P. and Richards, J.D. 1988: 'A new perspective on Sutton Hoo: the potential of 3-D graphics' in S.P.Q. Rahtz and C. Ruggles (eds) 'Computer Applications in Archaeology Conference 1987' *BAR Int. Series* 393

SUTTON HOO SEMINARS

SUTTON HOO AND RITUAL CONTINUITY: An invitation seminar was held at Oxford on 3rd – 5th April 1987, under the auspices of the Institute of Archaeology, (seminar organiser: William Filmer-Sankey).

The seminar set out to tackle the question of the relevance of Sutton Hoo's prehistoric predecessor by considering a wide range of papers offering the views of prehistorians (A. Ellison, R. Bradley, R. Chapman, E. Martin), proto-historians (C. Scull, P.A. Rahtz, J. Hines) and Old English scholars (H.R. Davidson, S. Newton) among others. After some semantic turbulence provoked by the word 'continuity', the general view appeared to be that the Anglo-Saxons were indeed sensitive to the character of prehistoric monuments and that such monuments may well have formed part of the ideological signalling apparatus for contemporary Anglo-Saxon society. Unfortunately we were unable to clarify to any great extent the character of the prehistoric site at Sutton Hoo itself or its context in the Suffolk landscape, so it remained uncertain that the phenomenon of legitimising archaism (ie the re-use of ancient monuments) can actually be observed there. This uncertainty remains now that the prehistoric 'sequence' at Sutton Hoo has telescoped into a major settlement and field system predominantly of the Late Neolithic, Early Bronze Age; large monuments which would have been visible in early Anglian times have yet to be located.

The following invitation seminar has been arranged: –

SUTTON HOO – FIFTY YEARS OF RESEARCH (organised by M.O.H. Carver), to be held at the Centre for Medieval Studies, York, on 29th September – 1st October 1989.

Other Anniversary Events have been arranged at *SNAPE* (22 April 89) and *KALAMAZOO* (4 – 7 May 89).

PUBLIC LECTURES BY THE RESEARCH DIRECTOR AND PROJECT STAFF 1987/8

Societies: Woodbridge Museum, Sutton Hoo Society, Plymouth and District Archaeological Society, Helmsley Archaeological Society, Yorkshire Archaeological Society (Harrogate), Yorkshire Archaeological Society (York), Grosvenor Museum Society (Chester), Wolverton and District Archaeological Society, Friends of the Canterbury Archaeological Trust.

Universities: Oxford University Archaeological Society, Manchester University Archaeological Society, University of East Anglia (School of Art History and Music), University of Leeds (Department of Adult and Continuing Education), University of Bradford Archaeological Society, Queen's College Cambridge Historical Society, University of Reading Archaeological Society, St Andrews University Department of Medieval History and Archaeological Society, University of Glasgow Archaeological Society, University of Newcastle upon Tyne Archaeological Society.

Institutions and Authorities: Sutton Parish Council (Church Roof Appeal), Creeting St Mary (Church Roof Appeal), Butley Middle School, Suffolk College (Adult and Continuing Education Unit), Scout Association (1st Kirton Venture Scouts).

BBC TELEVISION BROADCASTS

Work on the preparation of television films about Sutton Hoo continues, under the direction of Ray Sutcliffe, and filming took place during 1988 on site and in Norway. Editing of the third programme is now in progress, with transmission scheduled for 1989.

THE SUTTON HOO SOCIETY

THE SUTTON HOO SOCIETY is completing its fifth year, and has been presided over by the Duke of Edinburgh since 1985. The Society continues to support the work of the Trust by donating equipment to the project, and particularly in presenting Sutton Hoo to the public. Guided tours and access by ferry have been provided each summer, and visits to the site are co-ordinated by the Secretary. Enquiries about membership should be made to the Membership Secretary, c/o NatWest Bank plc, Cumberland Street, Woodbridge, Suffolk IP12 1JD.

The Society's officers during 1987 and 1988 were as follows:

Chairman	Malcolm Miles	Publications	Mark Mitchels
Hon. Secretary	Robert Beardsley	Publicity	Donald Brooks
Hon. Treasurer	John Aldridge	Ferry	Robert Simper
Hon. Membership Secretary	Elizabeth Miles		

SPONSORSHIP AND EXPENDITURE 1987/8

Grateful acknowledgement and appreciation is due to the following organisations who supported the work of the Trust in 1987/8:

The British Museum, the Society of Antiquaries, the British Broadcasting Corporation, The National Maritime Museum, the Scarfe Trust, the Aurelius Trust, Trinity College Cambridge, Gonville and Caius College Cambridge, Norwich Union Insurance Group, the East Anglian Daily Times, Suffolk County Council, The Leverhulme Trust, Manpower Services Commission, Oceanfix International Ltd.

The Trust is also grateful to the following who supported their work in 1987/8 with the loan or gift of equipment in kind:

- Sun Alliance Insurance Group (southern strip of the scheduled monument)
- Psion Ltd (3 Psion hand-held computers and software)
- Bartington Instruments (long-term loan of remote sensing equipment)
- Fairlawn Ltd (provision of turfcutting machine)
- Woodbridge School (loan of whitelining machine)
- Aldous Homes Ltd (construction of viewing platform by machine)
- F. Ingram-Smith Ltd (loan of Portacabin)
- Brian Ribbans (hot-air balloon flights)
- Stephens and Carter Ltd (scaffolding tower at concessionary rate)
- Sutton Hoo Society (theodolite, wet-sieve/flotation tank)
- USAF (loan of cordons for royal visit)
- Stowmarket Caravans Ltd (mobile home at concessionary rate)

and acknowledges with gratitude the continued sponsorship by BOYDELL & BREWER LTD of the publication of *Bulletin of the Sutton Hoo Research Committee*.

The Trust is grateful to the British Museum for the secondment of Angela Evans during the 1987 season, and for services by the conservation laboratory; to Suffolk County Council and to the Committee and members of the Sutton Hoo Society for their many services to the site and research team. A special debt of gratitude is owed to John Knight for his advice and assistance throughout the year.

Sutton Hoo Research Project Statement of Expenditure, 1987 – 8		£
<i>Expenditure</i>		
Director		—
Project Staff		45,631
Temporary site team, July – September 1987		3,632
Specialist Costs		3,447
Equipment		2,425
Consumables and expenses		7,570
Fundraising and publicity		2,770
East Anglian Kingdom Survey		5,525
		<hr/> 71,000
MSC Team staff		38,126
Equipment and running costs		1,103
Travel		2,316
		<hr/> 41,545
The Leverhulme Project		<hr/> 21,000

PARTICIPATION 1987/8

The Project Team

Director	Professor Martin Carver
Administrator	Jenny Glazebrook
Site Supervisor	Andrew Copp
Post-Excavation/Remote Sensing	Catherine Royle
Finds/Environmental Assistant	Kathryn Dowse
Photography/graphics	Nigel MacBeth
Environmental Co-ordinator	Helen Atkinson
Leverhulme Project Supervisor	Phil Bethell
Leverhulme Research Assistant	Lorraine Stewart

The Manpower Services Commission Teams:

Hester Cooper-Reade, Klara Spandl (Supervisors), Martin Bailey, Neville Bolsover, Tim Browne, James Bullingham, Phil Camps, Jackie Collins, Katrina Copping, Alison Dunnett, Tony Fisher, Richard Garnett, Andrew Garner, Karen Geisler, Joanne Heard, Beryl Latania, Elaine McEwan, Aaron Miller, Miranda Nicholson, Robert Olley and Sam Quilter.

The Research Director would like to thank:

Stanley West and Keith Wade of the Suffolk Archaeology Unit for their support and advice, John Newman of the Suffolk Archaeology Unit for his work on the regional survey; Paul Reilly and Andrew Walters of IBM, and Julian Richards of the University of York, for their research into computer graphics; Peter Simkins, Lawrence Baker and Peter Horsfall of Oceanfix International Ltd for their contribution to the remote sensing survey; Ray Sutcliffe and BBC film crews for comment and advice; Ian Windmill of Fairlawn Ltd (Orford) for his help during turf-stripping;

and the following, who participated in the 1987 site team:

Philip Rahtz, Angela Evans, Madeleine Hummler, Natasha Atkinson, Suzanne Beedel, Flora Blakemore, Abdelmadjid Boukacem, Miriam Bower, Sarah Calvert, Gerard Clover, Tom Cromwell, Chris Daniell, Penny Fenton, Clare Foss, Helen Geake, Paula Gentil, Tim Gregory, Roy Jerromes, Faith Jerromes, Judy Lawrence, Jeremy Lovett, Alice Lyons, Simon Harrington, Nathalie Houdret, Claire Howell, Barbara King, Barbara Johnston, Mark Johnson, Nick Johnson, Paul Johnson, Hilkka Mälarstedt, Susanna Mälarstedt, John Marsh, Paula McCarroll, Timothy Pestell, Pete Richardson, Pete Richmond, Mairi Robertson, V. Roulinson, Toby Simpson, Bart Templeman, Nick Till, Louise Todd, David Whitmore, Julia Willcock, Richard Wilson, Alex Woolf, Matthew Wade and Lorna Watts;

also Peter Berry, for his untiring efforts, advice and help on matters of site management and accommodation for the team; Rosemary Halliday for feeding the site team throughout the summer session; and Lindsay Lee, Karen Pfisterer and Ann Trewick for their continued voluntary help, throughout the year.

The Trust is grateful to Mrs Ann Tranmer and her Trustees for their kind permission to carry out the research, and to Mr Peter Waring for permitting research in fields surrounding the scheduled area.

THE SUTTON HOO MONUMENT AFTER 1992

Sutton Hoo is one of the most famous archaeological sites in Europe, but has never been actively protected. It remains in private hands and although it is a Scheduled Monument this has not prevented the accelerating dismemberment of the site by treasure hunters, rabbits and bracken. Temporary respite has been won through the intervention of the Sutton Hoo Research Trust, whose programme has included active protection and conservation. This protection, which began in 1983, is due to terminate in 1992 when the excavation of the research sample is complete.

During the past five years, efforts to secure state ownership of the site have met with little success. Attempts to gain backers for a scheme of presentation for the monument, which would be self-supporting and eventually profit-making, have also been unsuccessful. Now, thanks to the late Robert Pretty, Sun Alliance Insurance Group and the negotiations carried out with the help of the Trust's Legal Adviser, John Knight, the Trust itself owns approximately one fifth (2.7 acres) of the Scheduled Monument, and has the sole right of investigation of the remainder plus c.16 acres of the fields immediately surrounding the scheduled area, together with its own access (see Fig. 14). The Trust therefore has control of a viable asset, and is in a position to influence the site's future.

Various factors have provoked a review of possibilities for the monument after 1992. It seems that the ground rules for the curation of monuments for the long-term benefit of the community have changed since 1983. Whereas public ownership seemed then the most effective way to protect the resource, it is now clear that the policies of a public owner need not coincide with those of archaeologists. Even supposing a benevolent investor could be found, it is doubtful whether any presentation scheme involving large numbers of people could be realised without considerable attrition to the site.

A phenomenon like Sutton Hoo can convey its value from generation to generation more securely through a carefully structured educational approach, to the few, rather than through the superficial entertainment of the many. The character of the site, its international character, its depth of meaning and its vulnerability, invites quality not quantity. It is also important that the present vogue for marketing the heritage should not smother the role of monuments in education. It is difficult to educate at a financial profit, although private educational ventures may at least break even. It is already clear from the success of the training excavation that it is possible to put on a formal field course for trainee archaeologists which is self-financing, and it seems possible that other ways of raising awareness in the heritage of the land are within reach at Sutton Hoo.

The new policy adopted by the Trust therefore involves putting aside all approaches to English Heritage and other potential owners, so that the Trust itself can lay the foundations of a long term role for Sutton Hoo, as a field school rather than a tourist entertainment. Legal protection of the monument will be strengthened if possible, and public access will continue to be limited to those interested in a comprehensive, structured visit. Archaeological training courses will be developed, and a range of educational facilities will be offered to schools.

Martin Carver

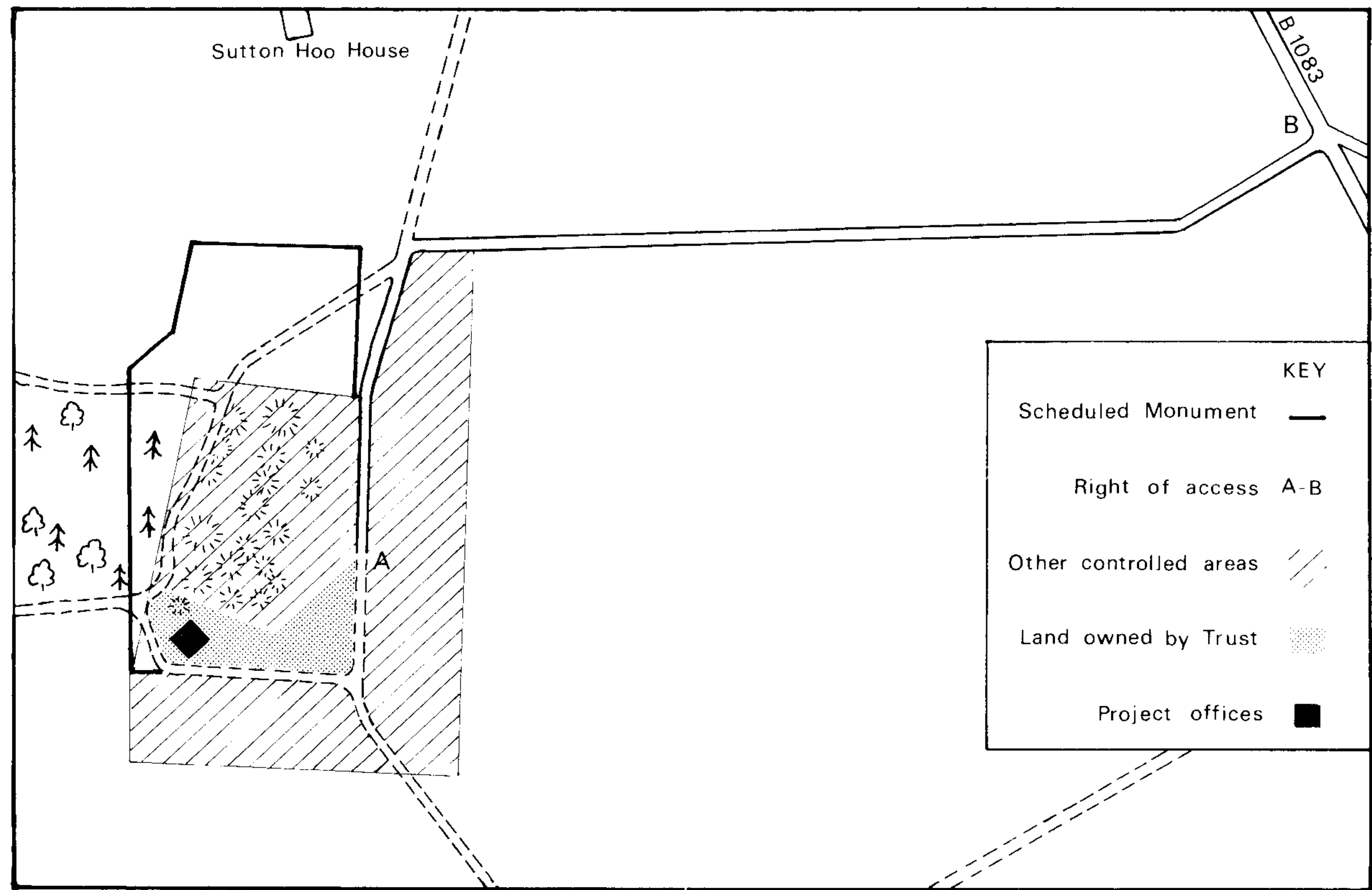


Fig. 14: Legal status of the Sutton Hoo monument, 1989 (Glazebrook)

ROBERT PRETTY

Robert Dempster Pretty of Lymington, Hampshire, was the only child of Mrs Edith May Pretty, to whose generosity the British Museum owes one of its greatest treasures: the grave-group from the Sutton Hoo ship burial. Robert Pretty inherited his mother's vision and public dedication, and, as the bearer of the sole rights of excavation, remained a loyal and imaginative advocate of Sutton Hoo and its archaeological potential all his life. It is to Robert that we owe the initiative which led to the present research campaign, and as a member of the Sutton Hoo Research Committee he gave us his continued enthusiasm and encouragement. His visits to site in his caravan were occasions for wide-ranging discussions on all aspects of the work – technical and speculative – and of course for reminiscence of his childhood in Sutton Hoo House. Shortly before his death, Robert Pretty made over the rights of excavation at Sutton Hoo to the Research Trust, and all the finds from the site – past and future – were given to the British Museum in perpetuity. In this he did more than endorse his mother's former gift: he showed a vision of the heritage as transcending the needs and uses of the current generation and the accidents of property; the past as a permanent asset for objective scholarship, accessible to everyone and for always.

Martin Carver

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THE SUTTON HOO RESEARCH COMMITTEE

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Dr M.S. Tite, FSA (British Museum)
*Mrs L. Webster, FSA (British Museum)
*Dr S.E. West, FSA (Suffolk Archaeological Unit)
E.V. Wright, Esq., MBE, FSA (National Maritime Museum)

*Members of the Sutton Hoo Research Trust

Research Director:

Professor M.O.H. Carver
Department of Archaeology
University of York
Micklegate House
Micklegate
York YO1 1JZ
Tel: 0904 36731

Project Team:

Administration: J.M. Glazebrook
Supervisor: A.J. Copp
Sutton Hoo Research Project
Sutton Hoo
Woodbridge IP12 3DJ
Tel: 03943 7673

Suffolk Archaeological Unit:

Director: Dr S.E. West, MA, FSA
Field Officer: K. Wade, BA
Suffolk County Council
St Edmund House
Rope Walk
Ipswich IP4 1LZ
Tel: 0473 230000

Sutton Hoo Society:

Chairman: R. Simper
Secretary: L. Gatter
c/o NatWest Bank plc
Cumberland Street
Woodbridge IP12 1JD

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Registered Office at:

The Society of Antiquaries of London
Burlington House
Piccadilly
London W1V 0HS

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